

Our ref: PCS/126776
Your ref: 2012/0145/DET

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If telephoning ask for:
Diarmuid O'Connor

18 June 2013

By email only to: craig.jardine@lochlomond-trossachs.org

Dear Sir

Town and Country Planning (Scotland) Acts

Planning application: 2012/0145/DET

**Change of use of land including an existing Camping and Caravan Club site (5no. stances) to form a caravan park comprising 10no. stances, access road and parking
At Drummond Fish Farm Lochearnhead FK19 8PZ**

Thank you for your consultation letter which SEPA received on 20 May 2013.

We **object in principle** to the proposed development on the grounds that it may place buildings and persons at flood risk contrary to Scottish Planning Policy and PAN 69.

Given the location of the proposed development within the undeveloped/sparsely developed functional floodplain we do not consider that it meets with the requirements of Scottish Planning Policy and our position is unlikely to change. We have a shared duty with Scottish Ministers and other responsible authorities under the Flood Risk Management (Scotland) Act 2009 to reduce overall flood risk and promote sustainable flood risk management. The cornerstone of sustainable flood risk management is the avoidance of flood risk in the first instance. We recommend that alternative locations be considered if possible.

In the event that the planning authority proposes to grant planning permission contrary to this advice on flood risk the application must be notified to the Scottish Ministers as per The Town and Country Planning (Notification of Applications) (Scotland) Direction 2009.

Notwithstanding this position we have included our review of the information supplied. Provision of this review does not imply that we consider there to be a technical solution to managing flood risk at this site which meets with Scottish Planning Policy.

Advice for the planning authority

1. Flood Risk

- 1.1 We note that the original proposal has now been revised and a reduced number of stances (4no. instead of original 5no.) is proposed. The recent planning history of the site is outlined below.



Chairman
David Sigsworth
Chief Executive
James Curran

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- 1.2 A planning application was submitted to Loch Lomond & Trossachs National Park Authority (LT/2008/0237/DET/S) in 2008 for the extension of the caravan park from 5 to 11 plots. We objected to this application based on lack of information and requested that a Flood Risk Assessment or other appropriate information was submitted in support of the application.
- 1.3 A further planning application (2012/0145/DET) was submitted in July 2012 for the extension of the caravan park from 5 to 10 plots. A Flood Level Plan and Flood Level Cross Sections were submitted in support of the application, however this information was insufficient to fully assess flood risk at the site and therefore additional information was sought from the applicant by SEPA (25 July 2012). Within our response we stated that the provision of this information “may only confirm that this site is not suitable for further development and may result in an objection in principle if the development area is identified as part of the functional floodplain and its land classification status of “sparsely developed” as determined by Loch Lomond and Trossachs National Park Planning Authority”.
- 1.4 Additional Flood risk comments were sought by the applicant of SEPA in March 2013, on the Flood Risk Assessment undertaken by MNV Consulting (January 2013) in support of the extension of the caravan park from 5 to 10 plots.
- 1.5 We previously identified two sources of flooding, from the Beich Burn and from high levels within Loch Earn. The River Tay Catchment Study by Ove, Arup & Partners notes that on the 6th of March 1990 there was a daily observed level of 97.536 mAOD and on the 17th of January 1993 a daily observed level of 98.207 mAOD at Loch Earn. The 1993 event has a return period of approximately 1 in 100 year based on a single site analysis of our gauging station at Kinkell Bridge. However, this is located a significant distance downstream of Loch Earn and may not be reflective of the return period at the upper end of the Earn catchment.
- 1.6 This area has suffered from flash flood events which have resulted in landslides on the A85 to the west of the site. Reconstruction of the peak flows on the nearby Rivers Ogle and Ample after the dramatic thunderstorm events in August 2004 gave runoff rates of 10.8 m³s⁻¹ and 7.0 m³s⁻¹ per square kilometre respectively. It is reported that a number of bridges were destroyed within the area affected by the extreme weather events. It should be noted that higher runoff rates could be attached to smaller sub-catchments of these watercourses.
- 1.7 The consultants have used a variety of methods within the FRA to estimate the 1 in 200 year flow of the Beich Burn. Whilst we are in agreement with the use of the FEH Rainfall-Runoff method, we are of the view that the flow could be underestimated by approximately 10 m³/s. It is possible that this discrepancy has arisen in relation to the average SPR estimate. The BFI and SOIL maps have been used to alter the average SPR in the Rainfall-Runoff spreadsheet to best represent the catchment conditions. It is possible that the consultant has used the SPR HOST calculated by FEH with no alterations. As stated in FEH Volume 4, “A better estimate of SPR is the most significant improvement that can be made for flood estimation”. We requested that the model be re-run with the higher flow estimate of 83.14 m³/s however there is no information which suggests that this has been undertaken. As a result, the flood levels presented in the FRA may be underestimated.
- 1.8 The estimated 1 in 200 year loch level for Loch Earn was supplied by Scottish and Southern Energy and is approximately 98.9 mAOD. Other loch levels have been analysed including the “normal loch level” of 96.99 mAOD which we assume relates to the observed level on the day of the site visit and the December 2009 level of 98.3 mAOD. It was highlighted to us that the season for which the site is open is between April and October and therefore the loch level used within the FRA should be representative of the level during this time. We are satisfied that a range of loch levels have been used within the model to model a combination of events on the loch and the Beich Burn. We note that a profile named “Dec_2006_loch” has been run however we are unsure what loch level this relates to as there is no mention of this level within the FRA; this however may simply be a typographical error.

- 1.9 Minimal topographic information has been supplied on “Caravan Site Extension” drawing number 03. The drawing also illustrates the estimated flood extent as determined by Scenario 3 (1 in 200yr flow + 20% + loch level of 98.9 mAOD). A table of HEC-RAS results has been provided in Appendix 10.3. We have reviewed the flood levels (WS Elev) in relation to the topographic information and have the following comments:
- The Scenario 3 flood extent demonstrated in drawing 03 only relates to the predicted flood levels of Cross Section 4. The flood levels for Cross Section 7 and 6 upstream of the A85 are 100.89 mAOD and 100.72 mAOD respectively indicating that the flood water would overtop the A85 adjacent to the access track (A85 OS spot level is 100 mAOD and other topographic level nearby is 100.32 mAOD) and flow over the area proposed for the new caravan pitches.
 - It is noted that for the 1 in 200yr flow + normal loch level scenario, the predicted flood level for Cross Section 7 and 6 is 100.52 mAOD and 100.21 mAOD respectively therefore it is still possible that flood water will overtop the A85 in some areas adjacent to the site. The same can be said for the 1 in 200yr flow + 20% + normal loch level scenario where the predicted flood levels are 100.89 mAOD and 100.72 mAOD respectively.
 - Cross Section 5 includes the area for the proposed extension. The predicted flood levels for Scenario 3 for Cross Section 5 is 99.05 mAOD. Review of the topographic information (specifically the 99 mAOD contour) indicates that part of the proposed area is at risk of flooding. The same is true for the 1 in 200yr flow + normal loch level scenario.
- 1.10 The bridge over the Beich Burn is located immediately upstream on the western boundary of the caravan site. Flooding can be exacerbated should structures like the bridge in this case become blocked by debris. We are satisfied with the application of a 50% blockage scenario as part of the FRA. The results indicate that should the bridge become blocked, it would be unable to convey flows larger than the 1 in 10yr flow resulting in overtopping of the A85. The consultant states that rather than the flood water impacting upon the proposed development site, it would be directed down the access road towards the fish farm where it would discharge into the loch. It is therefore demonstrated that safe access and egress would not be possible at this site during both significant and lower return period flood events.
- 1.11 As previously mentioned, the Risk Framework in Scottish Planning Policy (SPP) states that new caravanning and camping sites should not be located in undeveloped and sparsely developed areas at medium to high risk of flooding. Confirmation was sought from the Local Authority on the land status of the site who stated that “the current proposal (ref: 2012/0145/DET) is on “sparsely developed land” hence we are unable to support this development. People residing in holiday accommodation are arguably at greater risk than those in permanent accommodation because they are likely to be unfamiliar with the behaviours of the nearby watercourses and the immediate surroundings. As a result, caravan and camping sites are categorised as a most vulnerable use within SPP and SEPA’s vulnerability guidance. It is apparent from review of the FRA that the site is at risk from an extreme flood event from the Beich Burn even when the loch level is “normal”. We believe that whilst it may have been possible to manage the flood risk from high loch levels by having an evacuation plan in place the Beich Burn poses a significant threat of flooding to the site and access roads. The flood response to a significant thunderstorm event is likely to be rapid and with little or no warning. Therefore the risk of flooding cannot be addressed by an evacuation plan to get occupants to a place of safety.
- 1.12 In summary we object to the planning application as we believe the application site has a significant risk of flooding from both the Beich Burn and Loch Earn. Whilst flooding from Loch Earn is likely to be a slow process over many hours a significant thunderstorm event over the Beich Burn catchment could flood the site rapidly and with little or no warning.

Detailed advice for the authority/applicant

2. Flood Risk Caveats & Additional Information

- 2.1 Please note that we are reliant on the accuracy and completeness of any information supplied by the applicant in undertaking our review, and can take no responsibility for incorrect data or interpretation made by the authors.
- 2.2 The advice contained in this letter is supplied to you by SEPA in terms of Section 72 (1) of the Flood Risk Management (Scotland) Act 2009 on the basis of information held by SEPA as at the date hereof. It is intended as advice solely to Loch Lomond & The Trossachs National Park as Planning Authority in terms of the said Section 72 (1). Our briefing note entitled: "*Flood Risk Management (Scotland) Act 2009: Flood risk advice to planning authorities*" outlines the transitional changes to the basis of our advice inline with the phases of this legislation and can be downloaded from www.sepa.org.uk/planning/flood_risk.aspx .

Regulatory advice for the applicant

3. Regulatory requirements

- 3.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at www.sepa.org.uk/planning.aspx. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office at:

SEPA Perth
Broxden Business Park
Lamberkine Drive
PERTH
PH1 1RX

If you have any queries relating to this letter, please contact me by telephone on 0131-449-8554 or e-mail at planning.ek@sepa.org.uk .

Yours faithfully

Diarmuid O'Connor
Planning Officer
Planning Service

Copy to:

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Disclaimer

This advice is given without prejudice to any decision made on elements of the proposal regulated by us, as such a decision may take into account factors not considered at the planning stage. We prefer all the technical information required for any SEPA consents to be submitted at the same time as the planning application. However, we consider it to be at the applicant's commercial risk if any significant changes required during the regulatory stage necessitate a further planning application and/or neighbour notification or advertising. We have relied on the accuracy and completeness of the information supplied to us in providing the above advice and can take no responsibility for incorrect data or interpretation, or omissions, in such information. If we have not referred to a particular issue in our response, it should not be assumed that

there is no impact associated with that issue. If you did not specifically request advice on flood risk, then advice will not have been provided on this issue. Further information on our consultation arrangements generally can be found in [How and when to consult SEPA](#), and on flood risk specifically in the [SEPA-Planning Authority Protocol](#).