

SP SSAS INVESTMENTS LIMITED

Company number **13845775**

Flood Consequence Assessment

Ferguson House, Bethel Street, Briton Ferry, SA11 2HQ

Date: 11 August 2023

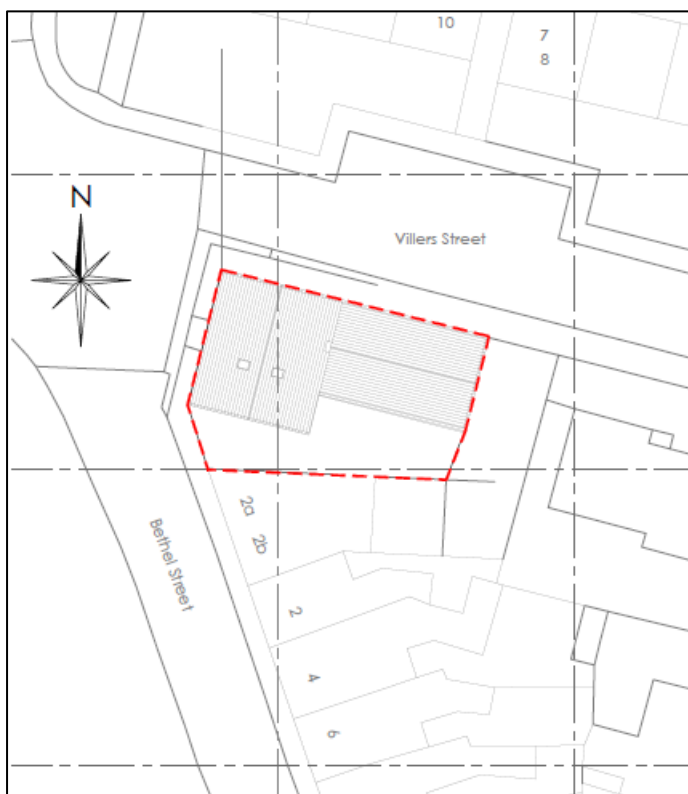
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Introduction

SP SSAS INVESTMENTS LIMITED intend to change the use of current office/store to one bed flat (C3) with rear external alterations at Ferguson House, Bethel Street, Briton Ferry, SA11 2HQ.

Natural Resources Wales responded to your Authority suggesting that the application is supported by a Flood Consequences Assessment (FCA) as the Flood Map for Planning (FMfP) identifies the application site to be at risk of flooding and is within Flood Zone 2 and 3 (Sea).

This Flood Consequence Assessment has been undertaken in accordance with Technical Advice Note 15 and is based on data provided from Natural Resources Wales (NRW). It will provide the current finish floor levels of the building compared to the predicted flood depths.



Site location

The location of the site, illustrated in Figure 1 below, is located at Ordnance Survey National Grid Reference 274024, 194035. This sites the proposed development to the south of Villiers Street, east of Bethel Street and west of Sand Lane.

Current and Proposed Use

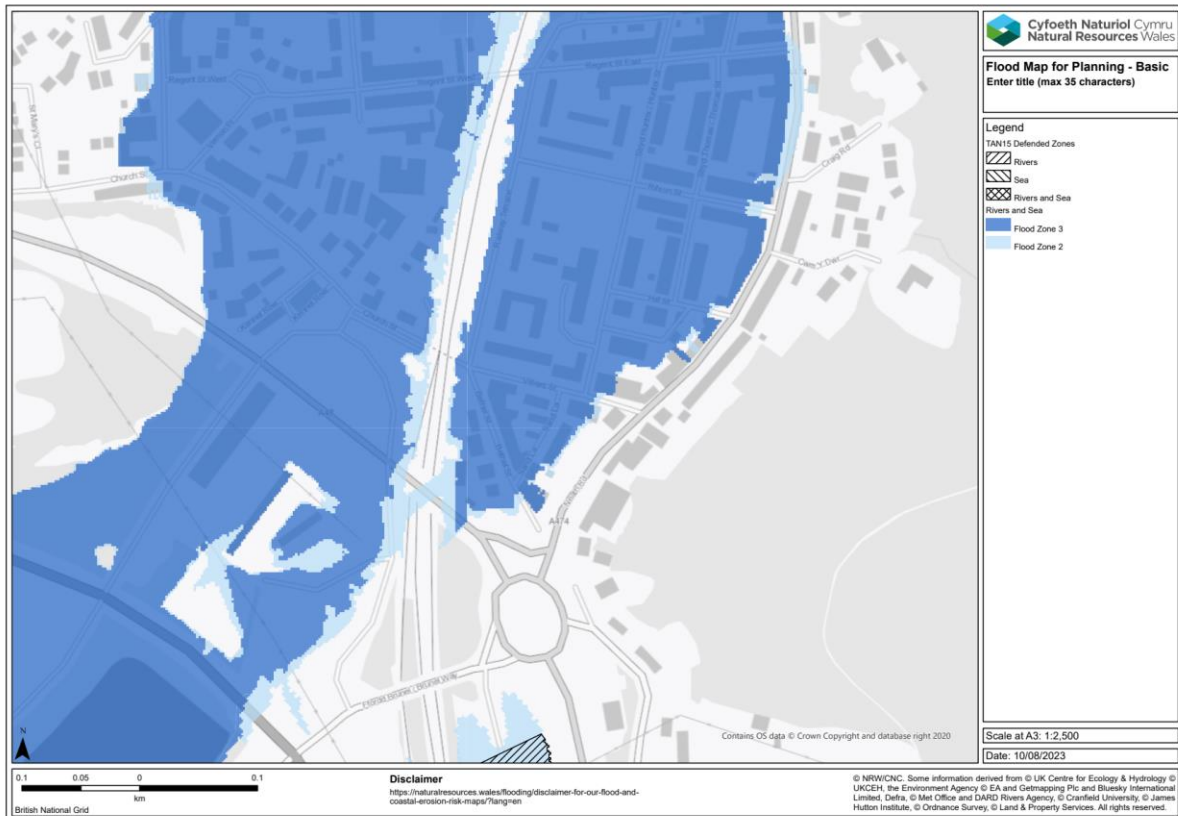
The current use of the structure is part of a larger building at Ferguson House which houses 8 flats and is used as office and storage space. The proposal is to convert part of the office/storage space into a 1 bedroom flat with no extensions, only internal and external alterations.

The proposed conversion to a flat will result in residential use, which according to Technical Advice Note 15:Development and Flood Risk (TAN15) classes the development as Highly Vulnerable Development (HVD). TAN15 recommends that Highly Vulnerable development may be acceptable within Development Advice Map Zone B which this proposal is in.

The current DAM shows that the site lies within DAM Zone B, as illustrated in Figure 2. According to TAN15, DAM Zone B is defined as an area known to have flooded in the past, and for areas located within DAM Zone B, consideration of the 0.1% AEP flood event should be made. It should be noted that the DAM is considered by NRW to be out of date.



The Flood Map for Planning represents better and more up-to-date information on areas at flood risk. The Flood Map for Planning (FMfP) identifies the application site to be at risk of flooding and is within Flood Zones 2 and 3 (Sea). Given the distance of the site from the coast, it is anticipated that the site is not to be at any significant risk of flooding from direct overtopping of the coastal frontage.



Fluvial flood risk

There is no fluvial flood risk as confirmed by the flood map for planning.

Third Party Detriment

As the application is for an existing structure to be converted, there will be no increase in flood risk to third parties or elsewhere as a result of the development.

Ground Levels

According to Ordnance Surveys, ground levels of the main road outside the building are 6.4m above ordnance datum (AOD). The existing building is raised on higher land on steep curbs with the finish floor level of the flat at 7.2m (AOD).

Extreme Flood depths including climate change allowances

'Flood Consequences Assessments: Climate change allowances', document dated September 2021 by Welsh Government sets out the climate change allowances to be used in flood consequence assessments submitted in support of relevant planning applications. It provides revised sea level rise allowances based on the most up to date assessment of how climate may change in the UK over the 21st Century as presented by UK Climate Projections (UKCP18).

Table 1 estimates the mean sea level rise (in metres) for Neath Port Talbot by 2120 representing the appropriate lifetime of development and has been compared to the finish floor level of the flat to be

converted. Allowances are based on RCP8.5 70th percentiles. CFB extreme coastal sea flood levels have been used for Neath Port Talbot.

Table 1 – Estimated Sea Level 70th Percentile

	0.5%	0.1%
Finish Floor Level of proposed converted flat	7.2m	7.2m
CFB extreme sea levels for Neath Port Talbot	6.37m	6.67m
Predicted levels with mean sea level rise (climate change)	7.37m	7.67m

Conclusion and recommendations

Based on NRW's Flood Risk mapping, the site is considered to have no risk of flooding in the present day, but it is understood that it may be at an increased level of risk in the future due to the effects of climate change. Analysis of extreme sea levels indicates (70th cc percentile, 0.5%AEP) a level of 7.37mAOD, and an extreme event (0.1%AEP) of 7.67mAOD by 2120. The finished floor level of the existing building is 7.2mAOD, indicating approximate maximum external depths of 170mm in the 0.5% and 470mm in the 0.1% extreme event. This flood risk is accepted by the applicant.

As the proposal lies within an area considered to be at risk of flooding in the future, the applicant will seek to incorporate flood resilience into the design where appropriate. Suitable flood proofing measures to the internal fabric of the ground floor will be considered and the location of electrical sockets/components will be at a higher level above possible flood levels. As tidal flooding is typically predictable, an evacuation of the building is feasible in an event.

A management plan will be provided to the occupier which will be reviewed, practised, and revised on a regular basis ensuring an appropriate awareness of flood risk. The management plan will direct occupiers to safe refuge in the event of a flood event to higher ground, which lies directly east along Villiers St. At the junction with Neath Road, which is within 100 meters of the proposed development, the floor level rises to 12m. Emergency access and egress may not remain feasible during tidal flooding events which is why it is recommended that a policy of safe refuge be adopted in such events. Flood alerts and warnings from NRW will be made available to the occupier.

The occupier would also have access to the first floor in an extreme situation, as there is a staircase to flats 2A and 2B Villiers St within the same communal area entered for access to the proposed new flat. There is a landing area at the top of the stairs that could be accessed if required.

The raising of ground levels for flood compensation cannot be considered as the proposal is for a conversion and floor levels will remain as existing. In any case, proposals raising ground levels within areas at risk of flooding can displace flood water which can have a negative effect on the flood risk of third parties, which is not typically permissible.

The recommendations given within this report have been made as a precautionary approach to mitigate flood risk and provided the mitigative measures are in place we ask the Local Planning Authority to consider the risk and type of development as acceptable.

Appendix 1 – photograph of Ferguson House



Appendix 2 – photograph of Ferguson House from West side



Appendix 3 – photograph of access to proposed flat from Villiers St.



Appendix 4 – Route to higher ground along Villiers St from entrance to proposed flat

