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Date: 14 October 2024

Dear Sir/Madam

ALLEGED RAISING OF GROUND LEVELS REBUTTAL PROOF

LAND ADJ MOOR LANE, LOUGHBOROUGH, LEICESTERSHIRE

We have produced the below rebuttal proof to the proof of evidence issued by TA Shattock regarding the classification of floodplain and the impact on flood risk.

Please find our response detailed below.

Yours faithfully

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Flood Risk Advisor
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Response to Proof of Evidence of TA Shattock

1. The proof of evidence from TA Shattock states that the 1 in 20 year floodplain is the relevant flood event for considering lost floodplain storage, at this site. The Environment Agency (EA) disagree with this approach. The National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG) take the view that the floodplain is comprised of land in flood zones 2, 3a and 3b.

1.1. The following is an excerpt from the PPG (my emphasis;

Planning and flood risk

What is “flood risk”?

“Flood risk” is a combination of the probability and the potential consequences of flooding. Areas at risk of flooding are those at risk of flooding from any source, now or in the future. Sources include rivers and the sea, direct rainfall on the ground surface, rising groundwater, overwhelmed sewers and drainage systems, reservoirs, canals and lakes and other artificial sources. Flood risk also accounts for the interactions between these different sources. This term is key to the application of the presumption in favour of sustainable development in [paragraph 11 of the National Planning Policy Framework](#).

For areas at risk of river and sea flooding, this is principally land within Flood Zones 2 and 3 or where a Strategic Flood Risk Assessment shows it will be at risk of flooding in the future. It can also include an area within Flood Zone 1 which the Environment Agency has notified the local planning authority as having critical drainage problems.

[Table 1](#) provides definitions of the Flood Zones, from low to high probability of river and sea flooding. A map showing river and sea flooding is available from the Environment Agency’s [Flood Map for Planning](#). The Environment Agency has also set out who is responsible for flood and coastal erosion risk management in its [National flood and coastal erosion risk management strategy \(Annex A\)](#). Government has also published a [Flood and coastal erosion risk management policy statement](#). Strategic flood risk assessments show all sources of flood risk, now and in the future.

Paragraph: 001 Reference ID: 7-001-20220825

1.2. The Charnwood Borough Council Strategic Flood Risk Assessment (SFRA) Level 1, 2018, includes mapping of the flood zones including flood zone 3b/functional floodplain. This mapping shows the site to be entirely in flood zone 3b/functional floodplain [included in CD 5.4 figure 3]

1.3. The Flood Map for Planning, mentioned in the PPG quoted above, is based on hydraulic modelling and a LiDAR topographic survey. The Flood Map for Planning shows the majority of the site to be in flood zone 3, with a smaller area of the site in flood zone 2 [included in CD 5.4 figure 2]. The Flood Map for Planning does not delineate between flood zones 3a and 3b, they are combined as flood zone 3. Therefore, in accordance with the PPG as shown in the quote above, Flood Map for Planning shows the whole site is in the floodplain, as flood zones 2, 3a and 3b are areas of land at flood risk, and forming part of the floodplain.

1.4. The following excerpt is taken from the PPG:

Table 1: Flood Zones

Flood Zone	Definition
<i>Zone 1 Low Probability</i>	<i>Land having a less than 0.1% annual probability of river or sea flooding. (Shown as ‘clear’ on the Flood Map for Planning – all land outside Zones 2, 3a and 3b)</i>
<i>Zone 2 Medium Probability</i>	<i>Land having between a 1% and 0.1% annual probability of river flooding; or land having between a 0.5% and 0.1% annual probability of sea flooding. (Land shown in light blue on the Flood Map)</i>
<i>Zone 3a High Probability</i>	<i>Land having a 1% or greater annual probability of river flooding; or Land having a 0.5% or greater annual probability of sea. (Land shown in dark blue on the Flood Map)</i>
<i>Zone 3b The Functional Floodplain</i>	<p><i>This zone comprises land where water from rivers or the sea has to flow or be stored in times of flood. The identification of functional floodplain should take account of local circumstances and not be defined solely on rigid probability parameters. Functional floodplain will normally comprise:</i></p> <ul style="list-style-type: none"> <i>• land having a 3.3% or greater annual probability of flooding, with any existing flood risk management infrastructure operating effectively; or</i>

Flood Zone**Definition**

- *land that is designed to flood (such as a flood attenuation scheme), even if it would only flood in more extreme events (such as 0.1% annual probability of flooding).*

Local planning authorities should identify in their Strategic Flood Risk Assessments areas of functional floodplain and its boundaries accordingly, in agreement with the Environment Agency. (Not separately distinguished from Zone 3a on the Flood Map)

Note: The Flood Zones shown on the Environment Agency's Flood Map for Planning (Rivers and Sea) do not take account of the possible impacts of climate change and consequent changes in the future probability of flooding. Reference should therefore also be made to the [Strategic Flood Risk Assessment](#) when considering location and potential future flood risks to developments and land uses.

Paragraph: 078 Reference ID: 7-078-20220825

Revision date: 25 08 2022

- 1.5. The proof of evidence from TA Shattock describes the 1 in 20 year flood event as the floodplain. Table 1 from the PPG above explains that the floodplain includes flood zone 2, a 0.1% annual probability of flooding (which can also be described as a 1 in 1000 year return period), it also includes flood zone 3a, a 1% annual probability of flooding (which can also be described as a 1 in 100 year return period) and flood zone 3b/functional floodplain.
- 1.6. As shown in Table 1 of the PPG above, floodplain 3b, the functional floodplain, is now defined as the 3.3% annual probability flood event, which is a 1 in 30 year return period. This is a more severe flood than a 1 in 20 year/5% annual probability flood (the previous definition), so the flood extents and heights for a 3.3% annual probability flood would be larger.
- 1.7. However as previously discussed, Charnwood Borough Council have made their own designation of flood zone 3b in this area in their SFRA.
- 1.8. The proof of evidence by TA Shattock, paragraph 5.8, states that if ground levels were reduced within the "1 in 20 year flood level"... "the flooding impact reasons for the enforcement notice would be addressed". The enforcement

notice from Charnwood Borough Council [CD 1.1] states in Paragraph 3: “THE MATTERS WHICH APPEAR TO CONSTITUTE THE BREACH OF PLANNING CONTROL - Raising of ground levels within the floodplain”

1.9. I note that the enforcement notice does not specify the 1 in 20 year flood level; the notice states "floodplain" which includes all land in flood zones 2 (1 in 1000 year), 3a (1 in 100 year) and 3b (1 in 30 year).

1.10. In terms of the ground raising works which have taken place, the proof of evidence by TA Shattock states in paragraph 5.7 that “The Sections show that much of the groundworks since 2004 have been undertaken outside of the 1 in 20 year flood level and the 1 in 100 year flood level”. I have looked at these sections and they also show land raising within the 1 in 20 year and 1 in 100 year flood levels. The 1 in 1000 year flood level is also not depicted.

1.11. **LiDAR survey**

A point of clarification regarding the Environment Agency’s LiDAR survey programme. The Environment Agency carry out LiDAR surveys each winter, however the whole of England is not surveyed each year. While LiDAR survey is flown each year it is only flown for areas which have been requested. All LiDAR survey that has been completed is made publicly available free of charge via the internet at <https://environment.data.gov.uk/survey>

1.12. The EA do not have access to any other LiDAR survey data for this site than that which is available via this website. The website has survey for the site from 2008, 2010, 2018 and 2022.

1.13. **Summary**

The Environment Agency Flood Map for Planning shows the whole of the site to be in the floodplain. The EA have LiDAR data for the site showing ground levels in 2008, 2010, 2018 and 2022.