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DEVELOPMENT CONTROL COMMITTEE

ROOMS 2 & 3, BURNLEY TOWN HALL

Thursday, 9th March, 2023 at 6.30 pm

SUPPLEMENTARY AGENDA

PUBLISHED 8th March 2023

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Update Sheet

Development Control Committee 9th March 2023

FUL/2022/0149 Land at Hollins Cross Woodplumpton Road Burnley Full planning application for the erection of 200 dwellings and associated works.

Following the deferral from January Development Control Committee the Council has requested a consultant 'Sweco' to provide comment in relation to the concerns raised by residents in their letter dated 18th Jan 2023, and the potential impact of groundwater on drainage of the development. The response form Sweco is attached to the committee report in full for members information. It concludes as follows:

'Based on the high-level review of the reports and information listed in Section 1 our assessment concludes that groundwater and any associated potential flood risk is not expected to be of a significant constraint to the development'.

The response does also highlight that *'Further monitoring of winter groundwater levels (between November and March) within peat and sand horizons would be beneficial to inform the detailed design and temporary works'.*

On the 3rd March 2023 a further letter was received on behalf of the residents group (from 'Aegaea'). This has been attached to this for members to consider. The report makes specific reference to the 'Sweco' report.

The letter concludes:

'Groundwater monitoring should be conducted to determine the overall risk to the proposed development. Mitigation should then be designed to support the proposed development in line with NPPF and Local Plan Policy CC4, ensuring that no increase to flood risk within or without the site.

Surface Water Drainage Strategy could be required to be reviewed in terms of design and arrangement of SuDs features. This may limit the depths of suds features and require broader, shallow attenuation, or raised features, especially if groundwater monitoring were to show that the site is much more affected than the current third-party information concludes.

Surface water flooding has been assessed to date by only using the EA RoFSW mapping which does not factor climate change. A site-specific rainfall model factoring climate change and ground conditions would be more representative what the EA national scale model. Model results could demonstrate that further mitigation is required to not increase flood risk elsewhere or impact flood flows in accordance with the PPG, NPPF and Local Plan Policy CC4'.

Officers have noted the content of this last correspondence and highlight the following:

1. The Environment Agency RoGFS (Risk of Flooding from Surface Water) mapping does not highlight this site as being a high-risk site. As such, LLFA have confirmed that as this is not considered a high-risk site, further investigation into this is not required. They would only

ask for this extra information on a site which the mapping identifies to be high risk. Officers are therefore satisfied that the information provided in the submitted information is acceptable.

2. The 'Sweco' report states: *'Further monitoring of winter groundwater levels (between November and March) within peat and sand horizons would be beneficial to inform the detailed design and temporary works'.*

   Conditions are included at the end of the committee report, to enable the finer detail of drainage on the site to be submitted to and approved in writing prior to the commencement of any development on the site. The use of these conditions retains the control in relation to the drainage detail with the Local Planning Authority, in consultation with the Lead Local Flood Authority. The conditions do encompass both groundwater and surface water. As such officers consider with the use of these suitably worded conditions, this is a reasonable approach to the drainage mitigation on this site.

The applicant has also provided a further response to this letter which addresses the points raised. That letter is also attached for members information. The letter is from LSK/LDE the applicants hydrology consultant. The conclusion of which reads:

'To conclude we do not believe that any of the three points raised in the recent Aegaea letter constitute material considerations which could reasonably justify deferral or refusal of the application on these grounds. The issues raised are addressed in this and previous correspondence. The SWECO report confirms this and also concludes that 'groundwater and any associated potential risk is not expected to be significant constraint to the development. In or professional view Members can be fully satisfied therefore that comprehensive consideration has been given to flood risk and how to drain the site. The proposed scheme should be considered on its merits: that it offers a reduction in potential off site flood risk, manages surface water in the area, retaining it on site and discharging at a reduced runoff rate, this meeting the requirements of paragraph 167 of the NPPF in full'.

The Lead Local Flood Authority, as statutory consultee, have also been re-consulted and they have confirmed they have nothing further to add in addition to their formal responses previously sent. For clarification, they have no objection and recommend various conditions set out in the report. (Those conditions are 23-27 in the report). They have also confirmed specifically are satisfied that groundwater can be considered sufficiently when the final design of the drainage is agreed with the LPA under the relevant conditions.

In conclusion, Officers remain satisfied that the site is acceptable, and with the inclusion of the conditions as set out in the report to retain control of the detail of the drainage system to the Local Planning Authority, they are satisfied that the provisions of local and national planning policy are met in this regard.

A further letter has been received form a resident who has highlighted that his residential property is not mentioned in relation to access to his septic tank. This is on page 6 of the report. To clarify any matters of access are not planning consideration and the resident should contact the developer directly about this.

FUL/2022/0431 Land at Wytham Street Padiham Proposed 34 Bedroom Residential Care Home with associated landscaping and car park

To clarify the title for the report states that the application is for consideration with a S106- this is a mistype and there is no s106 required.

The list of plans and programmes to be approved under condition 2 is as follows:

Application form

PL 011 Existing Site Plan

Site Location Plan

Proposed Site Plan PL 021 P8

Proposed Roof Plan PL103 P1

Proposed Site Sections PL 203 P2

Proposed landscaping Plan ATC 22 1228 103 RV 4

Proposed Lower Ground Floor Plan PL 102 P2

Proposed Ground Floor Plan PL 100 P6

Proposed First Floor Plan PL101 P6

Proposed Bin Store details PL 210

Proposed Elevations PL 202 P5

External Site Levels D C 155 (C01)

Additional External site Levels Layout D C 155 (C01)

Cycle store PL 211

Proposed Elevations 202 P4 – PREVIOUS REVSISION (P5) NOW CURRENT AS ABOVE

Proposed Site Sections 203 P1 PREVIOUS REVSISION (P2) NOW CURRENT AS ABOVE

Amended Drainage Layout DC 100 Co2

Proposed Drainage layout DC 100 C03

Proposed Drainage Layout DC 100 C05

External Layout Levels DC 155 C03

Foul and Surface Water Drainage Design 2120 100 Rev P3

21420 DCE XXXXDS231 P02

WBA SI 00 DR A PL 021 Rev P7

Flood Compensation Analysis Ref REP 02 (P1)

Planning Statement received 18th July 2022

Preliminary Ecological Appraisal received 13th July 2022

Tree Survey and Constraints Report received 13th July 2022

Energy Statement Rev 1.0

Design and Access Statement Rev C

Transport Statement TS01A

Arbicultural Impact Statement received 18th July 2022

Assessment of Biodiversity received 18th July 2022

Biodiversity Enhancement Measures received 18th July 2022

Drainage Calculations received 18th July 2022

Refuse and Recyling Statement received 4th August 2022

- Condition 7 reworded as follows:

'Deliveries to the approved development shall only be accepted between the hours of 9:30am and 2:30pm Monday – Friday, to avoid peak traffic on the surrounding highway network, unless otherwise prior agreed in writing by the Local Planning Authority'.

Reason: In the interest of highway safety in accordance with the provisions of Policy IC1 of the Burnley Local Plan and the provisions of the National Planning Policy Framework.

- Condition 9 to be removed as the requirement for wheel washing is required in condition 6.
- Condition 19 to be reworded as follows:

'Prior to the first occupation of the development hereby permitted, written confirmation shall be submitted to, and approved in writing by the Local Planning Authority that confirms the agreed energy and efficiency measures detailed in the Energy Statement approved under condition 2 of this permission have been integrated into the development. Relevant certificates to demonstrate this shall be provided at this time.

Reason: To ensure that energy efficiency measures have been incorporated into the development in accordance with the provisions of Policy SP5 of the Burnley Local Plan.

FAO Lancashire County Council / LLFA Phil Wadley / Elizabeth Hundle

Date: 03/03/2023
Ref: AEG0904_BB11_Burnley_07_B

RE: Hollin Cross Farm, Woodplumpton Road, Burnley, Habergham Eaves, Lancashire, BB11 3RS – FUL/2022/0149

Dear Lancashire County Council,

Aegaea have been asked to review the submitted documents and consultee responses to Burnley Borough Council planning application FUL/2022/0149 for the proposed development of Hollin Cross Farm with focus to Flood Risk and Surface Water Drainage. For the benefit of the reader, Aegaea previously produced a letter dated 18/01/2023. The format of this letter follows on from the previous by reviewing documents associated with the application regarding flood risk. Aegaea previous letter set out how groundwater was first raised by the LLFA and then was not mentioned in further consultations. Aegaea recommended further investigation in the form of ground water monitoring should be conducted to satisfy residents and inform the design. In addition to groundwater, surface water flood risk was also discussed that the EA model is national scale and that a site-specific model would be more representative, it should also include climate change allowances in line with the latest EA guidance. Finally, the letter set out that the current SuDS drainage layout could need to be reviewed/redesigned especially if further site specific investigations such as groundwater monitoring and a site specific direct rainfall model demonstrated different results to those presented on the current information.

. For the purposes of this review, the following documents have been reviewed to understand the risk of flooding to the site.

- Sweco – Groundwater Flood Risk Review (Project Number 65209009 & Dated 14/02/2023)
- Flood Risk Assessment, Report Ref: 680259-R1 (02) FRA
- Drainage and Levels Assessment, Report Ref: 21061
- Geo Environmental Investigation Report Pt 1, Report Ref: 21061/GEIR
- Geo Environmental Investigation Report Pt 2, Report Ref: 21061/GEIR
- Drainage Query Clarification Report, Report Ref: 21061, dated 20/12/2022
- LLFA Response dated 15/08/2022
- LLFA Response dated 11/10/2022
- LLFA Response dated 06/01/2023

The main focus areas Aegaea have been asked to review are;

1. Groundwater
2. Surface Water / Pluvial
3. Surface Water Drainage (SuDS)

Discussion

1. Groundwater

Aegaea have reviewed the response provided by Sweco (Project Number 65209009 & Dated 14/02/2023). Their report was a review of the site from a groundwater flood risk perspective only. The study was based on a high-level review of the third-party information available and was current at the time of drafting. No consultation or a site visit has been undertaken.

The letter reads positively, and the conclusions summarise the hydrogeological conditions at the site against the proposed development. However, the final statements align with previous recommendations that groundwater monitoring would be beneficial to determine and inform the design and temporary works.

Residents have expressed concerns that if groundwater monitoring were to demonstrate that the site was affected much more than has been initially thought, that there would be potential implications to them, as well as the overall design of the site in terms of layout, SuDS and mitigation to the proposed units and existing properties.

SWECO Conclusion is set out below.

> *Based on the high-level review of the reports and information listed in Section 1 our assessment concludes that groundwater and any associated potential flood risk is not expected to be a significant constraint to the development.*
>
> *Based on the information available, any flooding appears to be primarily associated with surface run-off due to the presence of low permeability clayey glacial till underlying most of the site.*
>
> *Groundwater is present within the peat, which would be naturally associated with wet ground. Groundwater is also within small, localised pockets of more permeable deposits within the clayey glacial till.*
>
> *Much of the peat deposit within the site boundary will be removed during construction of the attenuation pond, reducing groundwater storage. Any perched groundwater within more permeable horizons within the till will be isolated and of very limited extent. It may be encountered during regrading or excavation activities, but flows are likely to be minimal in terms of volume and duration.*
>
> *Weathered sandstone at the top of the bedrock is likely to contain groundwater but will not be intercepted by the attenuation basin.*
>
> ***Further monitoring of winter groundwater levels (between November and March) within peat and sand horizons would be beneficial to inform the detailed design and temporary works.***

2. Surface Water / Pluvial

The previous letter recommended that Surface Water Flooding should be considered in greater detail. No response has been provided. A site-specific rainfall model factoring climate change and ground conditions would be more representative than the EA national scale model. Particularly given the concerns over potentially high groundwater levels. The national surface water maps take a high level approach to infiltration based on soil moisture storage capacity that could be checked based on better local information and monitoring. This is based on ReFH and older rainfall data sets that have now been superseded.

Model results could demonstrate that further mitigation is required to not increase flood risk elsewhere.

3. Surface Water Drainage (SuDS)

Surface Water Drainage Strategy could be required to be reviewed in terms of design and arrangement of SuDS features, especially if the groundwater monitoring were to show that the site is much more affected than the current third-party information concludes.

Conclusion

Groundwater monitoring should be conducted to determine the overall risk to the proposed development. Mitigation should then be designed to support the proposed development in line with NPPF and local plan policy CC4, ensuring that there is no increase to flood risk either within or without the site.

Surface Water Drainage Strategy could be required to be reviewed in terms of design and arrangement of SuDS features. This may limit the depth of suds features and require broader, shallow attenuation, or raised features, especially if the groundwater monitoring were to show that the site is much more affected than the current third-party information concludes.

Surface Water flooding has been assessed to date by only using the EA RoFSW mapping which does not factor climate change. A site-specific rainfall model factoring climate change and ground conditions would be more representative than the EA national scale model. Model results could demonstrate that further mitigation is required to not increase flood risk elsewhere or impact flood flows in accordance with the, PPG, NPPF and the Local Plan Policy CC4.

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LDE
CIVILS | STRUCTURES | HYDROLOGY
an RSK company

8 March 2023

Our Ref: 680259 L02

Planning App Ref: FUL/2022/0149

Prospect GB

5 Meridian Business Village

Hansby Drive

Liverpool L24 9LG

For the attention of Gary Humphreys

RE: FUL/2022/0149 HOLLINS CROSS FARM, WOODPLUMPTON ROAD, BURNLEY

I refer to the recent response provided to Burnley Borough Council (Appended), produced by SWECO dated 14th February 2023 and the subsequent note by Aegaea on behalf of a 'local resident group', dated 3rd March 2023.

We welcome the note from SWECO which corroborates RSK's recent response to a previous Aegaea letter and concludes that **'groundwater and any associated potential flood risk is not expected to be a significant constraint to the development.'**

Notwithstanding this point, Aegaea have raised additional queries relating to groundwater, surface water flooding and the surface water drainage strategy.

This letter addresses each point in more technical detail on the following pages, however in summary:

- Further groundwater monitoring is not warranted given the weight of evidence provided to date clearly demonstrating the site is unaffected by shallow groundwater. This is clear through separate sampling events over the year showing no groundwater strikes. Whilst there is a small area of pooling water near the northern boundary at present, the evidence clearly points to this being 'surface water', as opposed to groundwater, which is simply pooling at the bottom of a slope, where it is held in area of peat underlaid with clay which prevents infiltration. Through the development, the peat will be removed, and the low spot regraded so that the surface water pooling here will simply be captured and managed by the development's surface water drainage system – removing the flood risk currently posed to the adjacent properties along this boundary. As such, the development will result in a material improvement in this respect

- Use of the Environment Agency rainfall mapping to assess surface water flood risk at the site is entirely appropriate. Both the Environment Agency and the LLFA, the two key statutory consultees (and independent experts) on the matter have reviewed our assessments and not raised any objection to the proposals. The only area of flood risk denoted by the EA mapping is the low spot near the northern boundary, which as above, will be removed through the development with the surface water here then managed by the drainage system delivered as part of the development. Further, the drainage system has been modelled and designed to the latest guidance and parameters set by the LLFA,

and there is no predicted flooding, with the system having sufficient capacity for the simulated worst case storm events

Groundwater

Whilst the SWECO report notes the 'benefit' of further groundwater monitoring, it does not require it to form a judgment on groundwater, rather this is a standard statement of 'limitation' of any similar investigatory report. Groundwater monitoring would only usually be required for sites close to tidal areas where there is recognised risk. Further monitoring is not warranted in this instance given its location and the weight of evidence clearly pointing to the site being unaffected by shallow groundwater, as evidenced consistently through the below investigations undertaken at various points through the year:

- intrusive Phase II Geo-Environmental Report by REFA (report reference 21061/GEIR dated September 2021).
- REFA's ground investigation into the northern area of the site HM/21061-REV1 dated November 2022 and
- the latest report SCB/21061- SupSI/GW/ Rev1 dated February 2023

All three of the above investigations have recorded similar ground conditions with regards to groundwater. The reports prove the site to be largely unaffected by groundwater ingress and that the peat deposits recorded within the northern section were causing the artificially shallow water level. Groundwater monitoring undertaken in October and November 2022 and again in February and March 2023 (i.e. a broad sample size) have recorded water levels of 0.25m to 0.60m across the months monitored to date within WS101 and flooded within WS103 and WS104 i.e. consistent with a surface water supply rather than shallow groundwater.

The SWECO report noted further groundwater monitoring would be 'beneficial' to provide further data for the temporary works and final design of the attenuation pond. To be clear, the SWECO report did not state that this further work was required to form a judgement on groundwater. Based on the water monitoring to date undertaken in Autumn and Winter within the northern section of the site, based on experience, our professional view is that the water levels will remain similar year-round whilst the peat is present which is affecting the natural infiltration of water within this area, so an extensive water monitoring programme is not warranted. In addition, once the peat has been removed the water monitoring undertaken within this area becomes effectively redundant as the monitoring was done within the peat.

This is supported somewhat within the SWECO report where it says '*In summary, based on the available information* ***construction of the attenuation is very unlikely to increase the risk of groundwater flooding. Rather, the removal of much of the peat deposit within the site boundary will reduce groundwater storage and flow****. Similarly, groundwater inflows into the attenuation basin (assuming it is unlined) will be very limited such that there is not likely to be any significant impact on the storage capacity of the attenuation basin'.* (our emphasis added)

To summarise what they expect, which we agree with, is that once the peat has been removed, groundwater entries will be minimal and be very different to the water levels currently being recorded.

In summary:

- Ground water monitoring results have been presented for surveys undertaken at various points through the year, which demonstrate the site to be unaffected by shallow groundwater,
- The only area in question was a small area of the site on the northern boundary, where pooling of water was noted. However, it is accepted and established that this is very likely the result simply of this area being at the foot of hill (a low spot) and in an area of peat which holds water, underlain with clay preventing infiltration.
- Recent groundwater surveys of this 'low spot' in November, February and March show maintained-water levels over this period, consistent with a surface water supply, rather than groundwater which would have otherwise been highlighted by fluctuating water levels.
- Through the development of the site, the peat will be removed and the low spot regraded and the surface water pooling here will simply be captured and managed by the developments surface water drainage system.

Surface water flood risk mapping

Aegaea suggest that the Environment Agency's (EA) surface water flood maps are not intended for site specific use and that further modelling with the latest allowances for rainfall and climate change should be carried out.

The EA mapping shows what is expected and understood to be the case on site i.e. showing surface water ponding at the low point on the site near to the northern boundary. It is noted that revised rainfall data and climate change allowances have been published since the production of the EA's mapping, however as there is no significant overland flow paths through the site for upto the 1000 year event (low likelihood/worst case scenario), then further refinement of the modelling is not required for this site. In assessing flood risk to inform the drainage design for the development the low spot shown to be at potential risk of surface water flooding has been considered up to the 1000-year flood event based on the EA mapping, whilst the requirement under the NPPF is only the 100 year plus climate change allowances i.e. the adequacy of the design has tested to above industry standard parameters. The 1000-year rainfall event is a conservative estimate of the rainfall for the 100 year plus climate change allowance (in addition to allowing for the recent changes in available rainfall data), and therefore the use of the 1000 year dataset is a suitable proxy to use for the 100 year plus climate change event.

Notwithstanding this point, the removal of the peat from the area shown to be at risk and the incorporation of an onsite drainage scheme for the development which will capture and mange any rainfall from within the development will result in the catchment feeding the area shown to be at risk being significantly reduced. **This will result in the area shown to be at risk, being no longer at risk, as there is no rainfall catchment feeding it.**

Surface water drainage strategy

The proposed surface water (SW) drainage network has been designed in accordance with Design and Construction Guidance, May 2021, SuDS manual Ciria C753 and Lancashire County Council LLFA comments.

The SW discharge rates for the development have been proposed within the FRA by others with the LLFA agreeing with the proposed rates.

The design has utilised the LLFA approach 2 in undertaking the design which has reduced the overall SW discharge rate for the development to the impermeable areas only, giving a limited discharge for the impermeable areas of the development of 35.5l./sec.

The current LLFA design criteria is as follows:

- *A volumetric runoff coefficient of 1 must be applied to the impermeable area*. The current SW drainage calculations have utilised a CV value of 1 to comply with the requirements.
- *Allowance for climate change must be applied*. The current SW drainage design has included 50% climate change allowance value as per the government allowance. Please note this value is the upper end allowance for the 1% annual exceedance rainfall event.
- *Allowance for urban creep must be applied*. The current SW drainage design has included 10% urban creep to allow areas which could be increased in the future to comply with the requirements.

Utilising the above criteria SW simulations using Causeway FLOW software has been undertaken for the following rainfall events with the critical results shown within the printed SW calculations.

- 1 in 1-year annual exceedance probability event
- 1 in 30-year annual exceedance probability event + 40% climate change allowance, with an allowance for urban creep.
- 1 in 100-year annual exceedance probability event + 50% climate change allowance, with an allowance for urban creep.

Results from the simulations based on the above rainfall events indicate there is no predicted flooding on the SW system.

Design and construction guidance May 2021, Section c7.7.6 states max design storage depth within should give a freeboard of between 400 & 600mm below the top of banks. Our proposed SW design predict the freeboard with the basin to be around the 600mm value which is at the higher end of the acceptable rates.

For additional measures we have proposed a twin 300mm diameter overflow at the basin outfall headwall to allow for any possible blockage on the main outfall. The overflows are set at a level higher than the predicted 1 in 100-year annual exceedance probability event + 50% climate change allowance, with an allowance for urban creep event. Further simulations were run using Causeway FLOW software with a restricted main outfall at the basin outfall headwall. The simulations were run for the 1 in 100-year annual exceedance probability event + 50% climate change allowance, with an allowance for urban creep event with there again being no predicted flooding and the twin outfall sufficient conveying the flows back into the downstream SW network and away from the existing properties. This additional measure is over and above the LLFA requirements.

The surface water networks have been designed to current guidelines and recommendations and there is no predicted flooding, with the SW network having sufficient capacity for the simulated storm events.

Conclusion

To conclude, we do not believe that any of the three points raised in the recent Aegaea letter constitute material considerations which could reasonably justify deferral or refusal of the

application on these grounds. The issues raised are addressed in this and previous correspondence. The SEWCO report confirms this and also concludes that '*groundwater and any associated potential flood risk is not expected to be a significant constraint to the development.'*

In our professional view, Members can be fully satisfied therefore that comprehensive consideration has been given to flood risk and how to drain the site. The proposed scheme should be considered on its merits: that it offers a reduction in potential off site flood risk, manages surface water in the area, retaining it on site and discharging at a reduced runoff rate, thus meeting the requirements of Paragraph 167 of the NPPF in full.

Should you have any additional queries, please do not hesitate to contact the undersigned.

Yours sincerely,
For RSK LDE Limited

Colin Whittingham BSc (Hons) MSc MCIWEM C.WEM PIEMA
Director

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