

# **FLOOD RISK ASSESSMENT**

**for**

**Mrs A FULLER**

**NEW VEHICULAR CROSSING AND EXTENSION OF PARKING  
AREA**

**at**

**ELDER DENE**

**210 GARSTANG ROAD, CLAUGHTON-ON-BROCK, PRESTON**

**NOVEMBER 2023**

**REFORD**

**Consulting Engineers Limited**

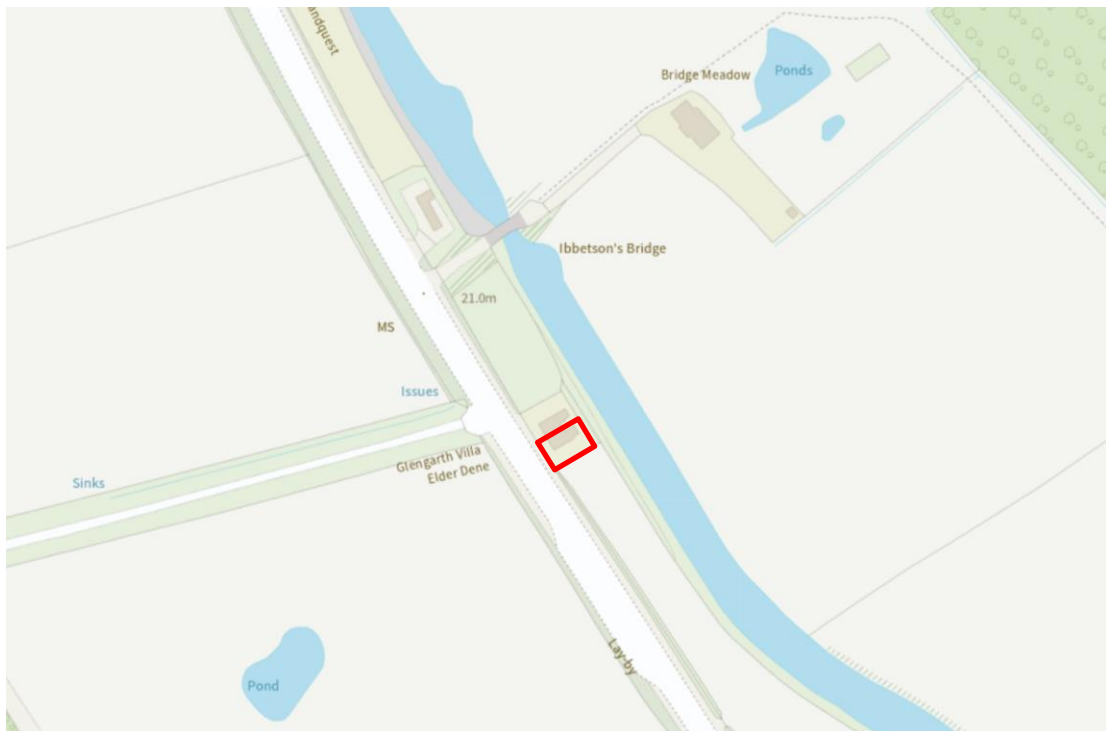
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## 1. INTRODUCTION

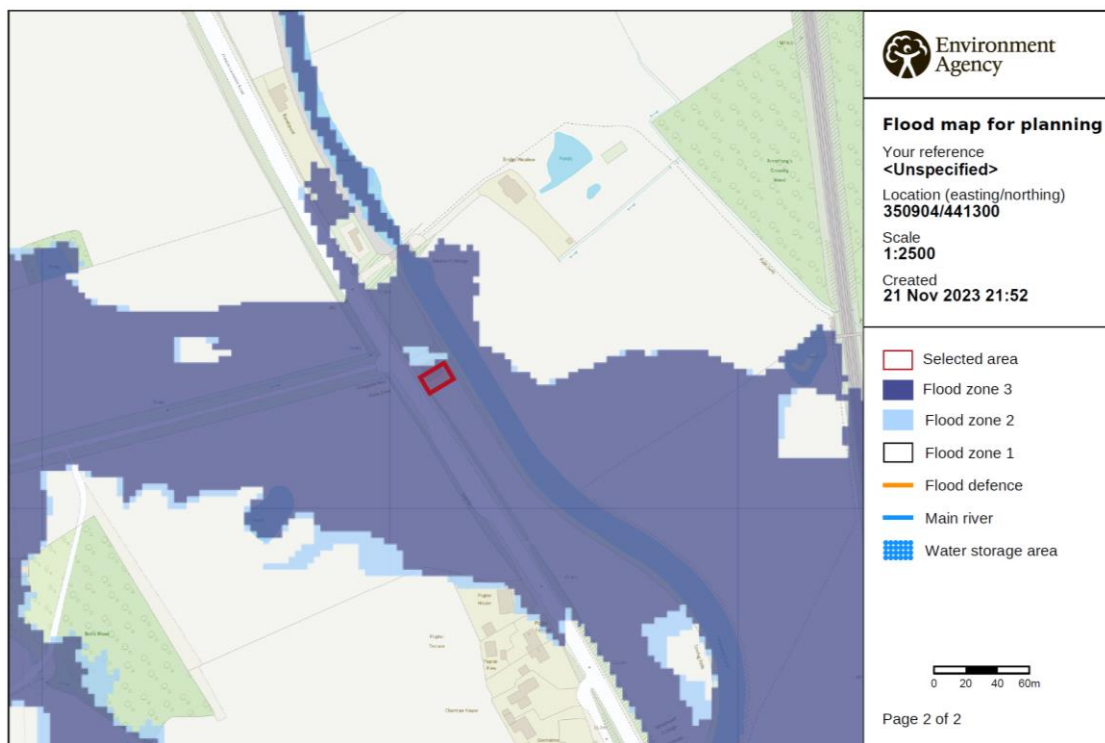
- 1.1 This flood risk assessment has been produced on behalf of Mrs A Fuller in support of a planning application for a new vehicular crossing and extension of parking area at Elder Dene, 210 Garstang Road, Claughton-on-Brock, Preston. The location of the site is shown below.



## 2. SITE DETAILS

- 2.1 The proposal relates to land to the east of the A6 Preston Lancaster Road. The site grid reference is SD509413.
- 2.2 The residential dwelling Elder Green is on the site with a hardcore surface lying to the south of the property. Elder Green is a semi-detached dwelling along with Glenarth Villa that is on the northern side.
- 2.3 The area of the site is approx. 210m<sup>2</sup>.
- 2.4 Access to the site is from the A6 Preston Lancaster Road.
- 2.5 Reference has been made to the Strategic Flood Risk Assessment for Wyre Borough Council, July 2016.

- 2.6 The River Brock lies approx. 800m to the south of the site and flows to the west to discharge into the River Wyre at St Michael's.
- 2.7 An ordinary watercourse, which is part of the River Brock catchment, lies along the northern edge of Stanzaker Hall Drive which lies approx. 25m to the north of the site. The ordinary watercourse is in culvert, passing within approx. 15m of the northern boundary of Glengarth Villa and under the A6 Preston Lancaster Road.
- 2.8 The new vehicular crossing and extension of parking area lie within Flood Zone 3 as identified on the Environment Agency's Flood Map for Planning. An extract from the Environment Agency's flood map for planning is below.



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- 2.9 The Environment Agency historical flood mapping has identified that the site has not previously been subjected to flooding.
- 2.10 The online Soilsmap Viewer has identified that the geology of the site comprising loamy and clayey floodplain soils with naturally high groundwater.
- 2.11 The Lancaster Canal lies immediately along the eastern boundary of the two residential dwellings. The canal is not on embankment.

### **3. SOURCES OF FLOODING AND FLOOD RISK TO THE DEVELOPMENT**

#### Tidal and Fluvial

- 3.1 The development is for a new vehicular crossing and extension of parking area. The main use of the site being residential, the vulnerability of the site is to remain unchanged as 'More Vulnerable'.
- 3.2 The flood risk is fluvial.
- 3.3 The new vehicular crossing and extension of parking area lie within Flood Zone 3 as identified on the Environment Agency's Flood Map for Planning. Flood Zone 3 is land assessed as having greater than 1 in 100 annual probability of river flooding.
- 3.4 Ground levels within the site are not to be raised. As such it will not be necessary to provide flood compensation due to loss of flood volume.
- 3.5 The site lies within a flood alert area where people are warned of the possibility of flooding and are encouraged to be alert, stay vigilant and make early / low impact preparations for flooding.

#### Canals, reservoirs and other artificial sources

- 3.6 The Lancaster Canal lies immediately along the eastern boundary of the two residential dwellings. The canal is not on embankment.
- 3.7 The Flood Risk from Reservoirs mapping shows there is no risk to the site of flooding from reservoirs should an event happen simultaneously with river flooding.
- 3.8 There are no other artificial sources within the vicinity of the site.
- 3.9 The risk from canals, reservoirs and other artificial sources is considered to be low.

#### Groundwater

- 3.10 Groundwater flooding is not raised as a major issue in either the Wyre or Ribble Catchment Management Plans.

### Pluvial

- 3.11 The Environment Agency Risk of Flooding from Surface Water map indicates the development site is at a very low risk of surface water flooding. A very low risk means that this area has a chance of flooding of less than 0.1% each year.
- 3.12 It is noted that flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

### Development drainage strategy

- 3.13 The proposal is for a new vehicular crossing and extension of parking area. The existing area comprises a hardcore area. The proposed finish is to comprise permeable tarmac.
- 3.14 The development will therefore not increase the area of impermeable hardstanding within the site and it is therefore considered there is no potential to alter the surface water runoff regime of the development nor to have an adverse effect on flood risk elsewhere in the wider catchment. As such there will be no change to the flood risk upstream or downstream of this location.

## **4. MITIGATION MEASURES**

- 4.1 The site lies within a flood alert area where people are warned of the possibility of flooding and are encouraged to be alert, stay vigilant and make early / low impact preparations for flooding. The site should sign up to the Environment Agency's flood alert service.
- 4.2 Should evacuation be necessary, it should be to the north along the A6 Preston Lancaster Road.

## **5. CONCLUSIONS**

- 5.1 This flood risk assessment has been produced on behalf of Mrs A Fuller in support of a planning application for a new vehicular crossing and extension of parking area at Elder Dene, 210 Garstang Road, Cloughton-on-Brock, Preston.

- 5.2 The new vehicular crossing and extension of parking area lie within Flood Zone 3 as identified on the Environment Agency's Flood Map for Planning. The main use of the site being residential, the vulnerability of the site is to remain unchanged as 'More Vulnerable'.
- 5.3 The development site is in an area benefitting from the Environment Agency's flood alert service, which should be signed up to.
- 5.4 The risk from canals, reservoirs and other artificial sources is considered to be low.
- 5.5 Groundwater flooding is not raised as a major issue in either the Wyre or Ribble Catchment Management Plans.
- 5.6 The Environment Agency Risk of Flooding from Surface Water map indicates the development site is at a very low risk of surface water flooding.
- 5.7 The development will not increase the area of impermeable hardstanding within the site and it is therefore considered there is no potential to alter the surface water runoff regime of the development nor to have an adverse effect on flood risk elsewhere in the wider catchment.
- 5.8 There will be no change to the flood risk upstream or downstream of this location.