Proposed Self-Build Bungalow
Twin Brook Barn
Upbrooks
Clitheroe
BB7 1PL

1. Introduction

This document has been prepared in support of the proposed self-build bungalow at Twin Brook Barn, Clitheroe.

The purpose of this document is to identify significant changes which have occurred since preparation of the Environment Agency's Mearley Brook hydraulic model and Flood Map for Planning and to explain why recent site-specific evidence should be afforded significant weight when assessing flood risk at the application site.

The Applicant recognises that the Flood Map for Planning remains an important strategic planning tool for the assessment of flood risk. However, national planning policy and planning practice guidance require planning decisions to be informed by the best available and most up-to-date information.

Where more detailed site-specific evidence is available, this should be considered alongside strategic flood mapping when determining planning applications.

The Applicant has therefore commissioned a detailed topographical survey and site-specific Flood Risk Assessment to provide a more accurate representation of current conditions at the site.

2. Environment Agency Model Data

The Environment Agency has confirmed that the current Mearley Brook hydraulic model is based upon terrain information derived from LiDAR surveys undertaken in 2006 together with subsequent channel survey information collected prior to publication of the model.

Whilst entirely appropriate for strategic flood mapping purposes, the model inevitably reflects the physical conditions that existed when the underlying terrain data was collected.

The model therefore represents a historic snapshot of the catchment and does not incorporate a number of substantial changes that have subsequently occurred within the immediate vicinity of the application site and the wider catchment.

The Applicant does not suggest that the strategic flood model should be disregarded. Rather, it is considered that the model should be assessed alongside more recent site-specific evidence which reflects current ground levels and present-day site conditions.

See appendix A Environment Agency Confirmation

3. Physical Changes Since Preparation of the Model

Since collection of the 2006 terrain data, substantial physical changes have occurred immediately upstream and adjacent to the application site.

Most notably, Twin Brook Business Park was constructed following the grant of Planning Permission 3/2015/0159.

The development involved significant earthworks, land raising, road construction, attenuation infrastructure and the creation of commercial buildings across a substantial area of land located between Mearley Brook and the application site.

Approved plans indicate finished floor levels of approximately 84.45mAOD to 84.49mAOD within parts of the development immediately upstream of the site.

These works materially altered the topography of the area through which the Environment Agency model predicts flood waters would travel.

The Applicant's topographical survey confirms that present-day ground levels differ materially from those represented within the historic terrain model.

Table 1

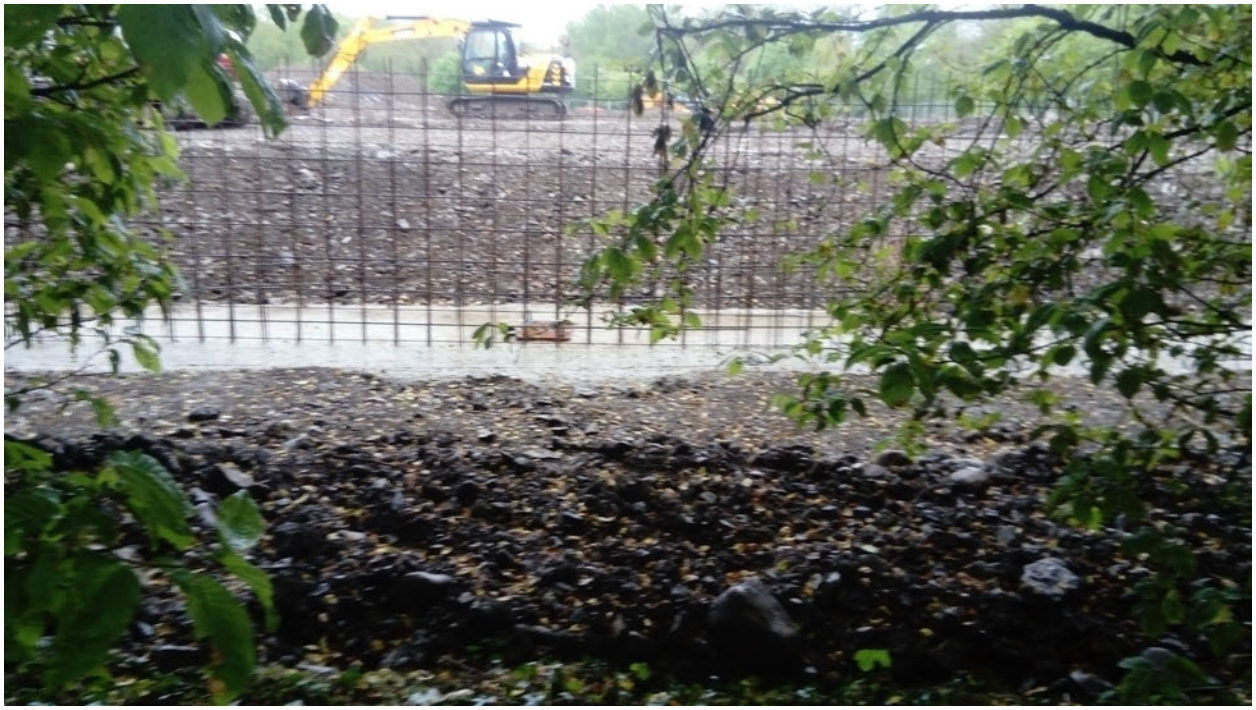
Comparison of Modeled Flood Levels for Defended Climate Change @ 0.1 percent AEP (+30 percent) against Actual Measured Ground Levels (March 2026) Along the Modelled Flow Path

Note : This scenario represents the most severe flood event currently identified by the Environment Agency as relevant to the assessment of flood risk at the application site .

The comparison demonstrates that surveyed ground levels at representative locations remain above the corresponding Environment Agency flood levels under this extreme flood scenario.

Reference Point	Location Description	EA Model Level (mAOD)	2026 Survey Level (mAOD)	Difference (m)	Observation
Point 14	Garden	83.45	83.59	0.14	Bungalow would be safe with larger footprint
Point 17	Finished Floor Level Industrial Building	83.57	84.49	0.92	Industrial park functions as an effective obstruction to modeled flood pathway
Point 20	Pedestrian access and egress	83.38	83.55	0.17	Pedestrian access and egress above predicted level
Point 23	Corner of Entrance Gate	83.57	83.89	0.32	Vehicular access /egress is above predicted level
Point 25	Twin Brook Road	83.25	83.46	0.21	Twin Brook Road is Above predicted levels

Figure 1 Twin Brook Business Park Land Raising during construction



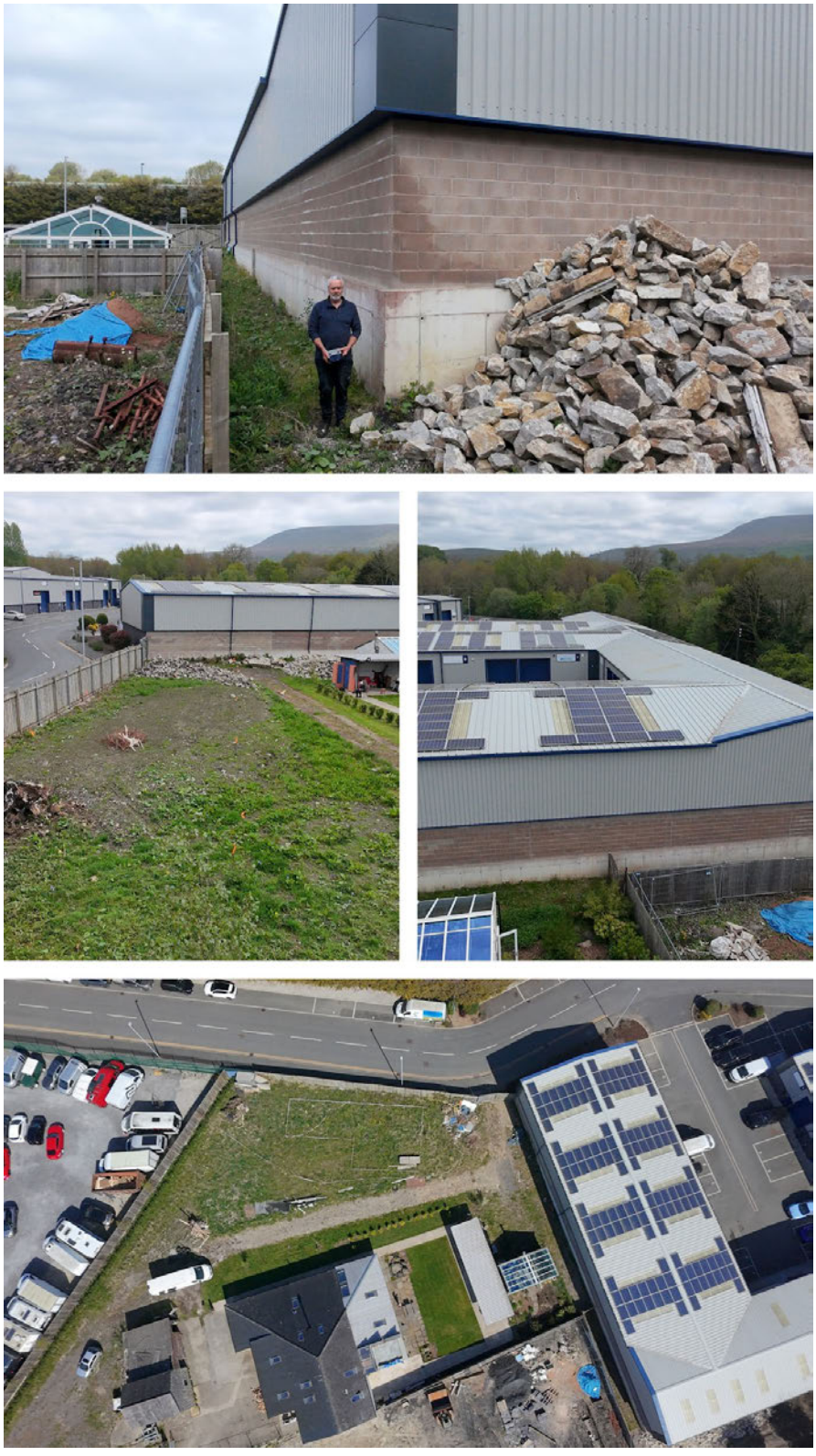


Figure 2 These photographs illustrate the current configuration of Twin Brook Business Park ,

including the raised development platform , roads and hard standing areas that now occupy the land between Mearley Brook and the application site

4. Changes Within the Mearley Brook and Worston Brook Catchments

In addition to the physical changes that have occurred immediately adjacent to the application site, a number of interventions have been undertaken within the wider Mearley Brook and Worston Brook catchments since preparation of the Environment Agency model.

These works have included natural flood management measures, river restoration projects and wider catchment management initiatives intended to improve ecological condition and increase resilience to flooding.

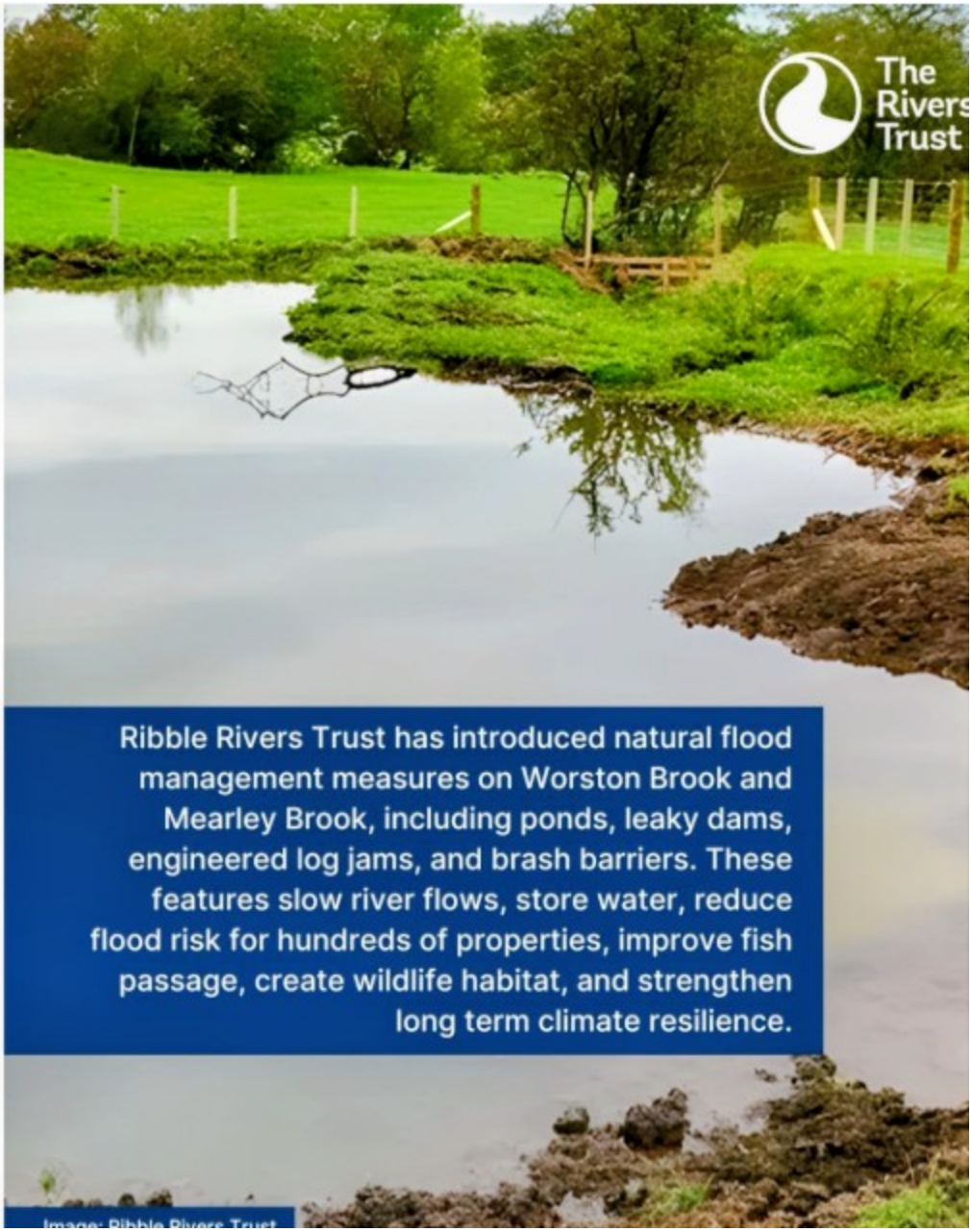
Projects undertaken by the Ribble Rivers Trust and partner organisations have included measures designed to slow runoff, increase temporary water storage, restore natural river processes and reconnect sections of floodplain.

Such interventions have been implemented at a number of locations within the catchment and represent further changes to catchment behaviour which post-date the preparation of the hydraulic model.

The purpose of this document is not to suggest that these measures eliminate flood risk or invalidate the Environment Agency model. However, they demonstrate that catchment conditions have continued to evolve since the model was prepared and reinforce the importance of considering the most recent information available when assessing flood risk.

Taken together with the substantial land raising and development associated with Twin Brook Business Park, these works indicate that present-day conditions differ from those represented within the historic terrain model upon which the strategic flood mapping is based.

Figure 4 Natural Flood Management and River Restoration Works



5 Site-Specific Evidence

A detailed topographical survey was undertaken in March 2026 using survey points corresponding with those used within the Environment Agency flood modelling data.

The survey provides a detailed and contemporary assessment of current ground levels within and surrounding the application site.

The accompanying Flood Risk Assessment demonstrates that:

- The proposed bungalow is located within an area identified as Flood Zone 1 on the Environment Agency Flood Map for Planning.

- The proposed development area is above the modelled flood levels identified within the Environment Agency data.

- Safe access and egress can be achieved via routes located within Flood Zone 1.

The Applicant is not aware of any historical incidents of fluvial flooding affecting the proposed development area during their occupation of the site.

Furthermore, a review of Environment Agency historic flood records has identified no recorded incidents of flooding affecting the proposed development area.

Whilst the absence of recorded flooding does not in itself demonstrate that flooding cannot occur, it represents an additional source of observed evidence which should be considered alongside hydraulic modelling and site-specific survey information.

The Applicant's survey therefore provides direct evidence of current site conditions rather than relying solely upon historic terrain assumptions.

6. Proportionate Assessment

National planning policy and planning practice guidance require flood risk assessments to be proportionate to the scale, nature and flood risk of the proposed development.

The proposed development comprises a single self-build bungalow occupying a limited area of land. The applicant has commissioned a detailed site-specific topographic survey which accurately records existing ground levels across the site and surrounding area.

The Environment Agency has indicated that a revised hydraulic model would be required to fully account for changes arising from the construction of Twin Brook Business Park and associated land raising works. However, such an exercise would require extensive remodelling of a large area extending beyond the application site, including land within third-party ownership and sections of the wider Mearley Brook catchment.

The applicant considers that requiring comprehensive remodelling of the wider area would be disproportionate to the scale and nature of the proposed development, particularly where detailed surveyed ground level data is already available.

The topographic survey demonstrates that existing ground levels and finished floor levels within

the business park are materially higher than the flood levels predicted by the current model. The survey also demonstrates that the proposed development area lies above the modelled flood levels identified within Environment Agency Product 4 data.

In these circumstances, the applicant considers that the site-specific survey provides a proportionate and reliable basis for assessing flood risk at the application site. The survey represents the most accurate evidence currently available and reflects present-day ground conditions that did not exist when the underlying flood model was prepared.

Accordingly, significant weight should be given to the site-specific survey evidence when determining flood risk and applying the Sequential Test.

7. Conclusions

The Environment Agency's Flood Map for Planning remains an important strategic planning tool.

However, the terrain information upon which the current Mearley Brook model is based predates a number of significant physical changes which have occurred within both the immediate vicinity of the application site and the wider catchment.

These changes include:

- Construction of Twin Brook Business Park and associated land raising works.

- Alteration of local ground levels and potential overland flow pathways.

- Installation of attenuation and drainage infrastructure.

- Natural flood management and catchment improvement projects.

- Availability of detailed site-specific topographical survey information collected in 2026.

- Absence of recorded historic flooding affecting the proposed development area.

The Applicant's detailed topographical survey and accompanying Flood Risk Assessment provide a more current representation of conditions at the site than the historic terrain data used within the strategic model.

Accordingly, the assessment of flood risk should be informed by both the Environment Agency's strategic mapping and the most up-to-date site-specific evidence available.

Significant weight should therefore be afforded to the detailed survey information and Flood Risk Assessment submitted in support of the application.

Appendix

Confirmation of age of flood maps used by Environment Agency

Gmail

Andrew thornburn [redacted] **GE32240RI- Age of flood risk maps for Twin Brook Barn Upbrooks Clitheroe.**

CMBLNC Info Requests [redacted] > 12 June 2024 at 13:33
To: [redacted]

Dear Andrew

Thank you for your email of 23 May 2024.

Fluvial flood risk

I can confirm that the hydraulic model that we hold for the Main River Mearley Brook is the 2018 Mearley Brook model. The Flood Zones on the Flood Map for Planning are currently informed by this model. The river channel survey used in the model was acquired in June/July 2016. The ground level/terrain information used in the 2018 model in this immediate area is from 2006.

If you would like to challenge the Flood Map for Planning please let us know and we can send more information.

Surface water flood risk

Managing the risk of flooding from surface water is the responsibility of the Lead Local Flood Authority (LLFA), which in this instance is Lancashire County Council. I believe that the surface water mapping in this area was produced in 2013, however, I do not know the age of the input data (e.g ground levels/terrain information) for this mapping.

As part of the Environment Agency's strategic overview role and to support the country in meeting its legal obligations under the Flood Risk Regulations we produced the Risk of Flooding from Surface Water (RoFSW) map. This allowed for a nationally consistent map to be produced.

While the Environment Agency maintains the map, in so far as we collate and publish updates to it via the GOV.UK website, responsibility for providing updated local information (e.g. new surface water modelling) rests with the Lead Local Flood Authority.

I hope that this is helpful.

Kind regards.

Helen Reynolds
Customers and Engagement Officer, Cumbria and Lancashire
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Rosie Irlam

Customer and Engagement Officer

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