

2 Myreton Cottages,
Insch,
Aberdeenshire,
AB52 6LS

For the attention of Mr Simon Watt,
By e-mail only

Date: 22nd March 2016

Dear Simon,

**TOWN AND COUNTRY PLANNING (SCOTLAND) ACTS - PLANNING APPLICATION:
2015/0305/DET. ERRECTION OF OFFICE ACCOMODATION SAWMILL
BALLIEMEANOCH, STRACHUR, ARGYLL AND BUTE, PA27 8DW.**

Following receipt of the SEPA response with respect to the above project we are pleased to provide the following comments and additional information.

Under Section 1.1 of the SEPA letter (PCS/144361) requested further information to address the following points:

1. The modification of the development to locate the proposed building out-with the functional floodplain;
2. Provision of appropriate site emergency access and egress measures; and
3. In the event suitable mitigation measures are agreed upon we will also require the provision of additional modelling information including cross section results, velocity results and sensitivity analysis of the downstream boundary

We set out below our responses to address the points raise above.

Key Point 1: The modification of the development to locate the proposed building out-with the functional floodplain.

Terrenus Land & Water Ltd has undertaken a review of the site layout in conjunction with discussions with the project architect, site owner and site operator(s).

The result of the review and consultation is that the current site layout offers the best location for the proposed office development within the site. This location has been chosen on a variety of factors, primarily:

- There is no other ground currently available within the site that is suitable for the proposed development.

In addition it is noted that:

- The locating of the site office at the site entrance minimises the interactions of traffic and pedestrians visiting the site with the operational yard area beyond the entrance.
- The location offers the best overview of the site to allow optimal situational awareness by management and office staff over daily operations within the site.
- The development will occupy ground within the site which is currently “dead ground” and of limited commercial use to existing operations.
- The proximity to the site entrances offers the best amenity and aesthetics within the site for the commercial office.

Within the SEPA response, in sub-section 1.6, SEPA make reference to “*higher ground to the east of the site*”, this ground is not suitable for the placement of the proposed office development as it is currently in use as part of the haulage yard as a lumber yard storage. This area is also part of the trailer storage yard and is kept clear for vehicle movements and manoeuvres associated with loading, unloading, parking and maintenance operations at the site. The access road through the site is a common access, which is also used by a local building contractor.

A revised site layout to the yard and lumber storage would increase the possibility of blockage at the A815 road bridge as the lumber stores would be closer to the River Cur and deeper within the functional flood plain.

With regards to the positioning of the proposed development on stilts, this approach allows for the minimal disruption to flow pathways and maintains, as far as is practicable, the current flood regime at the site. Maintaining overland flow pathways and allowing water to pass beneath a structure is an appropriate flood defence for the structure. We note that this approach has been used successfully in other development site in the past, with SEPA approval.

Land raising of the structure at its required location is not a practical solution for the proposed development, as the site is not well suited to the provision of compensatory storage. The relatively flat lying nature of the site, combined with the proximity to the River Cur would limit the available space for providing compensatory storage. Compensatory storage within the site is not commercially viable due to its impact on other site activities.

Key Point 2: Provision of appropriate site emergency access and egress measures.

Within the SEPA response, in sub-section 1.4, SEPA make reference to the proposed mitigation measures recommended within Section 4.2 of the original Terrenus Land & Water Report (December 2015).

Whilst we accept that SEPA “do not operate a formal flood warning target area in this location”, the provision of a suitable water level sensor and alert system would provide adequate notice to allow the safe evacuation of the proposed commercial development and the wider site. It is further noted that, as the proposed development is for a commercial operation, it will only be manned during normal operational business hours.

Within the SEPA response, in sub-section 1.8, SEPA notes that there are concerns over emergency access and egress from the site, even following re-grading works to ensure a maximum 300mm water depth is not exceeded over the site entrance. The SEPA proposal to elevate the site entrance to a level above the 1 in 200 year peak flood water level including an allowance for freeboard is unfeasible. The adoption of a 300mm maximum water depth is the typical council requirement for vehicular access of emergency vehicles within a flooded area. In addition to this, there is also an alternate emergency access and egress from the site via the shared access road that runs through the site. Figure 1 below shows the alternative route.



Figure 1: Alternate emergency access and egress from the site to the A815.

Key Point 3: In the event suitable mitigation measures are agreed upon we will also require the provision of additional modelling information including cross section results, velocity results and sensitivity analysis of the downstream boundary.

Terrenus Land & Water Ltd considers that the proposed mitigation measures are the best solution for the site in terms of regulatory compliance, commercial development of a rural area and operational practicality within the site.

Sub-section 1.17 of the SEPA response notes that although cross sections were provided on Figure 2, these did not show the 1 in 200year peak flood water level. It is noted ,however, that the 1 in 200 year peak flood water level is indeed shown on the cross sections by the red dashed line running across the section between the lateral extents of the cross section.

The SEPA response, within sub section 1.18, requests velocity information be supplied, however is it should be noted that the proposed development area is set back over 70metres from the southern bank of the main channel and as such the 1D model will not accurately reflect water velocities over this zone. The distance from the river bank, combined with the relatively level topography of the site would not give rise to significant velocities across the proposed development area.

The SEPA response, within sub section 1.19, requests sensitivity analysis on the downstream boundary condition. The table below provides the requested sensitivity analysis.

		Peak Water Level (mOD) for Existing Ground Levels			
	Section number	Chainage (m)	1 in 200 year at Manning's n of 0.04 with slope of 0.001	1 in 200 year at Manning's n of 0.04 with slope of 0.002	1 in 200 year at Manning's n of 0.04 with slope of 0.005
River Cur	1	0	38.37	38.35	38.35
	2	58	38.04	37.99	37.97
	3	125	37.63	37.52	37.49
	4	230	37.67	37.46	37.35
	5	360	37.50	37.18	37.13
	6	420	37.26	36.95	36.71
	7	470	37.21	36.84	36.48

Table 1 – Downstream Boundary Sensitivity Analysis

The table show that the model is not unduly sensitive to the downstream boundary condition.

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I trust that the above is in order, however, should you any queries regarding the above, or wish to discuss any other matters arising, then please do not hesitate to contact me.

Yours faithfully,



Douglas Aitken
Associate Director
Terrenus Land & Water Ltd

CC Mr Jack Thomson