

Flood Risk Assessment

Ref: PP_Cumana House_PL_FRA

This Flood Risk Assessment has been prepared by Harper Perry Ltd. in relation to the proposed extension at Cumana House, Hurworth, and in accordance with the requirements of the National Planning Framework (NPPF) and Standing Advice from the Environment Agency.

Site Address: Cumana, Tees View, Hurworth Place, Darlington, DL2 2DQ

Application: Conversion of existing garage to kitchen/dining room

Site Flood Risk

The house is located in an area classified as

Flood Zone 3 for planning considerations

Medium risk of flooding from rivers and sea

The NPPF requires that all planning applications for sites located within an area categorized as high risk must produce a site-specific flood risk assessment appropriate to the scale and impact of the proposed development.

The application is a small household application for a change of use of part of the building from its former use as a garage, into a habitable room.

The **sequential test** does not have to be applied since this is a minor development, and an alternative site could not be used since the proposal is contained within the footprint of the existing building.

The **exception test** requires applicants to demonstrate that:

- a) The development would provide wider sustainability benefits that outweigh the flood risk
- b) The development will be safe for its lifetime

Although the exception test is not required for small householder applications, it is relevant to note that by containing the proposed changes within the footprint of the existing building, rather than seeking a new extension to the property, the proposal makes the least impact on the wider site area and preserves and maintains the existing garden space which provides important attenuation for ground water and potential river flooding.

It is also recognized that the Darlington Borough Council Strategic Flood risk Assessment (2019) indicates that as a proxy assumption for the impacts of climate change over the next 100 years it might be assumed that flood zone 3a (where this property is located) will become flood zone 3b. Detailed below are the resistance and resilience measures that have been considered and will ensure the safety of the occupants for the lifetime of the development.

Site specific flood risk assessment

Climate change, current and future flood risk

The location of the property is sited within an area of high flood risk due to its proximity to the River Tees. A householders flood risk survey carried out as part of the purchase of the property (May 2023,

see appendix) indicates a moderate risk and records only one previous event of flooding in the lifetime of the property, which occurred in 1968. Details of the event are not included, but there have been significant flood defenses built up along the banks of the Tees in recent decades changing the nature and impact of flooding on this location, and there have been no recent flooding events at the property.

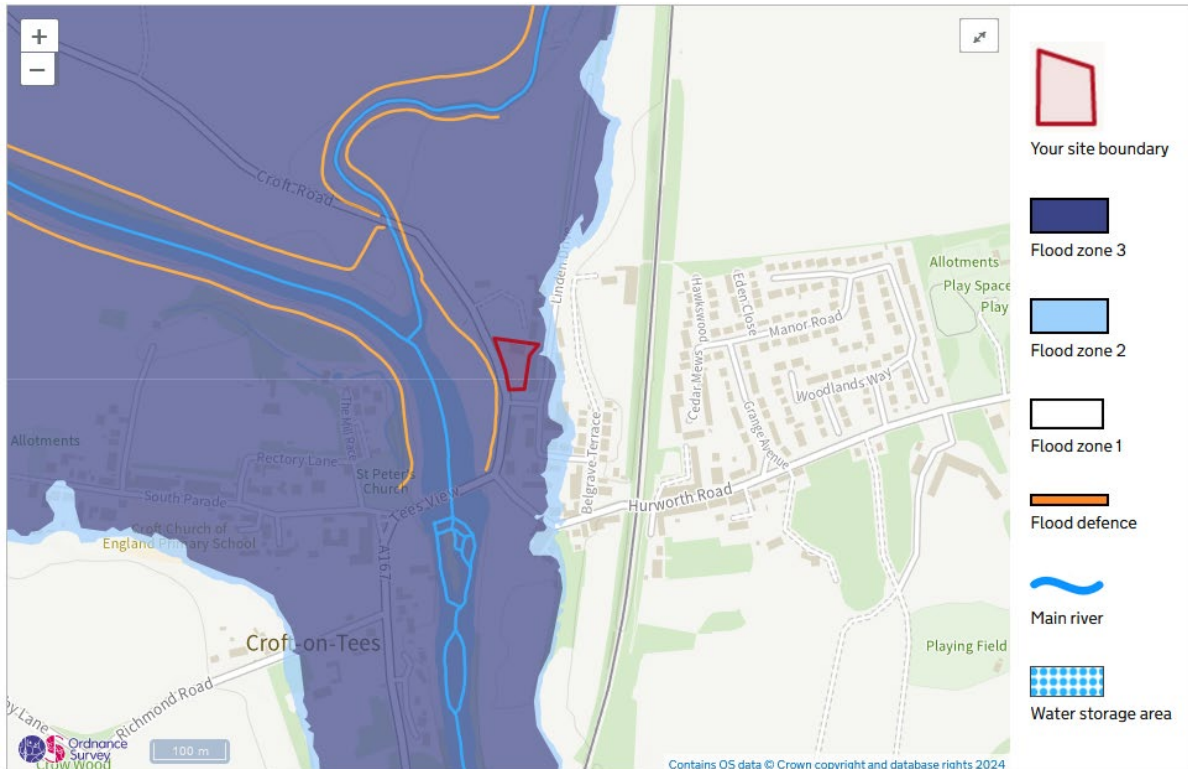


Figure 1: Map showing the flood zone of the property - sourced from Flood Map for Planning. Accessed 14th February 2024

Resistance measures

The house, which was designed and built in the 1960s was constructed with a raised ground floor and a floodable void beneath (approx. 700mm clear). A flood gate has been installed on the access door at the rear of the property, and this remains in place.

The proposed conversion of the garage into a habitable room will adopt a similar approach, with a proposal to raise the internal floor level +930mm, level with the other ground floor habitable rooms.

The resulting floor level will be approximately 930mm above the external ground level (although the external level varies) and above the peak flood level for the site location.

The proposal raises the existing floor level by +930mm above current levels. Cumana House has a raised, ventilated sub-floor which is treated as sacrificial spaces that can hold groundwater and are not used by as part of their residential accommodation. A previous owners of the home submitted and successfully had planning permission approved to raise the floor to +510mm **and** extend the garage and build a car port. The current application does not extend the footprint (no new foundations to be built), nor does it include a covered car port.

The Peak River Flow Allowances for the River Tees shows an anticipated 21% increase (50th centile) by 2050s and 32% by 2080s. Anticipating these increased levels, we have incorporated a number of measures to increase the resilience of the property and part of the proposed conversion.

Resilience measures

Additional resilience measures will include ensuring new electrical fittings are located a minimum 450mm above FFL (1380mm above external levels). All new and replacement wiring will be routed through the ceiling void and any existing circuits in this part of the house, below 450mm above FFL will be re-routed at a higher level.

Safety for life

There is currently an evacuation procedure in place for all residents in this postcode. The Environment Agency operate a call-alert system and the occupants have instructions on what to do at times of flooding, according to the risk level advised by the Environment Agency.

Evacuation would occur before the flood levels reached the property as the access driveway slopes down towards the river/ Tees View and would become inaccessible before the house would be affected by flood water.

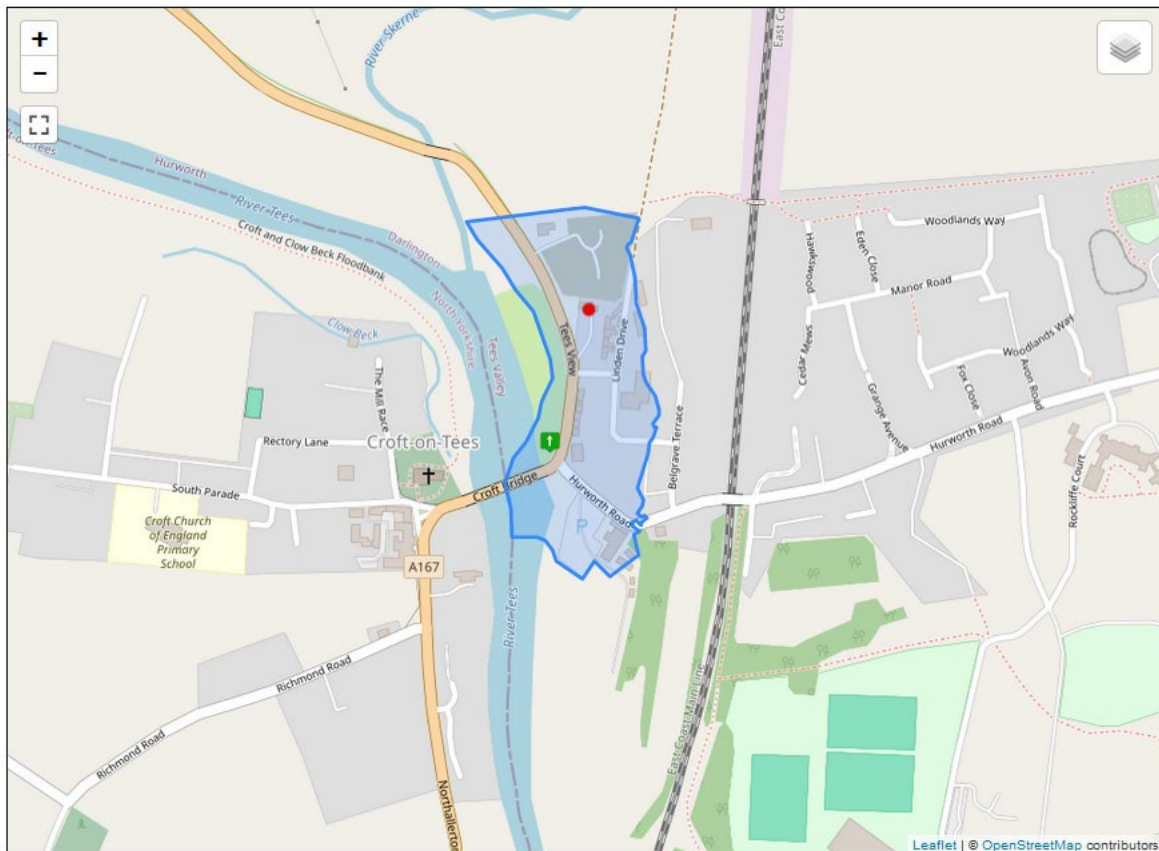
Precedent

In 2018, a the former owners of Cumana House successfully received approval of the conversion of garage to kitchen/dining room and erection of carport to rear (18/00433/FUL). The plan involved the extension of the garage to the front and rear. The current application is smaller and uses the existing footprint of the garage. The previous application raised the FFL to +0.510 RL, the current application raises it to +0.930 RL, an increase of +0.420.

More recently 12 Tees View successfully received prior approval (23/00291/PA) for the conversion of a shop to living space under similar circumstances of raising the existing floor level.

Area covered by this alert location

The area bounded in blue on the map shows the area covered by flood alerts and warnings for River Tees at Hurworth Place and Newbus Grange.



Note: the area shown on the map is the area covered by flood alerts and warnings. It is not a live map of current flooding. The area covered broadly equates to the area where the risk of flooding in any year is greater than 1% (the "hundred year" flood risk).

Figure 2: The map shows that the house sits within an area where the risk of flooding in any year is greater than 1% [Site highlighted in red]

Source: RiverLevels.uk using data from Environment Agency <https://riverlevels.uk/flood-warning-river-tees-at-hurworth-place-and-newbus-grange>

Finished levels relative to external street level (Ordnance datum) and peak river flow levels (EA).

PROPOSED INTERNAL FINISHED LEVEL	+31.930 *
CURRENT EXTERNAL FINISHED LEVEL	+31.000 *
HIGHEST RECENT FLOODING EVENT	+5.546M (JAN 2020)

*Ordnance survey datums

Additional sustainability factors

The proposed conversion of the existing garage to residential use brings additional benefits, both to the applicants and the vicinity which should also be taken into consideration.

- By converting the garage the applicants will provide an additional room to accommodate (if needed, in the future) a bedroom where their main kitchen is currently located. This helps to improve the livability of the house and makes it better suited to their needs as they grow older.
- It provides an opportunity to improve the resilience of the property overall – measures that would not otherwise be introduced.