Table 3.1: Existing & Proposed Runoff Rates

Return Period (Yr.)	Existing Greenfield Runoff Rate (l/s)	Post-Development Unmitigated Runoff Rate (l/s)	Post-Development Increase	
			l/s	%
1	20.4	20.5	0.1	0.5
QBAR	24.6	24.7	0.1	0.4
30	48.2	48.3	0.1	0.2
100	63.2	63.4	0.2	0.3
100 + 40%*	93.7	93.9	0.2	0.2

* Calculated by multiplying Standard Annual Average Rainfall (SAAR) by 1.4 to simulate a 40% climate change uplift on rainfall intensity

3.24 As shown within **Table 3.1**, the post-development runoff rate, when factoring in the increased impermeable area from the ancillary equipment is anticipated to increase the QBAR rate by 0.1l/s (0.4%), the 1 in 100-year runoff rate by 0.2l/s (0.3%) and the 1 in 100-year plus 40% climate change by 0.2l/s (0.2%). Therefore, the impact of developing the Site is considered to have a negligible impact on the existing runoff rate.

3.25 An assessment of the impacts the proposed ancillary equipment will have on the 1 in 100-year 6-hour runoff volume post-development has been undertaken. The pre- and post-development runoff volumes are compared in **Table 3.2**, with the supporting calculations provided within **Appendix 6**.

3.26 As the proposed development area is currently entirely greenfield, the existing runoff volume has been calculated using MicroDrainage to be 12,907m³.

3.27 The runoff volume from the new impermeable area (i.e., 0.04ha associated with the ancillary equipment has been calculated using an average rainfall intensity of 10.7mm/hr as calculated using FEH rainfall data within Micro Drainage, and multiplied by the impermeable area, as described within **Figure 3.1**. The 100-year, 6-hour rainfall profile is presented within **Appendix 7**.

Av. Rainfall (m/hr) x 6 (hours) x Impermeable Area (m²) = Runoff Volume (m³)

0.0107 x 6 x 387 = 25m³

Figure 3.1: 1 in 100-Year, 6 Hour Runoff Volume

3.28 As shown in **Figure 3.1**, the runoff volume from the newly introduced impermeable area is 25m³. The runoff volume from the remaining permeable portion of the proposed development area (62.16ha) has been calculated using MicroDrainage to be 12,899m³. As a result, the total post-development runoff volume is calculated to be 12,924m³.

Table 3.2: Runoff Volume Comparison

Existing Volume (m^3)	Proposed Volume (m^3)		Difference (m^3)
	Permeable	Impermeable	
12,907	12,899	25	17

3.29 As shown within **Table 3.2**, the proposed introduction of the ancillary equipment will result in an increase of surface water runoff volume during the 1 in 100-year 6-hour event by 17m^3. This an increase of approximately 0.1% of the existing conditions within the Site.

3.30 It is anticipated that any increase in surface water runoff volume leaving the site will be intercepted within the interception swales located across the site.

Interception Swales

3.31 It is proposed that the interception swales will have 1:4 internal side slopes with a maximum design water depth of 300mm. The material excavated to install the swales will be applied to the downstream edge of the features to create an earth bund. A typical cross section of the proposed interception swales is provided within **Appendix 4**.

3.32 The proposed swales have been positioned outside of Flood Zone 3 and are also not anticipated to adversely displace any existing floodplains within the Site as no level raising will be associated with the construction of the swales.

3.33 Based on the proposed dimensions of the interception swales, it is anticipated that the maximum storage capacity of the swales is approximately 0.4m^3/m.

3.34 The interception storage capacity of the swales is such that in increase in runoff volume associated with the ancillary equipment will be intercepted by the proposed swales. Additionally, the inclusion of the swales within the development will act to provide a betterment to the existing surface water runoff rate and volume that will leave the Site onto surrounding land and Bourne Brook and the UOW post-development.

3.35 The inclusion of the interception swales across the development will also function as a mitigation measure to reduce the likelihood of any pollution incidents leaving the Site. As the risk of pollution incidents is more likely to occur during the construction phase as opposed to the operation of the Site, it is recommended that the swales are constructed early on during the construction phase and silt fences are utilised on the swales during the entire construction phase.

3.36 The proposed swales should be maintained throughout the lifetime of the development to reduce the risk of the features becoming less effective due to silt accumulation, litter accumulation or vegetation issues.

Statement

Proposal:	Construction of a 62ha Solar Farm to include the installation of ground mounted solar panels together with associated works, equipment & necessary infrastructure
Location:	Land 800 metres South of Park House Farm, Meriden Road, Fillongley
Appeal no:	APP/R3705/W/24/3349391

Prepared by The Fillongley Flood Group

Introduction

This Statement has been prepared by the Fillongley Flood Group (The FFG), who are affiliated to the National Flood Forum. We are opposing the Appellant's Appeal under section 78 of the Town & Country Planning Act 1990.

We understand that the Appeal relates to "Land 800 metres South of Park House, Meriden Road, Fillongley" (the development) in the Borough of North Warwickshire.

We have been advised that North Warwickshire Borough Council and Fillongley Parish Council are opposing the Appeal. The FFG lodged written objections with the Planning Officer and made oral representations at the Planning Board Meetings on 4th March and 8th July 2024. The FFG also carried out a site visit on 4th March with the Appellant and a further visit with the Appellant and the Lead Local Flood Authority (LLFA) on 18th March 2024 as well as instructing and paying for a report prepared by Edenvale Young Associates (EYA) dated 4th July 2024, we therefore felt that we needed to make further representations at the Appeal Hearing. Further we have read the Appellant's Statement of Case, and we can see that the Appellant has modified its plans again and removed the attenuation ponds/detention basins that it had offered "to appease the local flood group as part of the local negotiations."

We have attached the following at the Appendix: -

1. Our letter of objections dated 4th March 2024 with enclosures;
2. Our letter of objection dated 8th July with enclosures 2024;
3. Letter of 3rd April 2024 from WCC Flood Risk Management (LLFA);
4. E-mail from the Appellant dated 7th May 2024;
5. Email from Mark Harding dated 17th May 2024;
6. Letter of 30th May 2024 from WCC FRM (LLFA);
7. The Edenvale Young Associates Report dated 4th July 2024.

Our letters of objection together with enclosures (items 1 & 2 of the Appendix) clearly set out the FFG's concerns that the development will increase the risk of flooding in the village. Unfortunately, the LLFA raise no objection subject to conditions. We appreciate that the LLFA have imposed conditions, but we believe that the LLFA could have gone further. Please see the below the highlighted sections of the WCC Local Flood Risk Management Strategy, April 2016, in particular paragraphs 3.6.3, 5.25, and measure 5B and 5D below.

3.6.3 New Development

New development has the potential to increase surface water runoff through new impermeable hard surfaces that reduce the ability of rainfall to soak into the ground. Unless managed, this can increase the volume of runoff, potentially increasing surface water flood risk. The National Planning Policy Framework (NPPF) and its associated

guidance require new developments to be designed such that they do not increase local flood risk. This includes provision of adequate drainage infrastructure to ensure surface water runoff is appropriately managed. This is supported by the Non-Statutory Technical Standards for Sustainable Drainage (Defra, March 2015) that set out the requirements for drainage of major development. The Local Authority SuDS Officer organisation has also published best practice guidance that builds upon these standards to aid their interpretation. While new development should not increase flood risk off-site, there may be occasions when areas of land are currently subject to flooding, but have yet to be developed. These have not been identified as locations of priority for investigation by WCC, since there is currently low flood risk due to the absence of buildings, for example. Such situations where known flooding exists should be investigated by the Developer in order to avoid any increase in flood risk due to the construction of new potential receptors of flood water. The Developer will determine the source, i.e. overland flooding caused by unmaintained ditches, unauthorised outfalls discharging to ditches/watercourses. This may include investigation of drainage systems to establish their structural status and whether the removal of debris or blockages is needed. If these investigations involve highway and/or public sewers, then authorisation should be obtained from the appropriate authority. It may be necessary in some instances to undertake a wider investigation involving a catchment assessment. Depending on the outcome of the investigations, the developer may present the findings to the planners or the organisation responsible for the source of the flooding. Equally, the Local Planning Authority may seek contributions or choose a Section 106 agreement to ensure that improvement works are undertaken. WCC actively seeks that new development offers betterment with regard to flood risk in order to mitigate the potential negative flood risk impacts of development. In addition new development must ensure that it is compliant with local planning policy that is developed by each Local Planning Authority in Warwickshire. Draft Planning Advice has been included in Appendix G of this document and this will be developed during 2016 into a supplementary planning document for adoption by local planning authorities.

5.2.5 Developers

Developers are responsible for properly considering flood risk to ensure occupants of new developments are not put at risk and to ensure the risk of flooding is not increased elsewhere. Developers must undertake a robust assessment of the flood risk using the best available data in order to accurately characterise the risk and mitigate this risk where necessary. As the LLFA, WCC will work to address flood risk and development. WCC actively seeks new development to offer betterment with regard to flood risk to mitigate the risk they can pose (see Section 3.6.3 above).

Objective 5: Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development.

Measure 5A: To work with partners to produce local policies and guidance and set standards to promote a positive impact on flood risk from new development, and to prevent any increase in flood risk, including the possible impacts of climate change.

Measure 5B: To maximise opportunities for contributions towards existing and proposed flood risk management from new development to address local flood risk.

Measure 5C: Develop byelaws, were beneficial, to control development.

Measure 5D: Work with relevant partners to promote SuDS measures for new developments through the role as a statutory consultee on major planning applications.

Conditions

As the FFG regularly have to stand in freezing cold water in the middle of the night protecting our homes and the village from flooding we would ask the Inspector that if he is not persuaded by our objections and those of other objectors that this site is inappropriate for the said development then we would ask that as well as the conditions imposed by WCC LLFA the Appellant is subject further conditions and a section 106 as appropriate. Edenvale Young Associates (EYA) Report (item 7 of the Appendix recommended the following:

1. "The swale design as shown will not reduce the runoff rates anticipated. The design should be developed to ensure that water is captured and managed such as by infiltration with check dams, and that the overflow mechanism is predicted and illustrated. The swales do not manage runoff as presently shown and would simply convey flows to the lowest points and cause unchecked erosion and silt mobilisation."

2. That attenuation ponds/detention basins be installed within the development site boundary. The LLFA agreed in their letter of 3rd April 2024 (item 3) that Natural Flood Management (NFM) measures including attenuation ponds, "**may reduce the risk any an unknown quantity by holding back the volume of water entering the watercourses at times of significant rainfall.**" The Appellant put forward three attenuation ponds/detention basins initially proposed by way of email dated 7th May 2024 (item 4) and in its Drainage Strategy of 30th April 2024 but has now withdrawn those. We asked EYA to comment on the proposed Drainage Strategy and Flood Risk Assessment of 30th April 2024 and the letter from the LLFA dated 30th May 2024 (item 6). The FFG were concerned that the ponds/basins that were being put forward by the Appellant were not in the right place. EYA said the "ponds as put forward by the developer would not attenuate flows in the existing watercourses. The inlets needed to be designed to receive water from the watercourses and the outlets designed to mobilise storage – they do not, as presently shown. An indication of the benefits delivered by these ponds should be given, to provide monitoring". Therefore, any attenuation ponds design and installation would need to be approved with the assistance of the LLFA and Edenvale Young Associates.

3. EYA stated that the scale and duration of grazing should be specified to ensure that the vegetation is effective in managing runoff. The FFG believes that this needs to be monitored. If the land is overgrazed, then the vegetation will not be effective in managing runoff.

4. EYA also stated that tracks should be formed in permeable granular material, usually expected to have 30% voids.

5. EYA recommended a project programme should be submitted showing the detention basins and swales installed as a first stage to bring benefits during construction. The FFG believe that the attenuation ponds/detention basins and swales should be installed before construction begins to reduce flood risk from compaction of the site. EYA state that it is customary to ensure that the fields are vegetated prior to trafficking and the commencement of construction, and that trafficking is avoided in wet conditions when the soil characteristics in the long term can be damaged. The FFG believe that this should be a condition of the development. We understand from our initial conversations with the LLFA that one of the greatest risks for the village from this development is during the construction phrase. As the Appellant indicated on the site visit potentially the development could take 18 months to construct and then the vegetation needs to grow, we calculate that the village could be at a higher risk of flooding at this stage.

6. EYA recommended on other solar farms that the Developer has agreed to have an annual walkaround with the community group to promote good relations and show that the maintenance is being undertaken.

As well as the recommendations from EYA as an active Flood Group we would like the following condition and a section 106 agreement as appropriate that the Appellant provides before work on the development commences namely: -

1. An automated trash screen in Fillongley to replace the antiquated trash screen that was installed over twelve years ago. The trash screen was a recommendation of the NWBC Bourne Brook Catchment & Alleviation Study, Fillongley, North Warwickshire – July 2010. The placing, type etc of trash screen would have to be with consultation with the LLFA. Hopefully an automated trash screen would reduce the risk of a flood group volunteer being injured or killed.

2. A contractual agreement to fund from pre-commencement for the length of the development the Timeview Telemetry (Brook alarm/monitor). It records the rising water levels at the mouth of the culvert by the Manor House Pub and sends alerts to members of the flood group as well as providing invaluable data. The Timeview Telemetry has been in place for the last 12 years and has been a lifeline for the

village. However, the funding of the monitor has been harder and harder for the flood group to secure.

The FFG engaged with the Appellant and asked them if they were willing to fund the brook monitor. An email from the Appellant dated 17th May 2024 is attached regarding their offer to fund the flood alarm as well as wishing to discuss any other ways they could support the Fillongley Flood Group's "admirable efforts in protecting Fillongley from the effects of floodings". (Item 5 – Appendix).

It is important to the FFG and the community of Fillongley that planning conditions recommended by the LLFA, and those that we have outlined in this Statement are included in the Decision Notice, if approved, and that the conditions are fully implemented and approved by the LLFA prior to being Discharged.

Appendix

1. Our letter of objections dated 4th March 2024.
2. Our letter of objection dated 8th July with enclosures 2024;
3. Letter of 3rd April 2024 from WCC Flood Risk Management (LLFA):
4. E-mail from the Appellant dated 7th May 2024;
5. Email from Mark Harding dated 17th May 2024;
6. Letter of 30th May 2024 from the FRM (LLFA);
7. The Edenvale Young Report dated 4th July 2024.

4th March 2024

URGENT

Dear Sir,

PAP/2023/0071 – OBJECTION

Introduction

Further to Pat Kenrick's email on 16th February 2024 we are writing on behalf of the Fillongley Flood Group (FFG) to formally set out in more detail our objections to the above planning application for a Solar Farm at Nailcote Farm.

We enclose the following evidence in support of our submission namely: -

1. A copy of the Timeview Telemetry which receives and forwards time series data and alarms at the culvert in Fillongley which are triggered by rising water levels (Sept23-Feb24).
2. Photographs of the volunteers clearing the culvert.
3. Photographs of the culvert blocked with & without debris.
4. Photographs of the volunteers clearing the culvert.
5. Photographs of the debris taken out of the culvert on 22nd February 2024.
6. Aerial footage of Fillongley taken by Drone on Friday 20th October 2023 indicating the areas that were flooded.
7. Photographs of the village in flood taken from the Bourne Brook Catchment & Flood Alleviation Study, Fillongley July 2010 (NWBC).
8. Page 12 from the Bourne Brook Catchment & Flood Alleviation Study July 2010 (NWBC).
9. Copy of the Landscape Strategy plan revised – 5th February 2024 AttachmentShowServlet (northwarks.gov.uk)
10. Copy of BWB Drainage Strategy (pages 14 & 15)– Existing & Proposed Run off rates.
11. Copy of BWB Drainage Strategy (page18)– SuDs Manual schedule for swales.

We have looked at the Applicant's Planning Statement, Addendum to the Statement, Flood Risk Assessment and Drainage Strategy and Statement prepared by BWB Consultants, the Landscape Strategy Plan as well as a number of other documents on the public portal. We have spoken to Enviromena on a number of occasions at Fillongley Parish Council (FPC) meetings. (Please note that the Applicant did not attend the FPC meeting on 15th February 2024 when the FPC were required to make a decision on Enviromena's revised plans and the FFG had hoped to raise issues with them).

Several members of the FFG also live in the centre of this Conservation Village and reside in designated heritage assets and have read the Heritage & Archaeology Assessments prepared by BWB Consultants on the portal as well.

Modelling & Data

We take issue with the Applicant's Flood Risk Assessment and Drainage Strategy in terms of both its modelling and data. For example, the Flood Risk Assessment refers to the Warwickshire PFRA and the Addendum of 2017. We note the 2017 Addendum does not reflect the flooding in the village in 2012 and 2016. Further we do not see any reference to the Bourne Brook Catchment & Flood Alleviation Study of Fillongley dated July 2010 commissioned by NWBC in the Flood Risk Assessment.

Modelling seems to be based on a 1 in hundred-year event, yet we have had floods in 1998, 2007, 2008, 2012 and 2016. Further the FFG has access to 12 years of almost complete data from The Timeview Telemetry which we are not aware the Environment Agency or Warwickshire County Council the Lead Local Authority (LLFA) have access too. The Timeview Telemetry referred to at **Document 1** records the rising water levels at the culvert by the Manor House Pub and barn (Designated heritage assets). You will see from **Document 1** that the early warning alarm alerts the Flood Groups at 0.6 maSD. The middle alarm 'Bourne is rising' is at 0.8 maSD and the critical warning alarm at 1 maSD. **Document 1** is just a snapshot of the data that the Flood Group hold (from September 23 to February 2024). You will see from **Document 1** that Fillongley has had 3 critical early warning alarm alerts between 20 October 2023 and 22nd February 2024, 4 'Bourne is rising' alarms and 12 early warnings. Major flooding to the village has been averted because volunteers from the Fillongley Flood Group have gone into the brook by the culvert at all times of the day and night to clear the trash screen of debris (illustrated by photographs at **Documents 2, 3, 4 and 5**) that is washed down the watercourses that slope through the proposed site of the Solar Farm (Flood Zone One). We also refer you to the photographs taken by drone at **Documents 6** which show the watercourses in Fillongley breaking its channels in October 2023. If the debris is not cleared away the water cannot continue down the culvert and rises thereby breaking the defence walls and flooding the village. Please see the photographs of the village in flood contained in the NWBC Bourne Brook Catchment & Flood Alleviation Study, Fillongley, North Warwickshire – July 2010 **(Document 7).**

Therefore, even a small rise in runoff together with additional debris from the development could mean that the village floods on a regular basis. The Applicant has confirmed in its Drainage Strategy that there will be an increase in runoff. However, we are not aware any account has been included in the Applicant's Flood Risk Assessment of the additional runoff from the M6 motorway. The runoff from the M6 runs downhill through the Applicant's proposed development site into the centre of the village. We have seen a number of tables including one taken from The Bourne Brook Catchment & Flood Alleviation Study page 12 (**Document 8)** which states that the M6 contributes up to eighteen percent of the overall runoff catchment in a 1 in 100-year event through to fifteen percent in a 10-year event. Clarification from BWB is clearly needed on this point as to whether any runoff from the M6 has been considered in their modelling and if so, what is the cumulative effect of runoff from both the Solar Farm and M6 Motorway. The FFG believe that the data relied upon by BWB does not give an accurate reflection of the reality of flooding in the village and raising water levels.

In addition, the FFG understands that the erection of the Solar Farm will increase the risk of flooding initially at the construction stage when the ground will have been compacted and "the trees cut down" (paragraph 8.59 of the Fillongley Solar farm Planning Statement February 2023). We are unsure from the report whether it is 30 or 300 trees due to the typo in the report. The time estimate given for the construction of the site is 3 to 6 months. However, we are aware similar projects of this scale can take up to 18 months to complete. The flood of July 2007 arose after a period of dry weather when the ground was compacted and unable to saturate the heavy rain. The FFG fear this will happen again especially as this was pointed out to us by the Flood Resilience Team at Warwickshire County Council.

Further we understand that once the site has been constructed trees and hedgerows are to be planted around the site to provide screening (Landscape Visual Appraisal and Landscape Strategy Plan). Ordinarily trees and hedgerows are helpful in preventing flooding however the planting has to be in the right place. Two watercourses run through the Solar Farm downhill and converge at the historical site of the remains of the

medieval castle and then on towards the culvert. Therefore, the revised designs **(Document 9 – Landscape Strategy plan)** put forward by the Applicant to help with screening and biodiversity create a problem, in terms of excess debris which is turn will increase the risk of flooding in Fillongley as the trash screen at the culvert collects debris **(Document 3)** and causes a build-up of water. We also understand that from time-to-time trees and foliage from the proposed development will have to be cut down so that they do not cover the solar panels.

The Applicant will argue that the interception swales as outlined in their Drainage Strategy dated November 2023 will be added to their site which will help with any runoff from the site. There is at pages 14 & 15 (**Document 10)** of their Drainage Strategy confirmation that there will be an increase in run-off although they believe that to be negligible, and the swales will assist with this. However, if the swales are blocked with debris, they have admitted at paragraph 3.17 of the Drainage Strategy that **"In the event of exceedance of the proposed swales, exceedance flows will follow the existing topography either into the nearby watercourses or off site."** The FFG do not believe that SuDs Maintenance Schedule for Swales at page 18 **(Document 11)** of the Drainage Strategy provides adequate maintenance and monitoring. For example, removing litter and debris from the swales "once a month or as required" is too open ended and could easily lead to excessive debris entering the watercourses. As a flood group we are weekly, sometimes several times a day, clearing debris from the trash screen. Further the Applicant's Flood Risk Assessment states at paragraph 4.6 that "the proposed fences around the perimeter of the proposed development should be designed such that water can flow freely through the fence **where possible**, particularly within the regions indicated to be as risk of flooding. They should be appropriately inspected and maintained **following flood events** especially **to prevent the accumulation of debris**." Clearly this paragraph is a recognition that there will be debris but to suggest that the fencing should be inspected just after a flood event is a nonsense. It maybe helpful to the Applicant to inspect the fencing after a flood event but not the village. Clearly another indicator that the proposed development increases the risk of debris accumulating and increasing the risk of the village flooding on a regular basis. The debris needs to be cleared constantly not just after a flood event. We understand from the Drainage Statement that the Applicant, who is based in Reading, proposes to maintain the site. We would therefore like to know what the Applicant's proposals are for maintaining the site. Clarification on this issue is needed from the Applicant.

We note that WCC Lead Local Flood Authority (LLFA) has withdrawn its objection with conditions to the development. However, we note that there was no site visit or visit to Fillongley (Flood Zone 2 or 3), by the LLFA, only consultation with BWB Consultants by email and a teleconference in July 2023. Further the Applicant has submitted revised plans in terms of planting and screening which run along the watercourse (see objections raised by FFG above) but there appears to have been no further consultation between the BWB Consultants and the LLFA. Further no consultation with the FFG was sought by the LLFA on the conditions that they have raised. Clarification on this issue is needed both from the LLFA and the Applicant.

Designated Heritage Assets

You will see from the photographs of the 2007 flood at **Document 7** that when Fillongley flooded several designated heritage assets in the Fillongley Conservation were flooded (FCA) including Little Bell Cottage, Bell Cottage, The Manor House Pub and barn. These buildings are identified in the Heritage and Archaeology Assessment as part of "the old village core" which characterises the Fillongley Conservation Village. Therefore, we disagree with the statement on page (iii) of the Heritage & Archaeology Assessment that there will be "no direct physical impact on designated Heritage assets as a result of the proposal." These properties are to be put at risk from the increased flooding risk arising from the development, and this goes against the Planning (Listed Buildings & Conservation Areas) Act 1990 and in contravention of the NPPF and the North Warwickshire Local Plan.

Conclusion

1. We believe that the modelling and data provide by the Applicant gives a slanted impression of the flood risk arising from the proposed development. Further there are still a number of outstanding questions remaining. We do have a site visit, which we have requested, on Monday 4th March but we do not feel that we will have adequate time to consider all the issues that may arise from the site visit or enquiries that have to be made with the LLFA. We would ask that this matter be heard in May 2024 which would allow us time to have clarification on the issues we have raised.

2. However, if you are not prepared to adjourn the planning meeting, we currently believe that the development will increase the flood risk to the village. Further we do not accept that the measures put forward by the Applicant in terms of betterment will mitigate the flood risk. There has been no offer of funding of the Timeview Telemetry for 40 years which historically has been paid for by grants from our Councillors. There has been no proposal for funding for automated trash screens including installation or alleviation ponds on site.

3. We appreciate that NWBC will benefit from 75,000 per annum in business rates from the development but there is a significant monetary effect from the increased flood risk which will affect not just the village of Fillongley but NWBC, WCC and the public services required to deal with the flooding. We are also acutely aware from high insurance rates even with the existence of Flood Re that this burden will be passed on to the taxpayer.

4. Several businesses in Fillongley that used to exist including the Post Office, Village Shop, Florist, and Hairdressers were all flooded and no longer exist. The Manor House Pub is also failing from under investment from the brewery and we can only imagine that further flooding may shut its doors forever.

5. Any increased flooding to the village will have an impact on house prices not just for the properties that have been flooded but for those houses that are affected by flood risk mapping. Furthermore, the whole village will acquire a reputation for flooding.

6. "The NPPF does not, therefore, say that it is automatic or inevitable that the wider benefits of renewable energy will always constitute 'special circumstances,' only that they **may** do so. That must mean an Applicant will still need to demonstrate that, in the specific circumstances of the site in question, those benefits clearly outweigh the damage done to the Green Belt. "(Jeremy Wright MP. KC). We would argue that the proposed development would cause damage to the Green Belt, the Conservation village as well as designated heritage assets.

7. Finally, if the planning committee have not been persuaded by our objections and those of other objectors that this site is inappropriate for the said development then we would ask that as well as the conditions imposed by the WCC (LLFA) the Applicant is subject to a section 106 agreement that Enviromena provide before work on the development commences the following:

    a. An automated trash screen at the culvert in Fillongley;
    b. An automated trash screen further upstream in Fillongley with advice from the WCC Flood Resilience Team;
    c. Enters into a contractual agreement to fund for the length of the development the Timeview Telemetry;
    d. Builds attenuation ponds on the site with advice from WCC Flood Resilience Team.

Thank you.

Yours sincerely,

The Fillongley Flood Group

Enc. As above

Timeview Telemetry

receiving and forwarding time series data and alarms

Pat Kenrick

- Logout
- Change Password
- User Guide

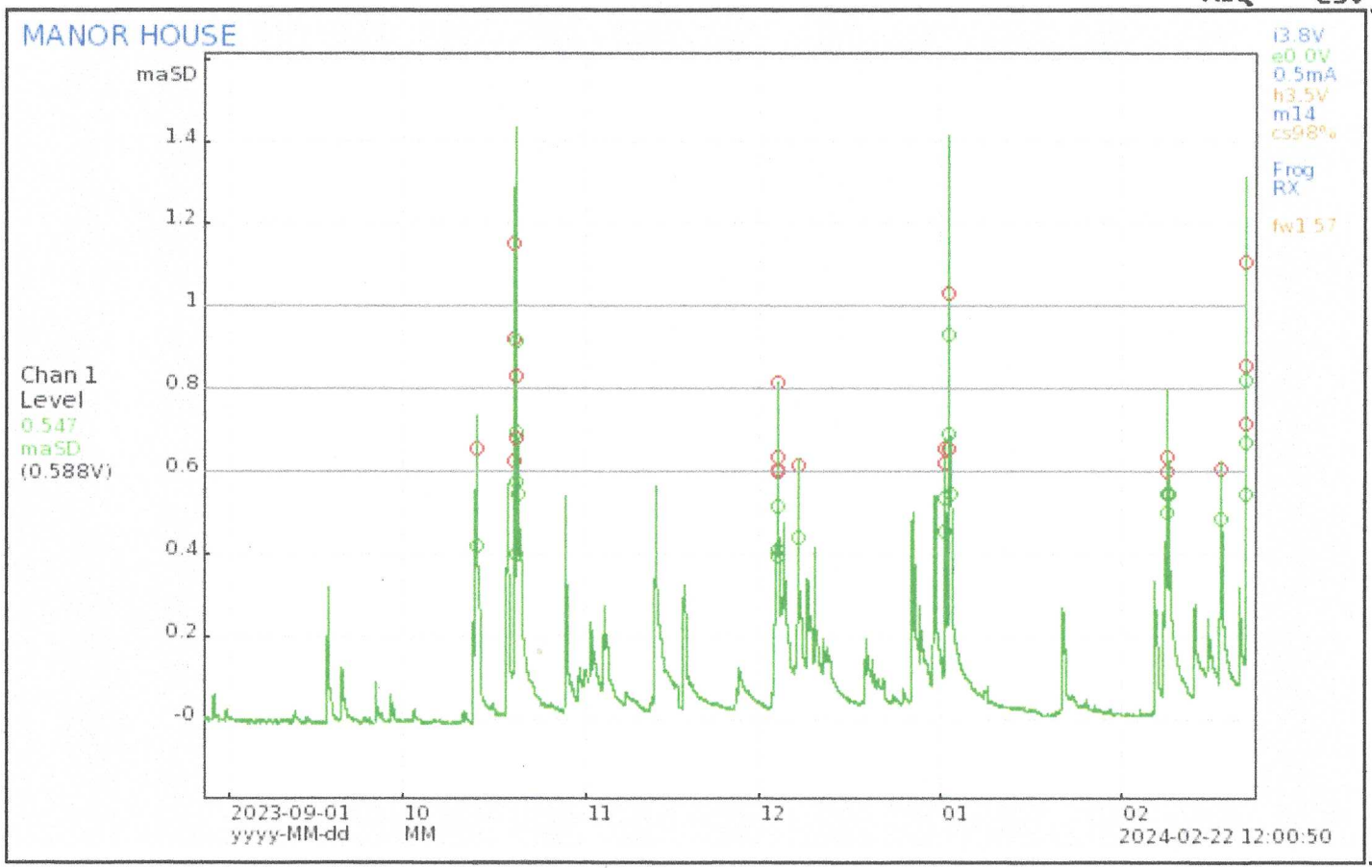
Feb 23 2024 12:09 GMT

View

- List Latest
- Map View
- Alarms
- List Stations
- Timeview DBi
- Logger Search
- Overdue Checkins

Logger Profile Daily Checkin 0800 0900

XDQ CSV View Configuration



View Data

Date Range:
- 1 Day
- 3 Days
- 5 Days
- 7 Days
- 4 Weeks
- 3 Months
- • 6 Months
- 1 Year

Display:
- • Graph (Static)
- Logger Properties
- Channel Properties
- Graph (Dynamic)
- Table View
- Logger Status

Channel:
- • 1 - Level

Account	Group	Data Number	Serial No
Fillongley	FILLONGLEY	882360001712473	203A6F

Document 2 – Photos of Volunteers Clearing Culvert

Document 3 – Photograph of Culvert Blocked with Debris

Document 5 – Debris taken out of Culvert – 22 Feb 24

Document 6 - Aerial footage taken by Drone – 20th October 2023

July 2007

Document 7

4 Impact of the M6 Motorway

As built construction drawings of the M6 were provided to NWBC by the Highways Agency, Management Agency Contractor for Area 9 (MAC9). At the time of request Optima were the MAC 9 agent, who has since been replaced by Amey Highways. This information has enabled more concise analysis to be undertaken of the contributing area of the M6 to the catchment.

An analysis has been carried out of the contribution to the overall catchment runoff of the M6 motorway.

	Catchment Inflows				
	100 Yr (m3/s)	**75 Yr (m3/s)**	**50 Yr (m3/s)**	**25 Yr (m3/s)**	**10 Yr (m3/s)**
Total Inflows	4.2	4	3.6	3.1	2.4
Motorway Runoff Contribution	0.76	0.7	0.62	0.5	0.37
Percentage Contribution from Motorway	18%	18%	17%	16%	15%

Table 2 – Percentage runoff contribution from M6 motorway

This table shows that the contribution from the M6 motorway is significant but it is not the main source of runoff in the catchment. The model has been simulated with a 100 year event with all of the motorway contribution removed. This was not sufficient to prevent flooding from occurring but did reduce the impact.

Recommended Action: - flood routing from the M6 should be examined in more detail. A possible solution would be to ascertain if there was sufficient space within the confines of the M6 boundary to provide a swale or pond storage system to attenuate the flows.

As an alternative, negotiations should take place with the MAC 9 agent to provide a percentage of the costs towards flood alleviation works elsewhere. There is currently no legal obligation for the Highways Agency to make a contribution for motorway runoff and the right of connection to the watercourse cannot be removed.

Document 11

BWB

4. MAINTENANCE

4.1 The SuDS Manual maintenance schedule for swales, is shown in **Table 4.1**.

Table 4.1: The SuDS Manual Typical Maintenance Schedule for Swales

Maintenance Schedule	Typical Frequency	Required Action
Regular Maintenance	Monthly	• Inspect inlets, outlets, and overflows for blockages, and clear if required.
	Monthly (or as required)	• Remove litter and debris; and • Inspect infiltration surfaces for ponding, compaction, silt accumulation, record areas where water is ponding for > 48 hours.
	Monthly (during growing season), or as required	• Cut grass – to retain grass height within specified design range.
	Monthly for first year then as required	• Manage other vegetation and remove nuisance plants.
	Monthly for 6 months, quarterly for 2 years, then half yearly	• Inspect vegetation coverage.
	Half yearly	• Inspect inlets and facility surface for silt accumulation, establish appropriate silt removal frequencies.
Occasional Maintenance	As required or if bare soil is exposed over > 10% of the swale treatment area	• Reseed areas of poor vegetation growth, alter plant types to better suit conditions, if required.
Remedial Action	As required	• Repair erosion or other damage by re-turfing or reseeding; • Relevel uneven surfaces and reinstate design levels; • Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface; • Remove build-up of sediment on upstream gravel trench, flow spreader or at top of filter strip; and • Remove and dispose of oils or petrol residues using safe standard practices.

8th July 2024

URGENT

Dear Sir,

PAP/2023/0071 – OBJECTION

Further to our email of 5th July the Fillongley Flood Group (FFG) assume that the Planning Board is proceedings with the above application as we have not heard to the contrary. In readiness for the Planning Board tonight we enclose the following: -

1. Letter of Objection of 4th March with enclosures;
2. Email from GWP dated 16th April 2024;
3. Report From Edenvale Young Associates Limited (EY);
4. Timeline from 4th March to 4th July for FFG;
5. Screenshot from Enviromena website.

The FFG's original concerns as outlined in our letter of 4th March 2023 have not changed. You are aware that the FFG undertook a site visit with the LLFA on 18th March alongside the Applicant and their hydrologists. We received two letters from the LLFA dated 3rd April and 30th May 2024 which you kindly forwarded to us. The FFG asked many of the same questions of the Applicant again on the site visit that we had raised on 4th March 2024. Many of the answers were left open ended once again. For example, we asked about the maintenance of the site, who would be maintaining it, what would happen to the debris from the cut down trees, how would the Applicant stop the debris from cut trees and hedges going into the watercourse, who would be cleaning out the swales and the answer was "it will be in the Management Plan which has not yet been prepared".

The FFG asked the LLFA what would happen if the Applicant was in breach of their conditions & they said that the FFG would have to let them know. However, the Applicant pointed out that the FFG would not be allowed on the land as we would be trespassing. The FFG asked the LLFA how any breaches would be enforced by the LLFA they said it is a long and expensive process. Clearly when properties are been flooded and homes left uninhabitable this is not a satisfy solution.

The FFG asked the Applicant and the hydrologists to consider putting in place attenuation ponds. The Applicant did inform us on 9th April that they were prepared to include attenuation ponds/detention basins but we could not consider these with our hydrologist until we had seen the plans and revised Flood Risk Assessment and Drainage Strategy which came available to view on the planning portal on 14th May 2024. We informed our Hydrologist GWP of this but on 23rd May GWP confirmed that they could not complete a report in time for the planning board on 8th June. They recommended EYA and we instructed them the next day.

EYA were not able to access the planning portal due to an internal server error and you kindly sent the revised FRA & DS on 13th June. That was rather unsatisfactory as our expert could not get a clear view of all the documentation to date. Our expert has therefore only had 14 days to prepare his report after

seeing that documentation. Our expert has confirmed several issues which mean that we cannot agree to this application. You have the report but the key issues for us are as follows: -

1. No calculation has been made of the runoff from the M6.
2. "The swales as shown will not reduce the runoff rates anticipated. The design should be developed to ensure that the water is captured and managed such by infiltration check dams, and that the overflow mechanism, is predicted and illustrated. The swales do not manage runoff as presently shown and would simply convey flows to the lowest points and cause unchecked erosion ad silt mobilisation".
3. The detention basins as shown will not attenuate flows in the existing watercourses.

Therefore, we believe that the Applicant and the LLFA for that matter are in breach of the WCC Local Flood Risk Management Strategy, April 2016. Please see paragraphs 3.63, 5.25, and measure 5B and 5D below.

3.6.3 New Development

New development has the potential to increase surface water runoff through new impermeable hard surfaces that reduce the ability of rainfall to soak into the ground. Unless managed, this can increase the volume of runoff, potentially increasing surface water flood risk. The National Planning Policy Framework (NPPF) and its associated guidance require new developments to be designed such that they do not increase local flood risk. This includes provision of adequate drainage infrastructure to ensure surface water runoff is appropriately managed. This is supported by the Non-Statutory Technical Standards for Sustainable Drainage (Defra, March 2015) that set out the requirements for drainage of major development. The Local Authority SuDS Officer organisation has also published best practice guidance that builds upon these standards to aid their interpretation. 36 While new development should not increase flood risk off-site, there may be occasions when areas of land are currently subject to flooding, but have yet to be developed. These have not been identified as locations of priority for investigation by WCC, since there is currently low flood risk due to the absence of buildings, for example. Such situations where known flooding exists should be investigated by the Developer in order to avoid any increase in flood risk due to the construction of new potential receptors of flood water. The Developer will determine the source, i.e. overland flooding caused by unmaintained ditches, unauthorised outfalls discharging to ditches/watercourses. This may include investigation of drainage systems to establish their structural status and whether the removal of debris or blockages is needed. If these investigations involve highway and/or public sewers, then authorisation should be obtained from the appropriate authority. It may be necessary in some instances to undertake a wider investigation involving a catchment assessment. Depending on the outcome of the investigations, the developer may present the findings to the planners or the organisation responsible for the source of the flooding. Equally, the Local Planning Authority may seek contributions or choose a Section 106 agreement to ensure that improvement works are undertaken. WCC actively seeks that new development offers betterment with regard to flood risk in order to mitigate the potential negative flood risk impacts of development. In addition new development must ensure that it is compliant with local planning policy that is developed by each Local Planning Authority in Warwickshire. Draft Planning Advice has been included in Appendix G of this document and this will be developed during 2016 into a supplementary planning document for adoption by local planning authorities.

5.2.5 Developers

Developers are responsible for properly considering flood risk to ensure occupants of new developments are not put at risk and to ensure the risk of flooding is not increased elsewhere. Developers must undertake a robust assessment of the flood risk using the best available data in order

to accurately characterise the risk and mitigate this risk where necessary. As the LLFA, WCC will work to address flood risk and development. WCC actively seeks new development to offer betterment with regard to flood risk to mitigate the risk they can pose (see Section 3.6.3 above).

Objective 5: Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development.

Measure 5A: To work with partners to produce local policies and guidance, and set standards to promote a positive impact on flood risk from new development, and to prevent any increase in flood risk, including the possible impacts of climate change.

Measure 5B: To maximise opportunities for contributions towards existing and proposed flood risk management from new development to address local flood risk.

Measure 5C: Develop byelaws, where beneficial, to control development.

Measure 5D: Work with relevant partners to promote SuDS measures for new developments through the role as a statutory consultee on major planning applications.

In a nutshell not only is there no betterment but the swales which are a condition imposed by the LLFA don't do what they are supposed to do.

Finally, we are also concerned about the viability of Enviromena. We are not sure whether it is a planning concern but given the difficulties of Daw Mill we would have thought that the planning department would have completed a due diligence process. We have just started looking at the accounts at Companies House and the restructuring that has taken place. We were also concerned about the amount of debt that hangs/hung over the Company. We suggest that this might be investigated given that Enviromena recently sold three solar PV developments to Black Finch Energy (see attached Screen Shot). We appreciate that section 106 agreements must be honoured by English based companies but how enforceable are they if the site is sold on to a company where the section 106 agreements cannot be enforced.

Yours sincerely,

The Fillongley Flood Group

Enc. As above

[redacted]

Hi, quick one:

https://api.warwickshire.gov.uk/documents/WCCC-1039-29

specifically, see sections:

- 3.6.3 – key word is 'betterment'. But this section also describes the process that developers should undertake to identify flood risk and the source of flooding. It seems your developer does not even understand the baseline (existing) level of flood risk in or adjacent to your site.
- Section 5.2.5 – key word is 'betterment'
- Measure 5B and 5D (page 27) – there doesn't seem to be much detail on these measures.

Cheers

[redacted]

[redacted]

[redacted]

I hope you are well. I don't know whether you and your Team were able to look at the planning application for a Solar Farm in Fillongley last week. Since I was last emailed you on 5th April 2024 I have received an email from the developer on 9th April. Please see below. The Fillongley Flood Group are planning to meet tonight and it would be useful to know if you have any thoughts on the above application. I will try and call you later this afternoon as I need to report back to the Flood Group Committee members.

Kind regards,

[redacted]

I hope you are well.

Application PAP/2023/0071 4th July 2024

Proposed Solar Farm South of Park House Farm, Meriden Road, Fillongley

Review of Drainage Strategy, Flood Risk Assessment and LLFA Consultation Response for Fillongley Flood Group

1 Introduction

Fillongley Flood Group (FFG) has been established to help reduce the impact of flooding in Fillongley, due to property having been flooded on frequent occasions. One of the many roles of the FFG is to remove debris from a screen in the village to reduce the consequences of blockage. This is a dangerous and disruptive activity.

A planning application has been submitted for a 62ha solar farm upstream of the village, and the FFG is concerned about the increased risk of flooding to the village. FFG has engaged with the Developer, their flood risk Consultants (BWB) and the Lead Local Flood Authority (LLFA) to seek to ensure that the opportunity is taken to reduce flood risk, in line with Paragraph 170b of the NPPF and Warwickshire County Council Local Flood Risk Management Strategy, April 2016. FFG has explained that the Motorway discharges into watercourses upstream of the propsoed solar farm, and despite expectations that runoff would be attenuated in line with policies, Highways England did not incorporate attenuation on their discharges, exacerbating flood risk in the village.

In light of the concern about the potential increased flood risk, FFG has sought to try and ensure that if consented the solar farm incorporates appropriate measures to reduce flood risk (in line with Para 170b of the NPPF and the LLFA policy). It seems that the Developer has been sympathetic to this concern and has included ponds and swales in their proposal. In recognition of this the LLFA has recommended planning conditions to ensure that they have the opportunity to approve the detailed design, that the surface water drainage works is verified on completion and that there is a detailed site-specific maintenance plan in place.

The Planning Authority is reluctant to engage in enforcement of these requirements, so getting the works designed, built and managed properly and as approved, in cooperation with the Developer, is an important objective.

FFG has asked Edenvale Young (EVY) to inspect the Flood Risk Assessment (FRA), Drainage Strategy (DS) (both dated 30th April 2024 by the LPA) and the LLFA Consultation Response dated 30th May 2024 and provide comments on the proposals. Our comments are based on our experience of advising on over 100 solar farms designed in the past, including some of the largest in the country. We have run through the documents, including BWB Plan 0001/P07 and have the following comments, with the relevant clause numbers; it is important to emphasise that the Developer and their advisors remain fully responsible for the proposals.

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As a general comment, solar farms are expected to allow the soil characteristics to improve through the absence of ploughing and the establishment of vegetation. Solar farms are also recognised for becoming havens for wildlife, especially when compared with fields sprayed with nutrients and pesticides. During the construction phase there are risks of increased runoff, and Paragraph 170b of the NPPF expects development to reduce the risk of flooding, especially when downstream flooding is predicted and the receiving watercourse is considered 'sensitive', as at Fillongley. However, as the solar farm is supposed to be restored to the former fields after its lifetime, the extent of 'civil engineering' should be reasonable. But noting that the new NPPF allows the lifetime of renewable energy sites to be extended (NPPF Paragraph 163c), this possibility and the predicted increase in runoff due to climate change needs to be borne in mind.

The following sections follow an assessment of the relevant documents and the related paragraph numbers.

2 FRA P07 29th April 2024

1 3.12 etc We are surprised that the reference to historic downstream flooding is treated so lightly and not introduced early in the report to highlight the known flood risk to Fillongley. The clause refers to 'understood' whereas flooding in Fillongley is shown on the flood maps and it is referred to in the press and on the internet. The NPPF states at 170b that development should reduce flood risk overall (also referred to in the LLFA policy) – we are surprised that the FRA does not highlight this paragraph when it copies so many other references.

2 4.10 The FRA refers to a series of detention basins alongside the Ordinary Watercourses (OWs). These are dealt with in more detail in the DS.

3 4.13 The basins provide additional mitigation to the swales – again, the detail is in the DS.

4 5.6 This clause refers to runoff rate reduction 'above and beyond', implying exceptional mitigation measures, and yet the NPPF and LLFA expect development to reduce flood risk (Para 170b); it should not be considered exceptional. The proposals should also recognise site-specific circumstances.

5 5.9 The statement 'will not increase flood risk to the wider catchment' depends on the details of the mitigation, which are not covered in the FRA, but in the DS.

6 The FRA does not describe the existing fields and their use/character, nor does it consider the predicted permeability of the soil. The proposed vegetation is not discussed, nor the virtues it might bring. The DS doesn't cover this either.

3 Drainage Strategy (DS) dated 25th April 2024 P07

7 1.8 There is no reference to potential runoff from the Motorway entering the Site and what potential impact the detention basins might have – even broadly.

8 1.11 ii The proposed grazing by livestock needs more specification. It is conventional to allow low density occasional sheep to reduce grass level. The intensity is reduced to prevent areas becoming denuded and the soil compacted, which would result in increased runoff. Recognised guidance should be referred to and confirmed.

9 1.11 iii We agree that gravel drains are not sustainable, not practical, nor realistically restored at the end of the lifetime. Swales as in b are appropriate.

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10 1.15 This refers to the policy for reducing flood risk overall (Para170b of the NPPF), but without the policy reference being given.

11 2.2 Does not define the existing nature of the agricultural land – is it arable or used for grazing? What are the consequences of the change to solar farm?

12 2.8 Geology – this section does not consider the soil characteristics – see Soilscapes viewer page below – showing that the soil has slightly impeded permeability (consistent with the presence of watercourses).

13 3.19 We would expect all tracks to be permeable. Type 1 is not normally considered to be permeable – usually permeable granular material should have 30% voids. Tramlines in fields are noted to result in a significant proportion of the runoff.

14 3.24 etc I have no concerns about the increased runoff from the transformers/inverters etc in this context. Its de minimus.

15 3.35 States that the swales should be installed 'early on' – they should be done as a first activity after the fencing, to aid capture and management of runoff during the trafficking and construction activities.

16 3.31 etc Whilst the swales are welcomed, and although the FRA says they will have 0.4m3/m storage, the survey highlights undulations in the terrain, and the consequences have not been considered (ie the sales do not follow contours). So the water will flow out of the swales at low points which have not been identified, nor have the flow routes been identified. We suspect water entering the swales would flow to the lowest point and spill into the nearest watercourse, especially as they are only 300mm deep overall. As described, these swales will make little difference in this case due to the absence of storage capability. Check dams could be considered to mobilise storage and activate infiltration, subject to tests.

17 3.38 No objection to infiltration trenches.

18 3.41 There is no description of how water enters the basins from the watercourses, how the storage in the basins is mobilised, or what virtues the basins would bring in terms of reduced flows, estimated return periods, etc. Whilst detailed calculations are not expected at planning stage, an estimate/judgment of the benefits would be helpful for the FFG's expectations. A pipe acting as a side-weir is likely to intercept very little flow and what does leave the watercourse will run through the pond and re-enter the watercourse. The ability for the side offtake to manage flows and the mobilisation of flows needs explanation (ie will a flow control device be introduced?). As described, the basins will make no difference to site runoff.

4 LLFA recommended Planning Conditions dated 30th May 2024

The three recommended conditions which require soakaway testing and detailed design, verification report and maintenance schedule to be approved are welcomed. These should be incorporated in the Decision Notice if approved, and Discharged appropriately following assessment.

5 Conclusions

Based on the above review we advise that the following are ensured;

19 The swale design as shown will not reduce the runoff rates anticipated. The design should be developed to ensure that water is captured and managed – such as by infiltration with check dams, and that the overflow mechanism is predicted and

illustrated. The swales do not manage runoff as presently shown and would simply convey flows to the lowest points and cause unchecked erosion and silt mobilisation.

20 The detention basins as shown will not attenuate flows in the existing watercourses. The inlets need to be designed to receive water from the watercourses and the outlets designed to mobilise storage – they do not, as presently shown. An indication of the benefits delivered by these ponds should be given, to provide monitoring.

21 The scale and duration of grazing should be specified to ensure that the vegetation is effective in managing runoff.

22 Tracks should be formed in permeable granular material, usually expected to have 30% voids.

23 A project programme should be submitted showing the detention basins and swales installed as a first stage to bring benefits during construction.

24 It is customary to ensure that the fields are vegetated prior to trafficking and the commencement of construction, and that trafficking is avoiding in wet conditions when the soil characteristics in the long term can be damaged.

25 It is important to FFG and the community of Fillongley that the LLFA ensures that recommended planning conditions are included in the Decision Notice, if approved, and that the conditions are fully considered by the LLFA prior to being Discharged.

26 On other solar farms the Developer has agreed to have an annual walkaround with the community group to promote good relations and show that the maintenance is being undertaken. We suggest that FFG seeks to agree this with the Operator.

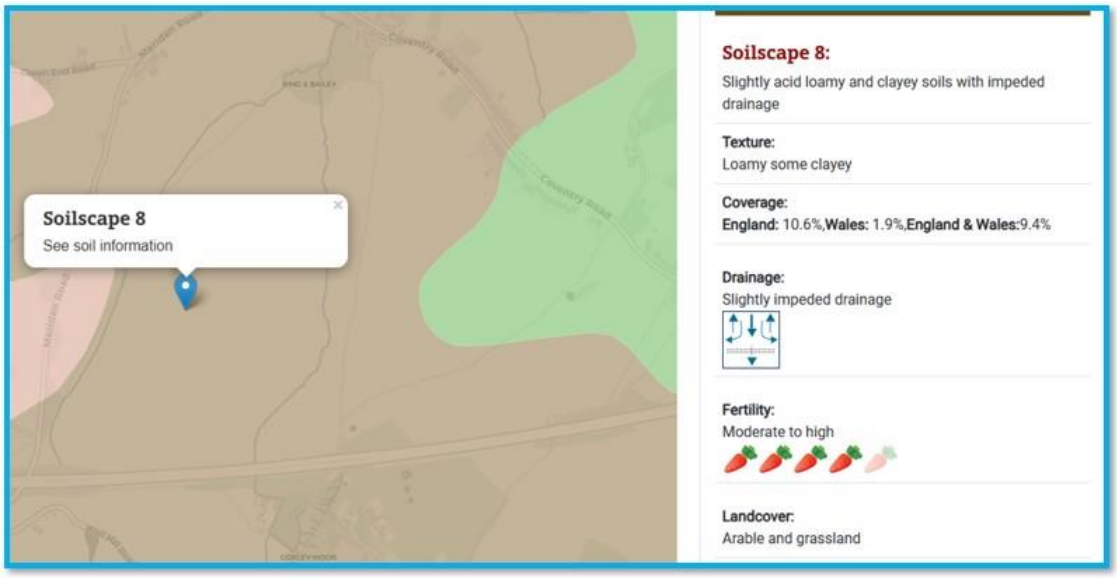

Image from Soilscapes website showing soil infiltration slightly impeded, and quite fertile soil.

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Timeline Since 4th March to 4th July for FFG

04.03.24	**FFG Site visit pm. Planning Board meeting. PB deferred at meeting.**
09.03.24	**FFG Meeting.**
15.03.24	**FFG instruct GWP(Hydrologist).**
18.03.24	**FFG site visit with LLFA & Applicant.**
23.3.24	**FFG Meeting.**
03.4.24	**FFG receive LLFA from PO dated 03.04.24.**
04.03.24	**FFG send letter to GWP.**
16.3.24	**FFG Meeting.**
14.5.24	**New documents including DS & FRA available to view on planning portal.**
21.5.24	**FFG Meeting.**
23.5.24	**GWP confirm they cannot complete report in time for PB in June & recommend Edenvale Young Associates Ltd (EYA).**
24.5.24	**FFG instruct EYA.**
24.5.24	**FFG request an extension of time from PO to allow EYA to prepare his report. Extension granted but PO request confirmation as to whether FFG object by 29.5.24 (2 working days due to Bank Holiday).**
30.5.24	**FFG confirm to PO that it would be unfair to expect EYA to advise after 2 working days.**
31.5.24	**PO emails letter from LLFA dated 14.5.24 for FFG to forward to EYA.**
13.6.24	**PO chasing FFG. FFG confirm that FFG chased EYA on 31.5 & 5.6. EYA confirmed that he was unable to access the documents on the planning portal due to internal server error.**
13.6.24	**PO sends downloads of documents to FFG to forward to EYA.**
24.6.24	**FFG Meeting.**
04.7.24	**EYA provides Report. (21 days & only 14 days working days after receiving documents from PO).**

4.6.24 **FFG Meeting. FFG notice EYA Report makes no reference to Landscape Plan or Strategy, but FFG note this is missing from documents sent by PO.**

ENVIROMENA EXTENDS UK SOLAR PARTNERSHIP WITH BLACKFINCH

UK-based developer Enviromena Power Systems has sold another three solar PV developments to Blackfinch Energy, part of Blackfinch Group , under their existing partnership in the UK.

The transaction includes the 17.88 MWp Kiln Fields, 24.18 MWp Horsey Levels, and 11.8 MWp Cruxton Farm solar projects in Hampshire, Somerset, and Dorset, respectively.

Together, the projects will comprise over 100,000 monocrystalline bifacial solar modules, with an expected production capacity of over 61 GWh per annum — enough to power approximately 21,100 averaged-sized UK homes.

All three solar farms have been submitted to the UK Planning Inspectorate and Enviromena has already received planning permission for Horsey Levels.

With this transaction, Enviromena has now divested four UK solar PV projects to Blackfinch Energy, after the 25 MW Three Maids Hill solar farm in Hampshire, which Enviromena's operations team is now successfully constructing.

"The sale of these three sites to Blackfinch represents another important milestone in Enviromena's history because we have now sold four sites out of our current 600 MW UK solar and battery storage development pipeline," commented Cabell Fisher, CEO of Enviromena.

"High-quality investors such as Blackfinch continue to prove the value of Enviromena's developed sites and I am proud of our team who continues to successfully bring bankable renewable projects in the UK and other key European countries to market."

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SENT BY EMAIL

Flood Risk Management
Warwickshire County Council
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FRMPlanning@warwickshire.gov.uk
www.warwickshire.gov.uk

[redacted]

03 April 2024

Dear Mr Brown

PROPOSAL: **Construction of a temporary Solar Farm providing 47.7 MW output, to include the installation of ground-mounted solar panels together with associated works, equipment, and necessary infrastructure**

LOCATION: **Land 800 Metres South Of Park House Farm, Meriden Road, Fillongley**

The Flood Risk Management Team as Lead Local Flood Authority have been asked to provide a brief report on their stance for the planning application 'Land 800 Metres South Of Park House Farm, Meriden Road, Fillongley'. As part of our role as statutory consultee in the planning process, we are consulted by Local Planning Authorities (in this instance North Warwickshire Borough Council) to comment on all 'major' applications from a flood risk and surface water drainage perspective.

Location

The proposed development site is on the land 800 meters south of Park House Farm, Meriden Road, Fillongley. The site is directly north of the M6 motorway and at its northern most boundary approximately 1km from the centre of Fillongley Village.

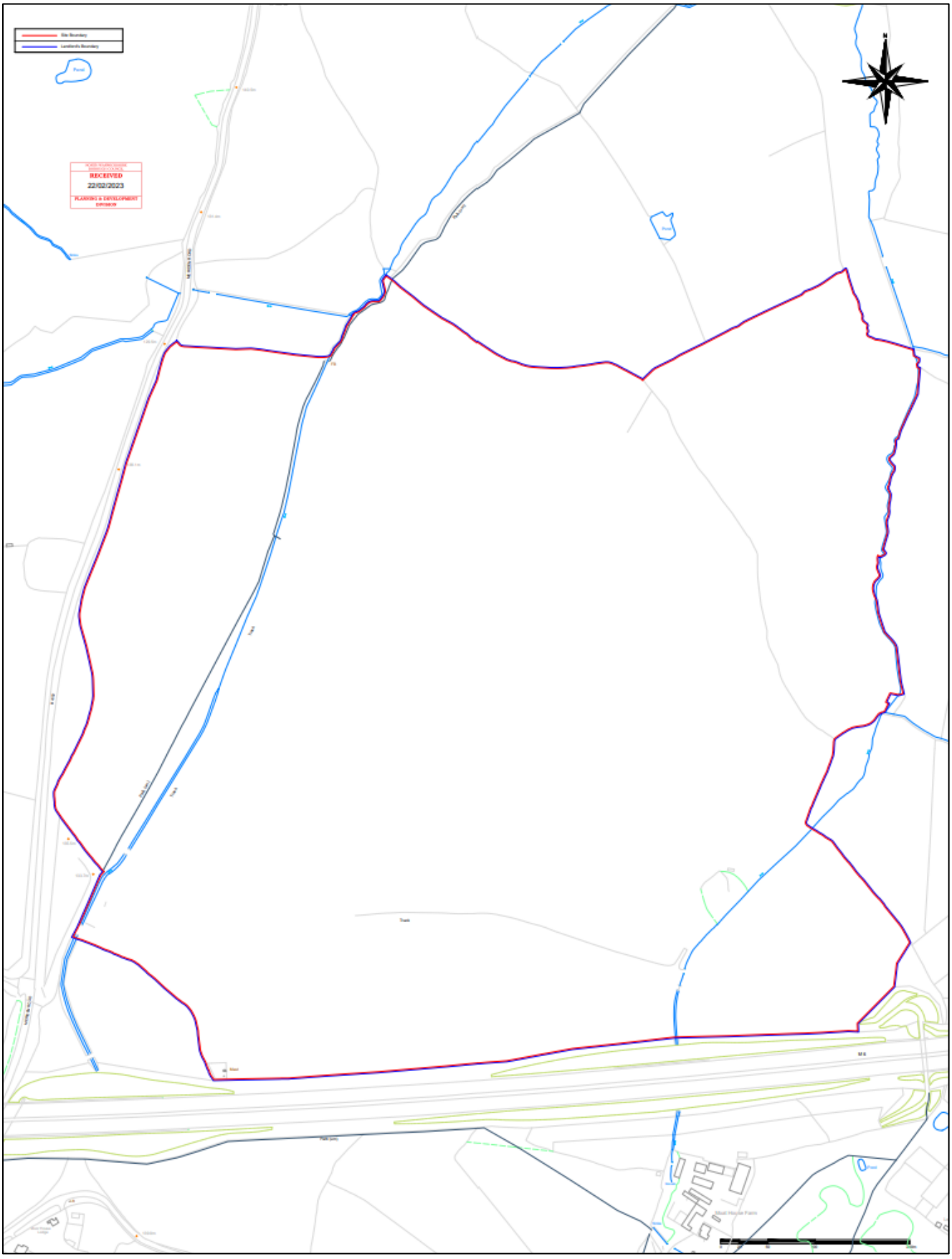

Figure 1: The red line boundary of the proposed solar farm, Fillongley.

LLFA Stance on the Development

The LLFA has been consulted on the proposed development since March 2023 and provided their last formal response on 27 October 2024. During this time the LLFA had multiple meetings with the applicant to discuss our initial objection and a telephone call with the Fillongley Flood Group to discuss their concerns with the proposal. Based on the information submitted in October 2024 the LLFA had no objection subject to the following conditions.

Condition

No development shall take place until a detailed surface water drainage scheme for the site, based on sustainable drainage principles has been submitted to and approved in writing by the Local Planning Authority in consultation with the LLFA. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. The scheme to be submitted shall:

1. *Undertake infiltration testing to clarify whether or not an infiltration type drainage strategy is an appropriate means of managing the surface water runoff from the site.*
2. *Provide drawings / plans illustrating the proposed sustainable surface water drainage scheme. The strategy agreed to date may be treated as a minimum and further source control SuDS should be considered during the detailed design stages as part of a 'SuDS management train' approach to provide additional benefits and resilience within the design.*
3. *Provide detail drawings including cross sections, of proposed features such as infiltration structures, attenuation features, and outfall structures. These should be feature-specific demonstrating that such the surface water drainage system(s) are designed in accordance with 'The SuDS Manual', CIRIA Report C753.*
4. *Provide detailed, network level calculations demonstrating the performance of the proposed system. This should include:*
    - *Suitable representation of the proposed drainage scheme, details of design criteria used (incl. consideration of a surcharged outfall), and justification of such criteria where relevant.*
    - *Results should demonstrate the performance of the drainage scheme including attenuation storage, potential flood volumes and network status. Results should be provided as a summary for each return period.*
5. *Provide plans such as external levels plans, supporting the exceedance and overland flow routeing provided to date. Such overland flow routing should:*
    - *Recognise that exceedance can occur during any storm event due to a number of factors therefore exceedance management should not rely on calculations demonstrating no flooding.*

Reason

To prevent the increased risk of flooding; to improve and protect water quality; and to improve habitat and amenity;

Condition

A Verification Report for the installed surface water drainage system for the site based on the approved Flood Risk Assessment (NFW-BWB-ZZ-XX-RP-YE-0001_FRA) has been submitted in writing by a suitably qualified independent drainage engineer and approved in writing by the Local Planning Authority prior to site completion and subsequent use. The details shall include:

1. *Demonstration that any departure from the agreed design is in keeping with the approved principles.*
2. *Any As-Built Drawings and accompanying photos*
3. *Results of any performance testing undertaken as a part of the application process.*
4. *Copies of any Statutory Approvals, such as Land Drainage Consent for Discharges etc.*

5. *Confirmation that the system is free from defects, damage and foreign objects.*

Reason
To secure the satisfactory drainage of the site in accordance with the agreed strategy, the NPPF and Local Planning Policy.

Condition
Prior to completion and subsequent use of the development shall take place until a detailed, site specific maintenance plan is provided to the LPA in consultation with the LLFA. Such maintenance plan should

1. *Provide the name of the party responsible, including contact name, address, email address and phone number*
2. *Include plans showing the locations of features requiring maintenance and how these should be accessed.*
3. *Provide details on how surface water each relevant feature shall be maintained and managed for the life time of the development.*
4. *Provide details of how site vegetation will be maintaining for the lifetime of the development.*
5. *Be of a nature to allow an operator, who has no prior knowledge of the scheme, to conduct the required routine maintenance.*

Reason
To ensure the future maintenance of the sustainable drainage structures.

Informatives for the next stage of design
As outlined within the condition, the strategy should be treated as a minimum at this stage of the design. Further consideration should be given during the next stage of the design to incorporate additional, localised source control SuDS as part of a 'SuDS management train' approach to provide water quality, amenity and bio-diversity benefits and increase the resilience within the design. Reference is also made to our Flood Risk Guidance for Development[i] (updated June 2023) with more details and examples of SuDS which can be incorporated at later stages of design.

At the 'discharge of condition' stage proposals for surface water drainage should be approaching a level of detail suitable for tender or construction. Documentation should show the drainage scheme including SuDS features, specific details (e.g. standard details or cross sections) and demonstrate the performance and of the system through calculations and exceedance management respectively. Such scheme should be in line with the original planning application/permission and where significant changes are made, justification should be provided.

Whilst the applicant had demonstrated the principles of an acceptable surface water management strategy for the proposed site, further information is still required to be submitted to the LLFA as detailed above before any development can take place. If the LLFA is not satisfied with the information submitted, they will not recommend that the Local Planning Authority (LPA) discharge the conditions.

Decision Meeting
The Board deferred determination on Monday 04 March 2024, on the grounds that clarification was required of the LLFA's response on the potential flood impacts arising from the development. The Flood Group circulated a letter on the morning of the Monday 04 March 2024, outlining their concerns with the proposed development. The applicant met the Group's

representatives on site later on in the afternoon, however requested a second site visit was carried out with the LLFA present.

At the Board meeting there were concerns that the LLFA had not visited the site and therefore the formal responses submitted by the LLFA were “desk-based”. The LLFA have no obligation to visit proposed development sites prior to reviewing the application. A decision was made that the LLFA would make an exception for this site given the relationship between the team and the Flood Action Group. It should be noted that this is not something the team typically do.

LLFA’s Requirements and the Applicant Response.

Whilst it is widely considered that greenfield solar farms have negligible impact regarding surface water runoff, the LLFA raise a number of points in Warwickshire County Council’s ‘Flood Risk & Sustainable Drainage Local guidance for developers’. The key points from this document and the applicant’s response and/or requirements are as follows:

- **Infiltration Testing**

Infiltration testing was carried out on site at 7 locations mutually agreed by the applicant and LLFA. The results of the infiltration testing showed that surface water naturally drains from the site via infiltration at varying rates.

- **Attenuation Features**

The LLFA require multi-functional above ground surface water attenuation features to be incorporated into the sites drainage scheme, with the purpose of capturing runoff from the solar panels. Ideally gravel filter trenches positioned under the drip line of each solar panel would be proposed to capture and store runoff from the panels. However, at a minimum there is a requirement to include above ground swales positioned strategically around the development to capture surface water runoff from the solar panels as water flows downslope.

The applicant has proposed the latter in that surface water runoff from impermeable areas will be captured by the proposed cut off swales located upstream from any offsite receptors of surface water runoff. Surface water captured by runoff swales will slowly infiltrate into the ground.

It is proposed that the interception swales will have 1:4 internal side slopes with a maximum design water depth of 300mm. The material excavated to install the swales will be applied to the downstream edge of the features to create an earth bund.

The proposed swales have been positioned outside of Flood Zone 3 and are also not anticipated to adversely displace any existing floodplains within the site as no level raising will be associated with the construction of the swales.

The inclusion of the swales within the development will act to provide a betterment to the existing surface water runoff rate and volume that will leave the site onto surrounding land and watercourses post-development.

- **Watercourse buffer strips**

Within the ‘Flood Risk Recommendations’ section of the SFRA it states that ‘An appropriate buffer strip must be maintained along fluvial corridors respectively, to ensure that maintenance of the channel can be undertaken;’. This has been agreed with the applicant.

- **Construction activities and soil compaction**

The applicant has stated they aim to restrict vehicular movements on site to designated access tracks. In doing so, the risk of soil compaction is minimised and limited to specific locations. The vehicular access tracks are also proposed to be permeable.

- **Vegetation management**

The applicant has specified what type of vegetation will be planted across the site and will provide details of how this will be maintained. The ideal situation is that vegetation is grassed and is kept reasonably high or grazed by livestock. Good vegetation cover will limit the transfer of sediments and slow the flow of water. The LLFA are waiting further details of how this will be maintained appropriately on site to ensure that no debris enters the watercourses.

Fillongley Flood Action Group

Following on from the COVID-19 pandemic, the Flood Risk Management Team at Warwickshire County Council contacted Fillongley Parish Council in February 2022 expressing our desire to reengage and to support the Flood Action Group in order to improve community engagement. Since then the LLFA have had a close working relationship with the group, attended the village on numerous occasions and held multi-agency meetings to discuss flood related issues with other partners. Therefore, as stated by the Flood Action Group, we as a team are aware of the flood risk in Fillongley.

One of the primary concerns of the Flood Action Group which the LLFA are fully aware of is the build-up of debris at the trash screen situated next to The Manor House Pub in the village. As part of our formal response, we have included a maintenance condition which requires the applicant to provide an in-depth site-specific plan providing details of how surface water and each feature will be maintained and managed for the lifetime of the development, along with details of who is responsible. This also includes a sub-point of how vegetation will be maintained. If during any point, there are concerns that the site is not being maintained as agreed, the LLFA will be able to contact the parties responsible to ensure that all works are being carried out.

LLFA's Site Visit

As previously stated the LLFA have no requirement to attend site visits for proposed developments, however an exception for this site was made.

An updated Landscape Strategy was presented to the LLFA on arrival at the site visit. This had not been submitted to the LLFA for review as the changes made did not have an impact on the proposed drainage strategy. It is worth noting that the updated Landscape Strategy Plan illustrated additional hedgerows and vegetation planting across the site which further mitigate flood risk by slowing the flow off run off travelling across the site towards the watercourses.

The Flood Action Group discussed possible Natural Flood Management (NFM) measures including attenuation ponds, that could be installed within the development site boundary. The LLFA would be willing to support the group in any future projects moving forward. Although mitigation measures here would not eliminate flood risk to Fillongley village, they may reduce the risk by an unknown quantity by holding back the volume of water entering the watercourses at times of significant rainfall. Any NFM projects would need to be discussed and agreed with

the landowner, It is believed that the applicant (Environmena) will take over ownership rights for the lifetime of the development.

Summary

A site visit to the land 800 meters south of Park House Farm, Meriden Road, Fillongley was made on Monday 18 March 2024 with attendance from the LLFA, the applicant (Enviromena), the drainage designers (BWB) and members of Fillongley Flood Action Group. The attendees walked the boundary of the site and discussed various concerns from the Flood Group, these were largely addressed on site by the applicant with the exception of a small number of questions which were taken away.

The LLFA were requested in attendance due to the Flood Groups concern that the no objection subject to conditions response submitted by the LLFA to the LPA on the 27 October 2023 was based solely on 'desk-based' assessment. The LLFA have no formal requirement to undertake site visits, however it was felt that the site visit was benifital for all parties to better understand the concerns of Fillongley Flood Action Group.

The National Planning Policy Framework (NPPF) and supporting Planning Practice Guidance (PPG) provides the overarching national policy and guidance relating to flood risk and sustainable drainage. It states that when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere.

Given this the LLFA position remains unchanged following on from the site visit to the proposed development site. The applicant has addressed all of the LLFA's points adequality at this stage in the planning process. Further details and information are still required to be submitted. If the LLFA are not satisfied with the information submitted, they will not recommend that the Local Planning Authority (LPA) discharge the conditions and no development should take place.

Yours sincerely,

[redacted]

App 4a - NFW-BWB-Z...
2.0 MB

1 Attachment

Show Image

[redacted]

I hope you are well.

We've not heard back from you since our previous email four weeks ago so just wanted to drop you a note with an update. As per my previous note, we have now tweaked our designs to incorporate three detention basins on the site which can be seen in the attached plan. We were keen to explore whether we could incorporate these following our discussions on site and the response back from the LLFA which references that features such as these would add further betterment on top of the plans already approved by the LLFA, and I'm pleased to demonstrate that we have managed to tweak our designs to include three of these on site.

Our updated drainage documents including these plans, the Drainage Strategy and the Flood Risk assessment has now been issued back to the LPA. We hope that this further enhancement to our plans demonstrates our appetite to work with the local community including the Flood Group to go above and beyond in helping support Fillongley Village in their battle against flooding.

Kind Regards,

[redacted]

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Reading, RG7 1JQ, United Kingdom
enviromena.com

[redacted]

We understand that you have now been formally re-consulted on the updated drainage plans and documents by NWBC and the revised documents are now available on the portal.

Whilst not a planning consideration, I'd like to speak with you in the next week or two regarding our offer to fund the flood alarm and discuss any other ways in which we can support Fillongley Flood Group's ongoing admirable efforts in protecting Fillongley from the effects of flooding. If you can share a contact number, it would be great to put some time aside for a chat in the next fortnight. Alternatively, please feel free to give me a call on my mobile to discuss. We could also accommodate a Teams call if that would work better for you.

Look forward to hearing from you.

Kind Regards,

[redacted]

Your ref: PAP/2023/0071
Our ref: WCC002749 R2/FRM/SR/002
Your letter received: 14/05/2024

SENT BY EMAIL

Flood Risk Management
Warwickshire County Council
Shire Hall
Warwick
Warwickshire

FRMPlanni
www.warwickshire.gov.uk

30 May 2024

Dear Mr Brown

PROPOSAL: **Construction of a temporary Solar Farm providing 47.7 MW output, to include the installation of ground-mounted solar panels together with associated works, equipment and necessary infrastructure**

LOCATION: **Land 800 Metres South Of Park House Farm, Meriden Road, Fillongley**

Warwickshire County Council as the Lead Local Flood Authority (LLFA) has reviewed the application which was received on the 14 May 2023. It understood that the applicant has update the drainage strategy to now include additional SuDS features. The LLFA's last response on 22 November 2023 was no objection subject to conditions, given that the drainage scheme on the proposed site has been improved, the LLFA has **No Objection** subject to the following conditions which remain.

Condition
No development shall take place until a detailed surface water drainage scheme for the site, based on sustainable drainage principles has been submitted to and approved in writing by the Local Planning Authority in consultation with the LLFA. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. The scheme to be submitted shall:

1. Undertake infiltration testing to clarify whether or not an infiltration type drainage strategy is an appropriate means of managing the surface water runoff from the site.
2. Provide drawings / plans illustrating the proposed sustainable surface water drainage scheme. The strategy agreed to date may be treated as a minimum and further source control SuDS should be considered during the detailed design stages as part of a 'SuDS management train' approach to provide additional benefits and resilience within the design.
3. Provide detail drawings including cross sections, of proposed features such as infiltration structures, attenuation features, and outfall structures. These should be feature-specific demonstrating that such the surface water drainage system(s) are designed in accordance with 'The SuDS Manual', CIRIA Report C753.
4. Provide detailed, network level calculations demonstrating the performance of the proposed

system. This should include:

a. Suitable representation of the proposed drainage scheme, details of design criteria used (incl. consideration of a surcharged outfall), and justification of such criteria where relevant.
b. Results should demonstrate the performance of the drainage scheme including attenuation storage, potential flood volumes and network status. Results should be provided as a summary for each return period.

5. Provide plans such as external levels plans, supporting the exceedance and overland flow routeing provided to date. Such overland flow routing should:
    a. Demonstrate how runoff will be directed through the development without exposing properties to flood risk.
    b. Recognise that exceedance can occur during any storm event due to a number of factors therefore exceedance management should not rely on calculations demonstrating no flooding.

Reason
To prevent the increased risk of flooding; to improve and protect water quality; and to improve habitat and amenity;

Condition
A Verification Report for the installed surface water drainage system for the site based on the approved Flood Risk Assessment (NFW-BWB-ZZ-XX-RP-YE-0001_FRA, rev P07) has been submitted in writing by a suitably qualified independent drainage engineer and approved in writing by the Local Planning Authority prior to site completion and subsequent use. The details shall include:

1. Demonstration that any departure from the agreed design is in keeping with the approved principles.
2. Any As-Built Drawings and accompanying photos
3. Results of any performance testing undertaken as a part of the application process.
4. Copies of any Statutory Approvals, such as Land Drainage Consent for Discharges etc.
5. Confirmation that the system is free from defects, damage and foreign objects.

Reason
To secure the satisfactory drainage of the site in accordance with the agreed strategy, the NPPF and Local Planning Policy.

Condition:
Prior to completion and subsequent use of the development shall take place until a detailed, site specific maintenance plan is provided to the LPA in consultation with the LLFA. Such maintenance plan should

1. Provide the name of the party responsible, including contact name, address, email address and phone number
2. Include plans showing the locations of features requiring maintenance and how these should be accessed.
3. Provide details on how surface water each relevant feature shall be maintained and managed for the life time of the development.
4. Provide details of how site vegetation will be maintaining for the lifetime of the development.
5. Be of a nature to allow an operator, who has no prior knowledge of the scheme, to conduct the required routine maintenance.

Reason:
To ensure the future maintenance of the sustainable drainage structures.

Notice to LPA / Applicant regarding the conditions
Whilst the applicant has demonstrated the principles of an acceptable surface water management

strategy at the site, further information is still required as detailed above.

The applicant may prefer to provide these additional details at a later date during the detailed design stage and therefore we have recommended an appropriate pre-commencement condition to ensure that these details will be provided for review and approval by the LPA and LLFA before the development commences.

Alternatively, the applicant may wish to avoid any pre-commencement conditions therefore the information set out above should be provided at this stage prior to the determination of the planning application. Subject to the approval of such details, the LLFA would subsequently seek the agreed plans to be included within any 'built in accordance with' type condition.

Informatives for the next stage of design
As outlined within the condition, the strategy should be treated as a minimum at this stage of the design. Further consideration should be given during the next stage of the design to incorporate additional, localised source control SuDS such as green roofs, rain-gardens and tree pits as part of a 'SuDS management train' approach to provide water quality, amenity and bio-diversity benefits and increase the resilience within the design. Reference is also made to our *Flood Risk Guidance for Development*[i] (updated June 2023) with more details and examples of SuDS which can be incorporated at later stages of design.

At the 'discharge of condition' stage proposals for surface water drainage should be approaching a level of detail suitable for tender or construction. Documentation should show the drainage scheme including SuDS features, specific details (e.g. standard details or cross sections) and demonstrate the performance and of the system through calculations and exceedance management respectively. Such scheme should be in line with the original planning application/permission and where significant changes are made, justification should be provided.

Yours sincerely

Approved Documents:

- Application Form.pdf
- Covering Letter_Redacted..pdf
- Planning Statement Feb 23.pdf
- Site location plan.pdf
- 3D Basins and Sections_S2-P01.pdf
- 11370 Land at Nailcote Farm, LVA Rev E.pdf
- Conceptual Drainage Strategy_S2-P07..pdf
- Drainage Strategy_S2-P07.pdf
- Flood Risk Assessment_S2_P07.pdf
- P17-Landscape Strategy Plan.pdf

N.B. On 10th January 2023, the Defra published[ii] "the Review for implementation of Schedule 3 to the Flood & Water Management Act 2010;" this recommended implementation of Schedule 3 which the government has accepted. Warwickshire County Council will take on the role of the SuDS Approval Body (SAB), you can read more about this on our website which we will be updating periodically.

https://www.warwickshire.gov.uk/severe-weather/planning-and-sustainable-drainage/2

[i] https://api.warwickshire.gov.uk/documents/WCCC-453486374-170

[ii] https://www.gov.uk/government/publications/sustainable-drainage-systems-review

Application PAP/2023/0071 4th July 2024

Proposed Solar Farm South of Park House Farm, Meriden Road, Fillongley

Review of Drainage Strategy, Flood Risk Assessment and LLFA Consultation Response for Fillongley Flood Group

1 Introduction

Fillongley Flood Group (FFG) has been established to help reduce the impact of flooding in Fillongley, due to property having been flooded on frequent occasions. One of the many roles of the FFG is to remove debris from a screen in the village to reduce the consequences of blockage. This is a dangerous and disruptive activity.

A planning application has been submitted for a 62ha solar farm upstream of the village, and the FFG is concerned about the increased risk of flooding to the village. FFG has engaged with the Developer, their flood risk Consultants (BWB) and the Lead Local Flood Authority (LLFA) to seek to ensure that the opportunity is taken to reduce flood risk, in line with Paragraph 170b of the NPPF and Warwickshire County Council Local Flood Risk Management Strategy, April 2016. FFG has explained that the Motorway discharges into watercourses upstream of the propsoed solar farm, and despite expectations that runoff would be attenuated in line with policies, Highways England did not incorporate attenuation on their discharges, exacerbating flood risk in the village.

In light of the concern about the potential increased flood risk, FFG has sought to try and ensure that if consented the solar farm incorporates appropriate measures to reduce flood risk (in line with Para 170b of the NPPF and the LLFA policy). It seems that the Developer has been sympathetic to this concern and has included ponds and swales in their proposal. In recognition of this the LLFA has recommended planning conditions to ensure that they have the opportunity to approve the detailed design, that the surface water drainage works is verified on completion and that there is a detailed site-specific maintenance plan in place.

The Planning Authority is reluctant to engage in enforcement of these requirements, so getting the works designed, built and managed properly and as approved, in cooperation with the Developer, is an important objective.

FFG has asked Edenvale Young (EVY) to inspect the Flood Risk Assessment (FRA), Drainage Strategy (DS) (both dated 30th April 2024 by the LPA) and the LLFA Consultation Response dated 30th May 2024 and provide comments on the proposals. Our comments are based on our experience of advising on over 100 solar farms designed in the past, including some of the largest in the country. We have run through the documents, including BWB Plan 0001/P07 and have the following comments, with the relevant clause numbers; it is important to emphasise that the Developer and their advisors remain fully responsible for the proposals.

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As a general comment, solar farms are expected to allow the soil characteristics to improve through the absence of ploughing and the establishment of vegetation. Solar farms are also recognised for becoming havens for wildlife, especially when compared with fields sprayed with nutrients and pesticides. During the construction phase there are risks of increased runoff, and Paragraph 170b of the NPPF expects development to reduce the risk of flooding, especially when downstream flooding is predicted and the receiving watercourse is considered 'sensitive', as at Fillongley. However, as the solar farm is supposed to be restored to the former fields after its lifetime, the extent of 'civil engineering' should be reasonable. But noting that the new NPPF allows the lifetime of renewable energy sites to be extended (NPPF Paragraph 163c), this possibility and the predicted increase in runoff due to climate change needs to be borne in mind.

The following sections follow an assessment of the relevant documents and the related paragraph numbers.

2 FRA P07 29th April 2024

1 3.12 etc We are surprised that the reference to historic downstream flooding is treated so lightly and not introduced early in the report to highlight the known flood risk to Fillongley. The clause refers to 'understood' whereas flooding in Fillongley is shown on the flood maps and it is referred to in the press and on the internet. The NPPF states at 170b that development should reduce flood risk overall (also referred to in the LLFA policy) – we are surprised that the FRA does not highlight this paragraph when it copies so many other references.

2 4.10 The FRA refers to a series of detention basins alongside the Ordinary Watercourses (OWs). These are dealt with in more detail in the DS.

3 4.13 The basins provide additional mitigation to the swales – again, the detail is in the DS.

4 5.6 This clause refers to runoff rate reduction 'above and beyond', implying exceptional mitigation measures, and yet the NPPF and LLFA expect development to reduce flood risk (Para 170b); it should not be considered exceptional. The proposals should also recognise site-specific circumstances.

5 5.9 The statement 'will not increase flood risk to the wider catchment' depends on the details of the mitigation, which are not covered in the FRA, but in the DS.

6 The FRA does not describe the existing fields and their use/character, nor does it consider the predicted permeability of the soil. The proposed vegetation is not discussed, nor the virtues it might bring. The DS doesn't cover this either.

3 Drainage Strategy (DS) dated 25th April 2024 P07

7 1.8 There is no reference to potential runoff from the Motorway entering the Site and what potential impact the detention basins might have – even broadly.

8 1.11 ii The proposed grazing by livestock needs more specification. It is conventional to allow low density occasional sheep to reduce grass level. The intensity is reduced to prevent areas becoming denuded and the soil compacted, which would result in increased runoff. Recognised guidance should be referred to and confirmed.

9 1.11 iii We agree that gravel drains are not sustainable, not practical, nor realistically restored at the end of the lifetime. Swales as in b are appropriate.

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10 1.15 This refers to the policy for reducing flood risk overall (Para170b of the NPPF), but without the policy reference being given.

11 2.2 Does not define the existing nature of the agricultural land – is it arable or used for grazing? What are the consequences of the change to solar farm?

12 2.8 Geology – this section does not consider the soil characteristics – see Soilscapes viewer page below – showing that the soil has slightly impeded permeability (consistent with the presence of watercourses).

13 3.19 We would expect all tracks to be permeable. Type 1 is not normally considered to be permeable – usually permeable granular material should have 30% voids. Tramlines in fields are noted to result in a significant proportion of the runoff.

14 3.24 etc I have no concerns about the increased runoff from the transformers/inverters etc in this context. Its de minimus.

15 3.35 States that the swales should be installed 'early on' – they should be done as a first activity after the fencing, to aid capture and management of runoff during the trafficking and construction activities.

16 3.31 etc Whilst the swales are welcomed, and although the FRA says they will have 0.4m3/m storage, the survey highlights undulations in the terrain, and the consequences have not been considered (ie the sales do not follow contours). So the water will flow out of the swales at low points which have not been identified, nor have the flow routes been identified. We suspect water entering the swales would flow to the lowest point and spill into the nearest watercourse, especially as they are only 300mm deep overall. As described, these swales will make little difference in this case due to the absence of storage capability. Check dams could be considered to mobilise storage and activate infiltration, subject to tests.

17 3.38 No objection to infiltration trenches.

18 3.41 There is no description of how water enters the basins from the watercourses, how the storage in the basins is mobilised, or what virtues the basins would bring in terms of reduced flows, estimated return periods, etc. Whilst detailed calculations are not expected at planning stage, an estimate/judgment of the benefits would be helpful for the FFG's expectations. A pipe acting as a side-weir is likely to intercept very little flow and what does leave the watercourse will run through the pond and re-enter the watercourse. The ability for the side offtake to manage flows and the mobilisation of flows needs explanation (ie will a flow control device be introduced?). As described, the basins will make no difference to site runoff.

4 LLFA recommended Planning Conditions dated 30th May 2024

The three recommended conditions which require soakaway testing and detailed design, verification report and maintenance schedule to be approved are welcomed. These should be incorporated in the Decision Notice if approved, and Discharged appropriately following assessment.

5 Conclusions

Based on the above review we advise that the following are ensured;

19 The swale design as shown will not reduce the runoff rates anticipated. The design should be developed to ensure that water is captured and managed – such as by infiltration with check dams, and that the overflow mechanism is predicted and

illustrated. The swales do not manage runoff as presently shown and would simply convey flows to the lowest points and cause unchecked erosion and silt mobilisation.

20 The detention basins as shown will not attenuate flows in the existing watercourses. The inlets need to be designed to receive water from the watercourses and the outlets designed to mobilise storage – they do not, as presently shown. An indication of the benefits delivered by these ponds should be given, to provide monitoring.

21 The scale and duration of grazing should be specified to ensure that the vegetation is effective in managing runoff.

22 Tracks should be formed in permeable granular material, usually expected to have 30% voids.

23 A project programme should be submitted showing the detention basins and swales installed as a first stage to bring benefits during construction.

24 It is customary to ensure that the fields are vegetated prior to trafficking and the commencement of construction, and that trafficking is avoiding in wet conditions when the soil characteristics in the long term can be damaged.

25 It is important to FFG and the community of Fillongley that the LLFA ensures that recommended planning conditions are included in the Decision Notice, if approved, and that the conditions are fully considered by the LLFA prior to being Discharged.

26 On other solar farms the Developer has agreed to have an annual walkaround with the community group to promote good relations and show that the maintenance is being undertaken. We suggest that FFG seeks to agree this with the Operator.

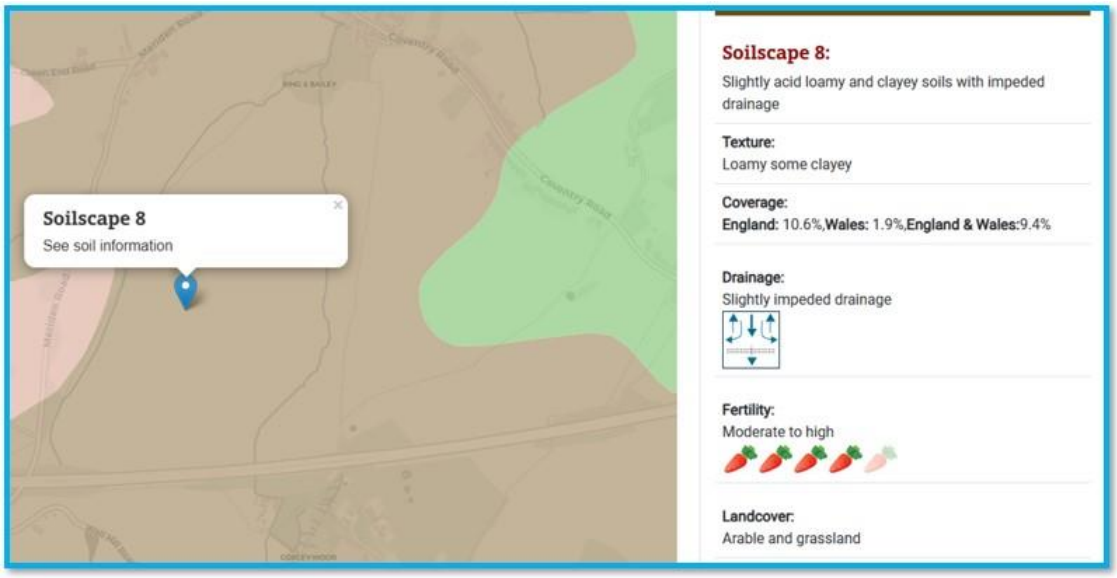

Image from Soilscapes website showing soil infiltration slightly impeded, and quite fertile soil.

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