The Great Grid Upgrade

Sea Link

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Volume 9: Examination Submissions

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Contents

1. Introduction

1.1.1 A set of additional visualisations has been prepared to inform ongoing discussions with stakeholders, in particular East Suffolk Council and Suffolk County Council, regarding the design of the proposed River Fromus bridge crossing (locations shown in **Appendix A** on 'Location Plan for Additional River Fromus Viewpoints A, B and C'). The visualisations include three height options for the bridge. These heights relate to a bridge structure with 4 m, 5 m, or 6 m clearance between the bridge soffit and the Q95 flow level of the river (low flow). These bridge options would result in bridges with overall heights approximately 4 m, 5 m, and 6 m from the ground level at the bridge abutment to the top of the parapet.

1.1.2 It should be noted that on the original visualisations submitted within the Environmental Statement (ES) (see **Application Document 6.4.2.1 ES Figures Suffolk Landscape and Visual Parts 1-7 [APP-208 to APP-214]**), the 4 m option was referred to as the '2 m option', because the soffit was 2 m above the bank level, and the 6 m option was referred to as the '4 m option', because the soffit level was 4 m above the bank. This reflected the terminology used in the engineering models on which the visualisations were based but have been updated for consistency with how the bridge options are referred to elsewhere in the application. A schedule setting out the various dimensions relevant to the 4 m and 6 m bridge options is found at [**Application Document 6.2.1.4 Part 1 Introduction Chapter 4 Description of the Proposed Project [AS-018]**. The 5m option has emerged since submission, based on discussions with the Environment Agency (EA), although this variant falls within the parameters presented and assessed at the application stage.

2. Additional Visualisations

2.1.1 The following visualisations have been prepared as set out in Table 2.1 and presented in **Appendix A**.

Table 2.1 Additional Visualisations

Viewpoint Number	Information shown
Viewpoint 2	Baseline, winter year 1 and summer year 15. Using the illustrative model and updated block model for the 4 m, 5 m and 6 m bridge (soffit height above the Q95 water level) respectively.
Viewpoint 20	Baseline, winter year 1 and summer year 15. Using the illustrative model and updated block model for the 4 m, 5 m and 6 m bridge (soffit height above the Q95 water level) respectively.
Additional Viewpoint A	Baseline, winter year 1 and winter year 15. Using the updated block model for the 4 m, 5 m and 6 m bridge (soffit height above the Q95 water level) respectively.
Additional Viewpoint B	Baseline, winter year 1 and winter year 15. Using the updated block model for the 4 m, 5 m and 6 m bridge (soffit height above the Q95 water level) respectively.
Additional Viewpoint C	Baseline, winter year 1 and winter year 15. Using the updated block model for the 4 m, 5 m and 6 m bridge (soffit height above the Q95 water level) respectively.

2.1.2 Visualisations have been prepared from representative Viewpoints 2 and 20 with updated winter photography taken in February 2025. Whilst winter photography captured in 2024 was available at the time of submission of the application, this included a crop in the foreground field of Viewpoint 20 and therefore it was deemed less suitable to be used in the visualisation. Instead, the Viewpoint 2 visualisation package presented in **Application Documents 6.4.2.1 ES Figures Suffolk Landscape and Visual Part 1of 7 and Part 2 of 7 [APP-208 and APP-209]** used older winter 2023 photography to avoid a crop screening the River Fromus bridge and it was considered that this should be updated for the purposes of examination as another winter season was then available. The 2023, 2024 and 2025 photography have all been taken in the same viewpoint location, however with very slight differences due to micrositing and corresponding angle of view at each separate visit. Other than the updated winter photography, the visualisation packages for Viewpoints 2 and 20 are comparable to those presented in **Application Documents 6.4.2.1 ES Figures Suffolk Landscape and Visual Part 1of 7 and Part 2 of 7 [APP-208 and APP-209]** as they show the winter and summer baseline, winter year 1 and summer year 15 and reinforce the conclusions contained within the Environmental Statement.

2.1.3 The visualisation packages also show a slightly updated model of the River Fromus bridge. Further information on the updated model and topographical survey is available below (within section ‘4 Explanatory material around bridge model updates’).

2.1.4 Additional visualisations have also been prepared from three supplementary locations (referred to as Viewpoints A, B, and C) to the west of the proposed River Fromus bridge as requested by the Suffolk County Council Landscape Officer during pre-application landscape and visual thematic meetings and in response to concerns raised regarding visual effects of the River Fromus bridge crossing in the Suffolk County Council Relevant Representation **[RR-5209]** (**EN020026-00522-SCC Sea Link Relevant Representations_Redacted**). These visualisations have been prepared for winter baseline, year 1 winter and year 15 winter as a worst-case scenario as only winter photography has been captured from these locations (taken in February 2025).

3. Additional Visualisation Conclusions

3.1.1 The additional visualisations (Viewpoints A, B, and C) demonstrate that the original representative viewpoints (Viewpoints 2 and 20) used to inform the Landscape and Visual Impact Assessment (**Application Document 6.2.2.1 Part 2 Suffolk Chapter 1 Landscape and Visual [APP-048]**) provided robust locations for representative viewpoints. Their choice in location of Viewpoints 2 and 20 is to be representative of 'Important Local Views' as recognised within the Saxmundham Neighbourhood Plan (2023) and for Viewpoint 2 specifically, part of the 'Green Gateway' on the approach to Saxmundham.

3.1.2 From Viewpoints 2 and 20, the proposed River Fromus bridge, permanent access road and Saxmundham Converter Station are visible and the combination of these components of the Suffolk Onshore Scheme result in residual significant adverse effects from the recreational receptors. It should also be noted that the public right of way (PRoW) which lies parallel to the B1121, is set behind a mature hedgerow, which screens views to the east towards the Suffolk Onshore Scheme. This is with the exception of one short section where there is a break in hedgerow vegetation, near to representative Viewpoint 2, and another short section due to the break in vegetation where the access road is proposed. Road users and pedestrians using the pavement along the B1121 would experience views of the Suffolk Onshore Scheme as represented by Viewpoint 2.

3.1.3 From Viewpoint B, the operational River Fromus bridge would not be visible due to the angle of the view. From Viewpoint C, views are likely to be limited to the parapets for the 6 m soffit height above the Q95 water level option. From Viewpoint A, views of the operational River Fromus bridge would be experienced; however, due to the angle of the view, the Saxmundham Converter Station would be largely screened. The receptors from Viewpoint A are limited as the view illustrated in Viewpoint A cannot be experienced from the B1121, despite the very short gap in mature vegetation, and can only be experienced by entering the field. Residential properties on the southern edge of Saxmundham have the potential to experience views of the proposed River Fromus bridge but they do not typically have windows facing this direction.

3.1.4 The varying views illustrated by representative Viewpoints 2 and 20 and Viewpoints A, B, and C demonstrate the changing visibility of the various elements of the Suffolk Onshore Scheme experienced by recreational receptors using the PRoW network in the local landscape to the west of the River Fromus. They also illustrate the wooded nature of this valley landscape.

3.1.5 The updated visualisations further reinforce the conclusions in the Environmental Statement and demonstrate that these conclusions are unlikely to change as a result of minor changes as the detailed design progresses.

3.1.6 For completeness and whilst discussions are still ongoing with stakeholders (e.g. Environment Agency), the viewpoints that have been provided include a 4 m, 5 m, and 6 m soffit height above the Q95 water level options.

4. River Fromus Bridge Model Assumptions

4.1.1 To provide greater legibility around the bridge models and photography, Table 4.2 outlines the sets of visualisation extracts that have additionally been prepared using Viewpoint 2. These are contained in **Appendix B**.

Table 4.2 River Fromus bridge model comparative images

Reference	Comparison shown
Plate 4.1: VP2 Block model with 2025 photography	Winter 2025 photography showing proposed River Fromus bridge model as presented within the Environmental Statement versus updated bridge model for 4 m bridge and 6 m bridge design options (soffit height above the Q95 water level) respectively.
Plate 4.2: VP2 Block model with 2023 and 2025 photography	Winter 2023 and 2025 photography showing proposed River Fromus bridge model as presented in the ES versus updated bridge model for 4 m bridge and 6 m bridge (soffit height above the Q95 water level) design options respectively.
Plate 4.3: VP2 Block model with 2023 photography	Winter 2023 photography showing proposed River Fromus bridge model as presented in the ES versus updated bridge model for 4 m bridge and 6 m bridge (soffit height above the Q95 water level) design options respectively.
Plate 4.4: VP2 Block and rendered model with 2025 photography	Winter 2025 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6 m bridge (soffit height above the Q95 water level) design options respectively.
Plate 4.5: VP2 Block and rendered model with 2023 and 2025 photography	Winter 2023 and 2025 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6m bridge (soffit height above the Q95 water level) design options respectively.
Plate 4.6: VP2 Block and rendered model with 2023 photography	Winter 2023 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6 m bridge (soffit height above the Q95 water level) design options respectively.

4.1.2 The River Fromus bridge models used in the ES visualisations (**Application Document 6.4.2.1 ES Figures Suffolk Landscape and Visual Parts 1-7 [APP-208 to APP-214]**) are from November 2024. These models show the 4 m and 6 m bridge design options (with 4 m and 6 m referring to the height of the bridge soffit above Q95 flow level).

4.1.3 The soffit level for these bridge designs were 9.774 m Above Ordnance Datum (AOD) and 11.774 m AOD respectively, relative to an, at the time, assumed Q95 level of 5.774 m AOD.

4.1.4 National Grid has been able to further refine the assumptions on which the ES stage visualisations were based by undertaking additional topographical surveys and investigation of the river soft bed levels. From this additional survey work, which was undertaken in Summer 2025 following the submission of the application, the Q95 flow level has been determined as 6.49 m AOD, therefore a 0.716 m variation from that used in the previous bridge models. This has resulted in the previous models being updated and raised by 0.716 m and show the corresponding soffit levels for the 4 m and 6 m options as being 10.49 m AOD and 12.49 m AOD respectively. This is summarised in **Error! Reference source not found.** below.

Table 4.3 River Fromus bridge model update 2025

	Q95 flow level	4 m soffit level	6 m soffit level
ES bridge model	5.774 m AOD	9.774 m AOD	11.774 m AOD
November 2025 model	6.49 m AOD	10.49 m AOD	12.49 m AOD
Variation	**+ 0.716 m**	**+ 0.716 m**	**+ 0.716 m**

4.1.5 In addition to the confirmed Q95 level, the topographical survey has also highlighted that the channel of the river is slightly wider than previously estimated. Due to the Proposed Project commitment to keeping the abutments 8 m from the top of the bank, this increased channel width has led to an increase in the span of the bridge of approximately 0.2 m.

4.1.6 With the increase in height there is a corresponding increase in the width of the approach ramps, however as these would be vegetated slopes they do not give rise to a notable increase in appearance.

4.1.7 Regarding tree removal around the proposed River Fromus bridge, the updated visualisations have applied the same tree removal assumptions used in the ES visualisations as no new information is available at this stage.

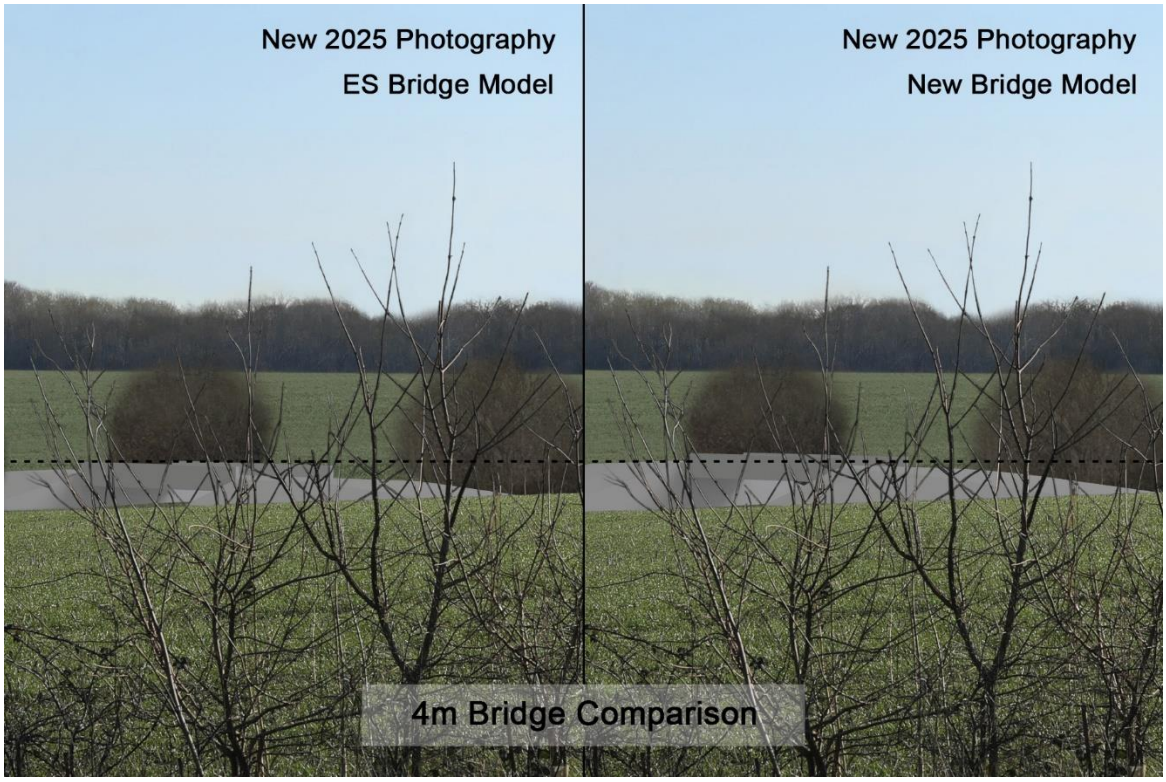
4.1.8 The information presented in this document includes both, block models and rendered models. The rendered provides a more detailed illustration of how the bridge may look like reflecting discussions with stakeholders and the design principles. The comparison images with block models reflect the 0.716 m height difference (see **Appendix B**, Plates 4.1 - 4.3), while the comparison images with block model and rendered model show more of a difference due to the arched design for the parapet and beam (see **Appendix B**, Plates 4.4 - 4.6).

Appendix A Additional Visualisations

Appendix B River Fromus Bridge Model Comparative Images

Plate 4.1: Viewpoint 2 Block Model with 2025 Photography

Winter 2025 photography showing proposed River Fromus bridge model as presented within the ES versus updated bridge model for 4 m bridge and 6 m bridge design options.



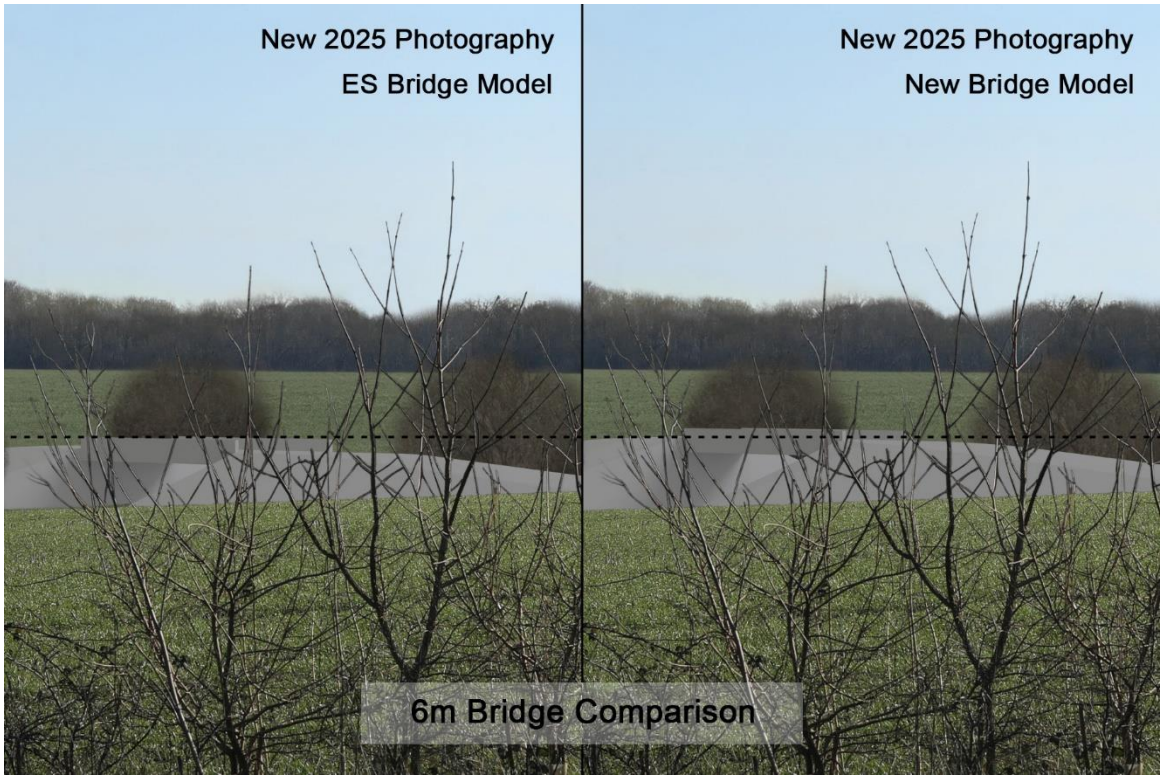
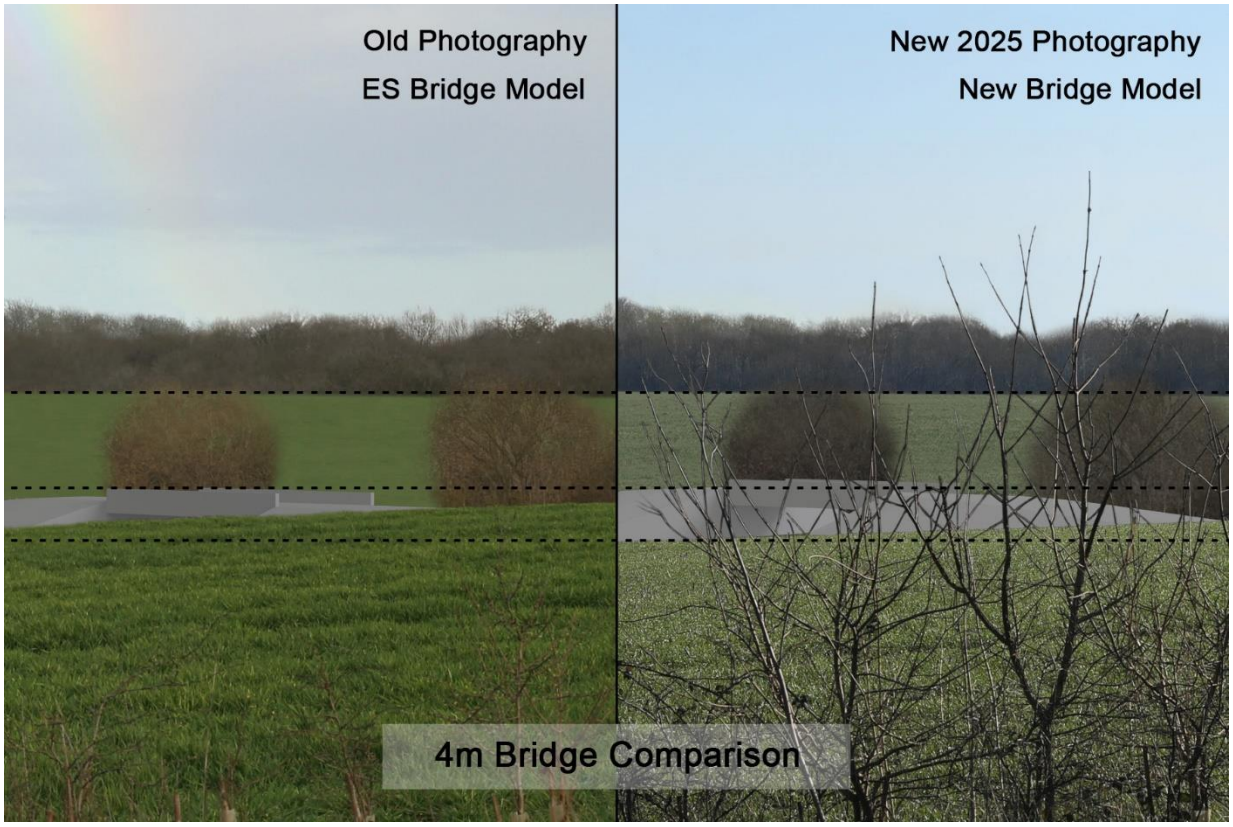


Plate 4.2: Viewpoint 2 Block Model with 2023 and 2025 Photography

Winter 2023 and 2025 photography showing proposed River Fromus bridge model as presented in the ES versus updated bridge model for 4 m bridge and 6 m bridge design options.



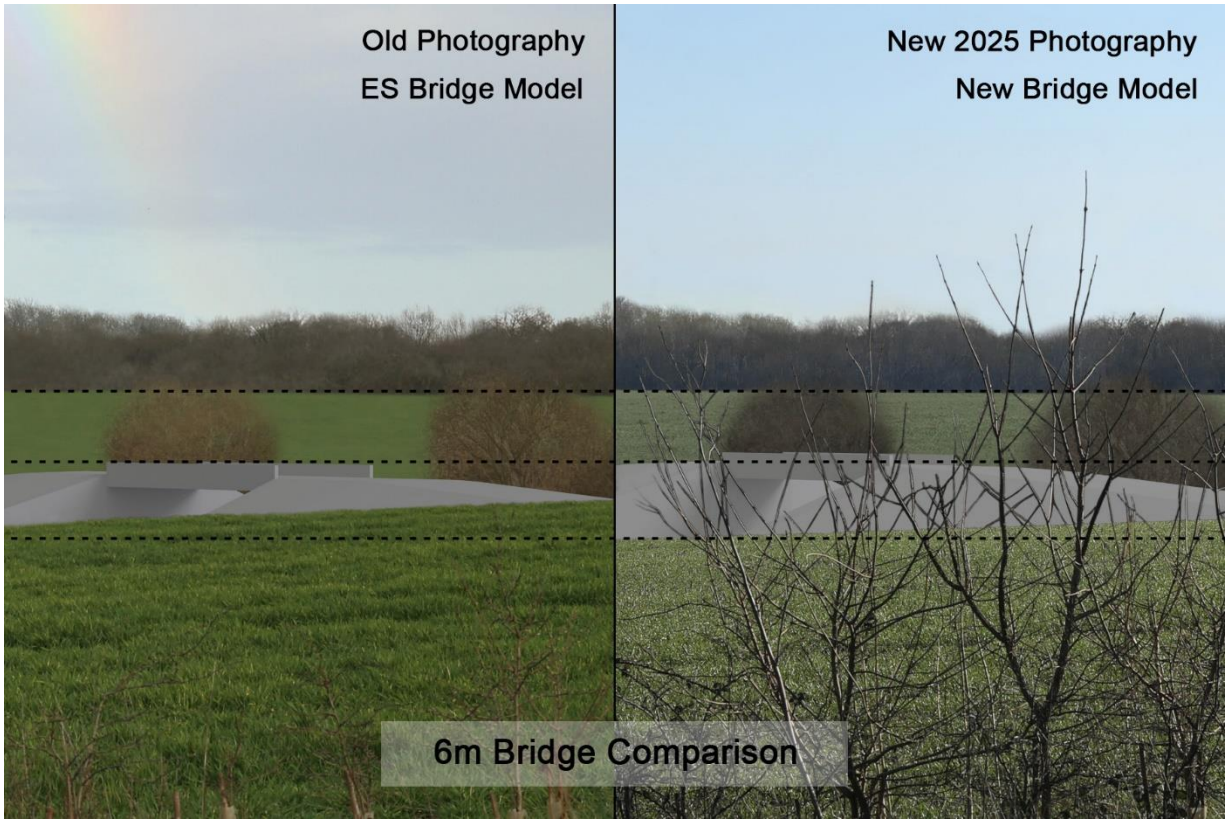
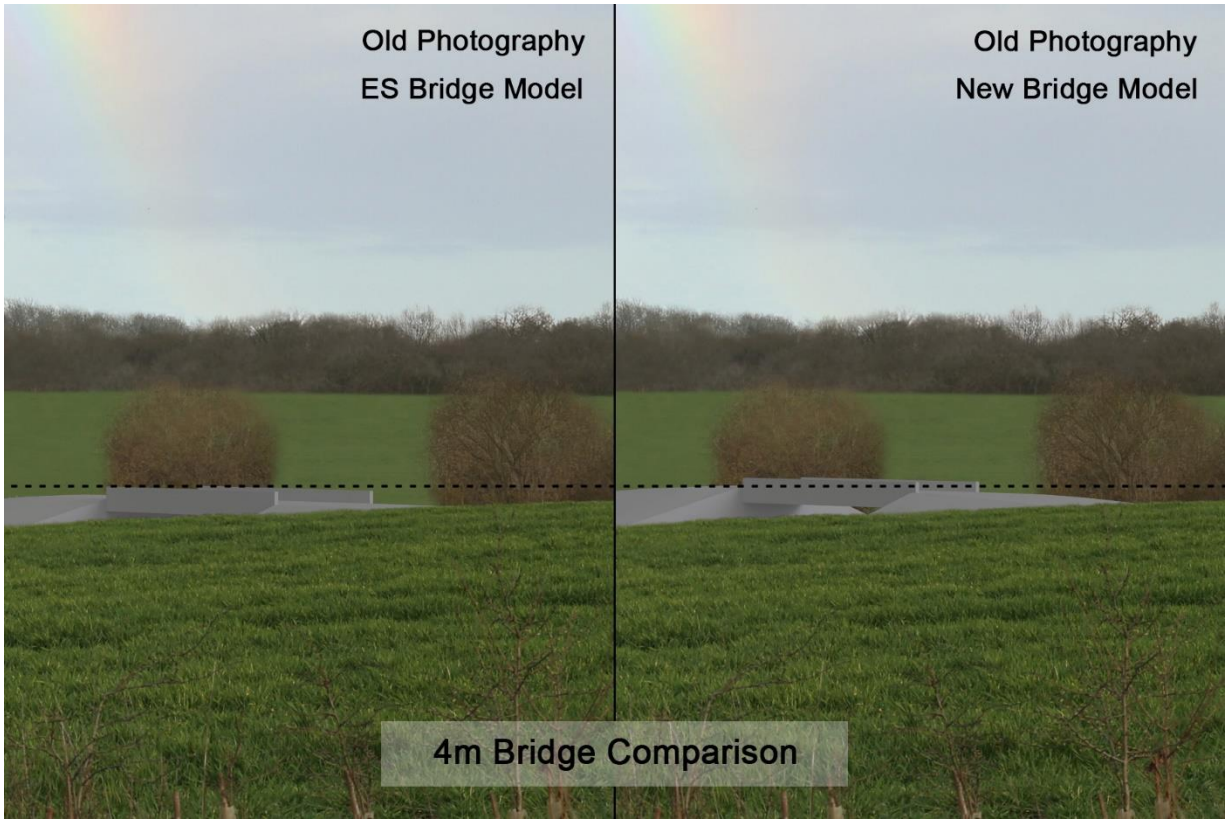


Plate 4.3: Viewpoint 2 Block Model with 2023 Photography

Winter 2023 photography showing proposed River Fromus bridge model as presented in the ES versus updated bridge model for 4 m bridge and 6 m bridge design options.



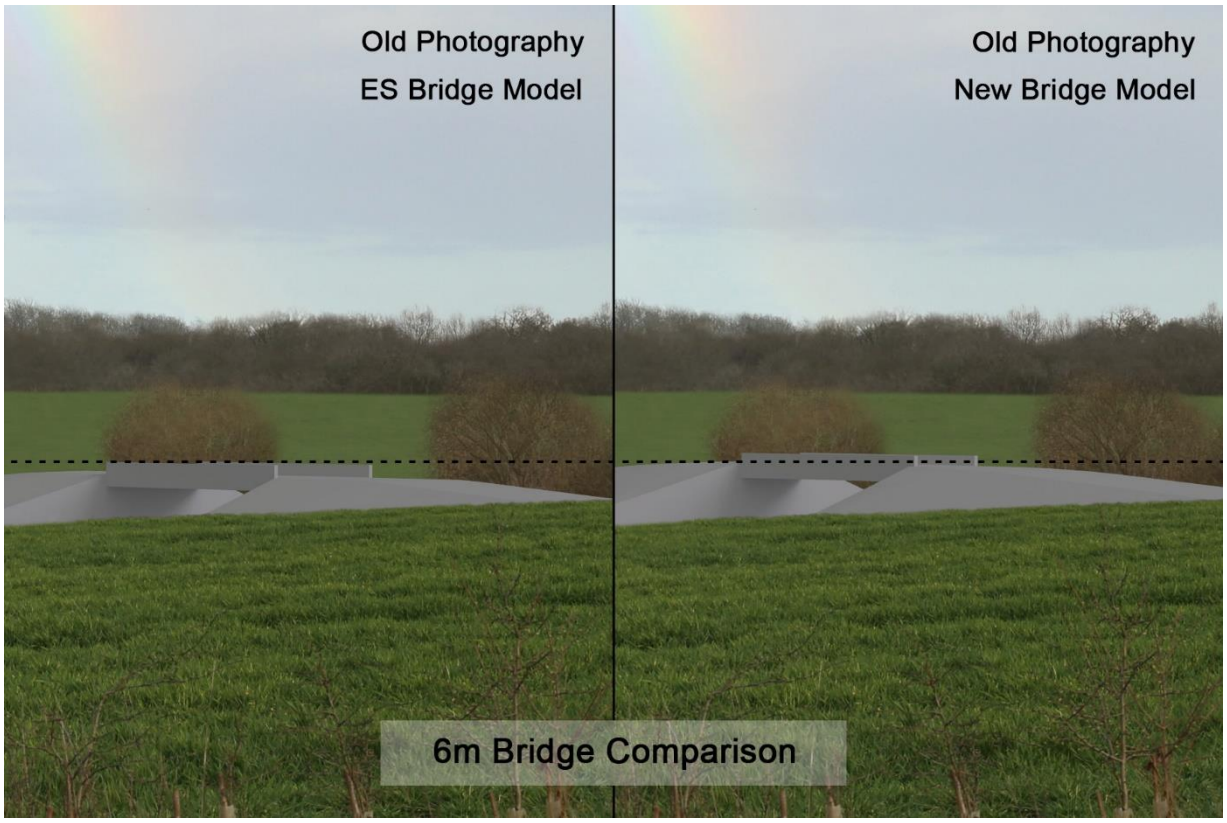
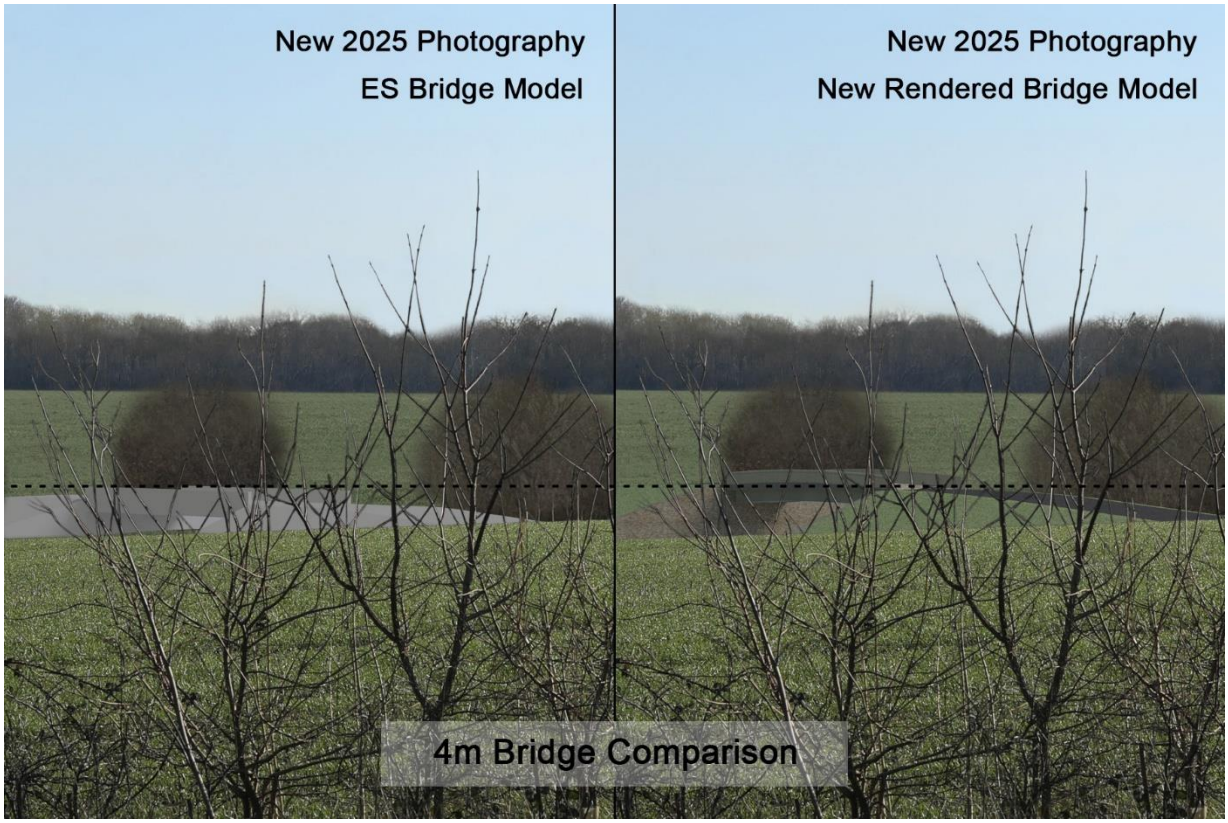


Plate 4.4: Viewpoint 2 Block and Rendered Model with 2025 Photography

Winter 2025 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6 m bridge design options.



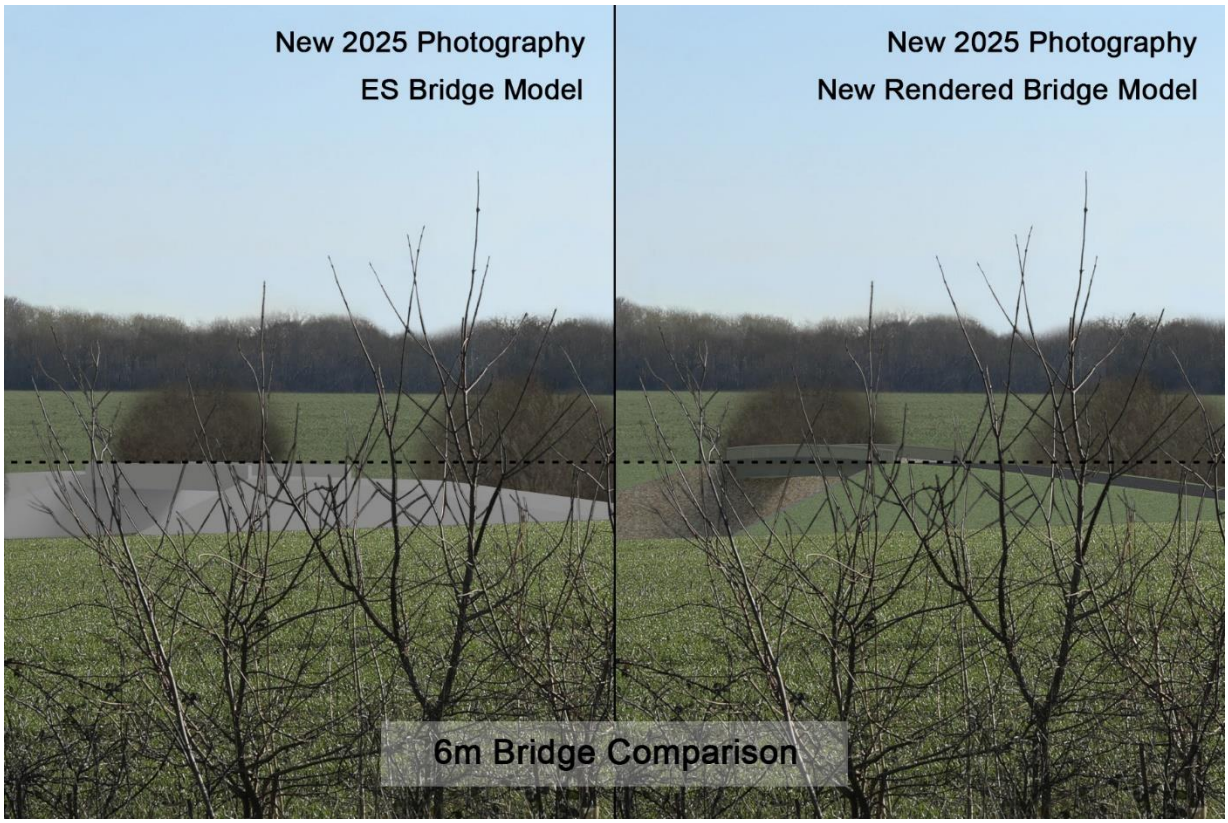
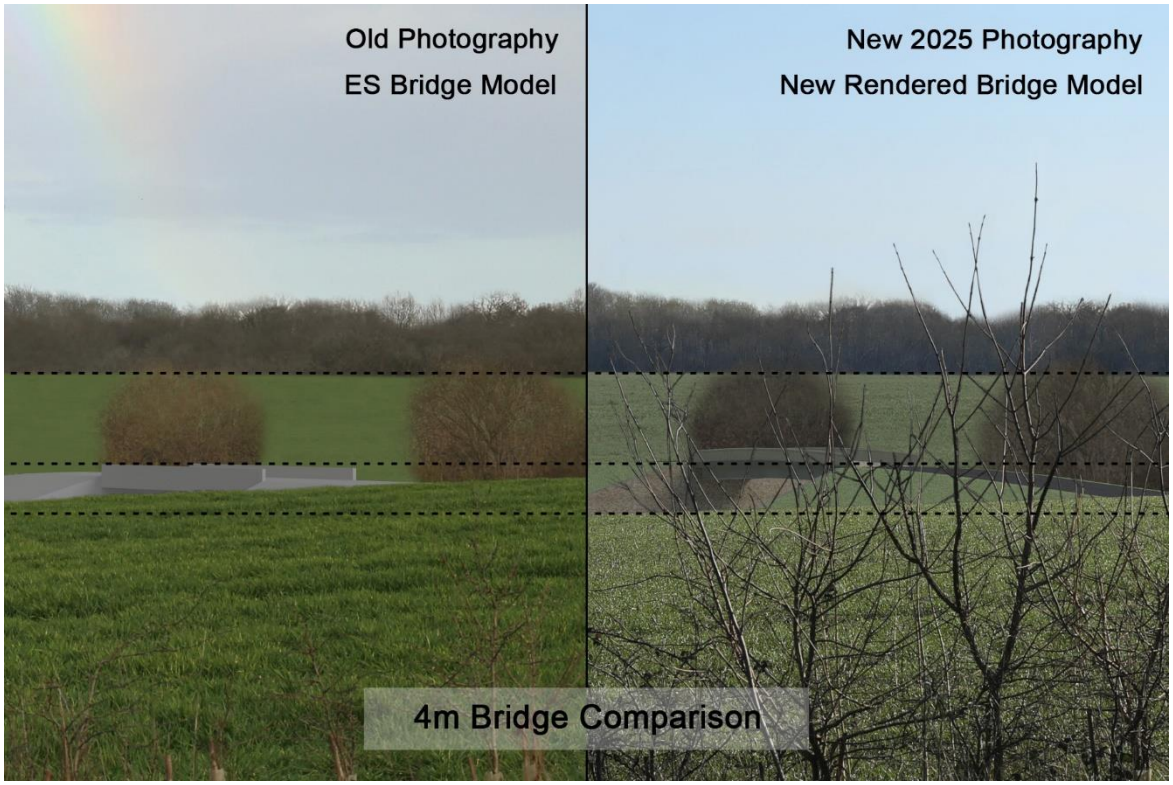


Plate 4.5: Viewpoint 2 Block and Rendered Model with 2023 and 2025 Photography

Winter 2023 and 2025 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6 m bridge design options.



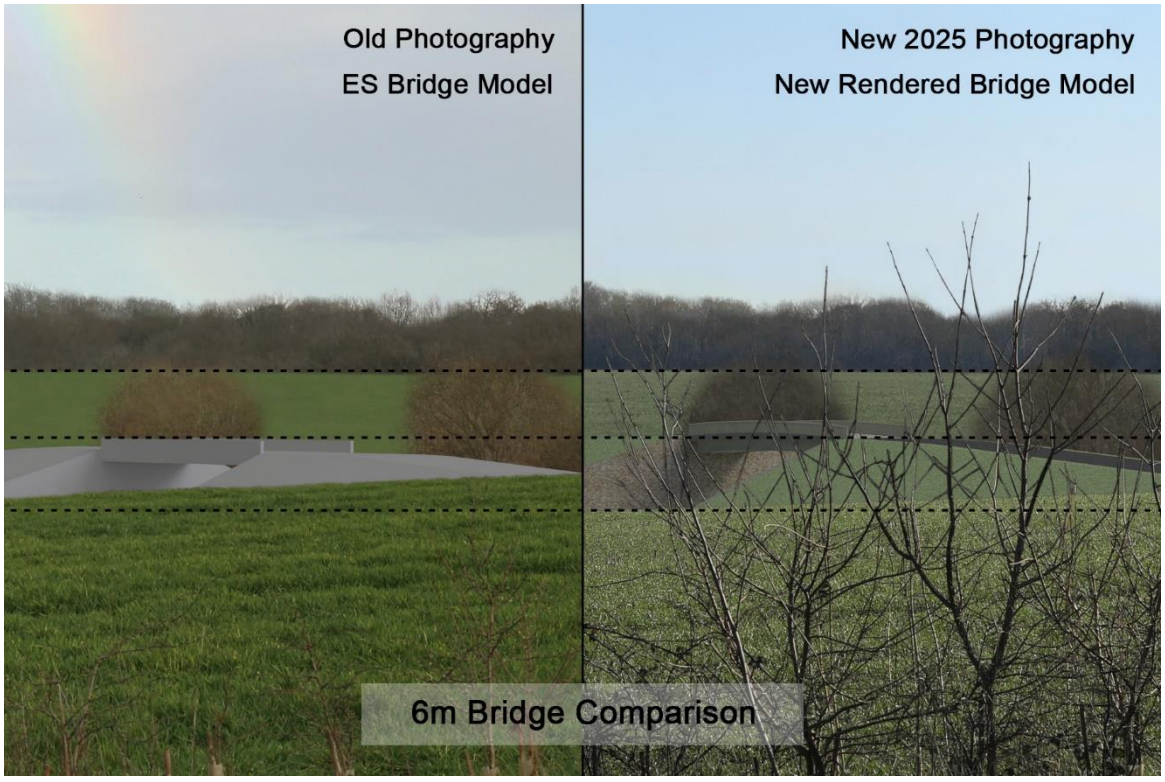
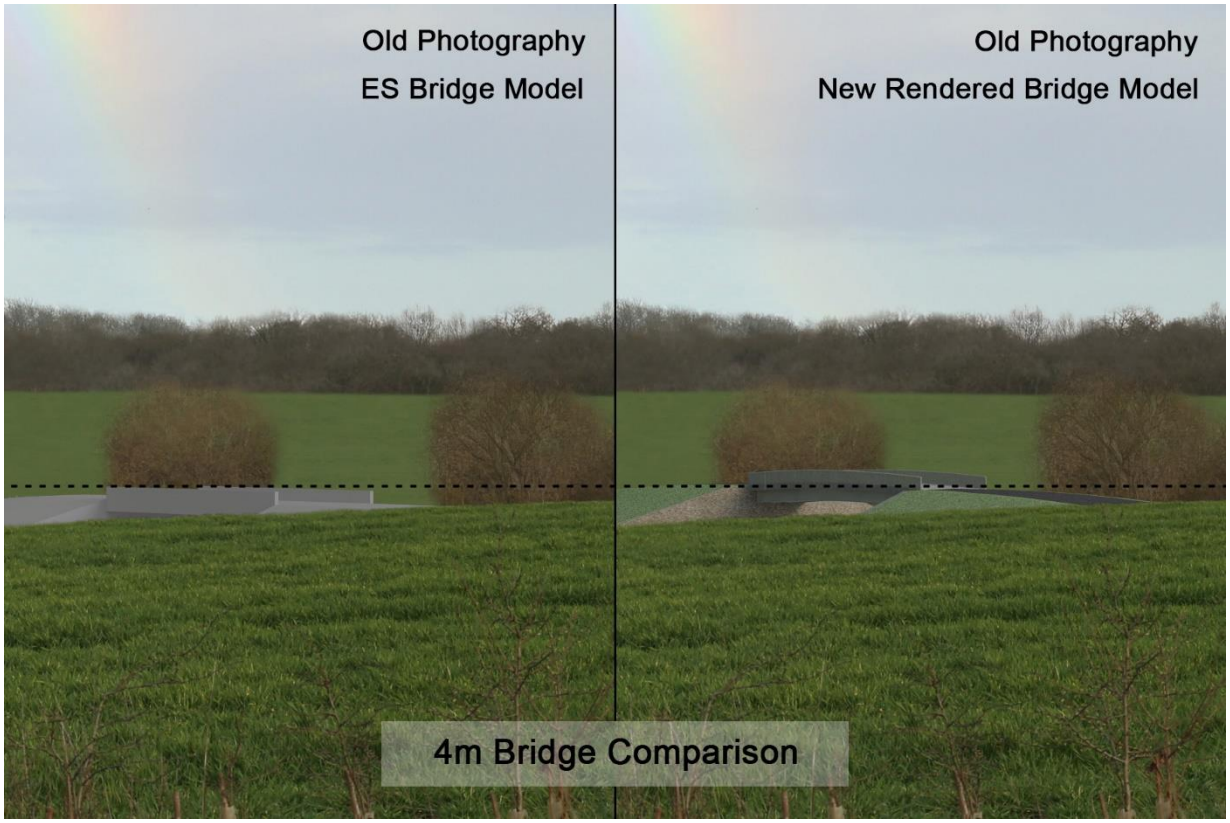
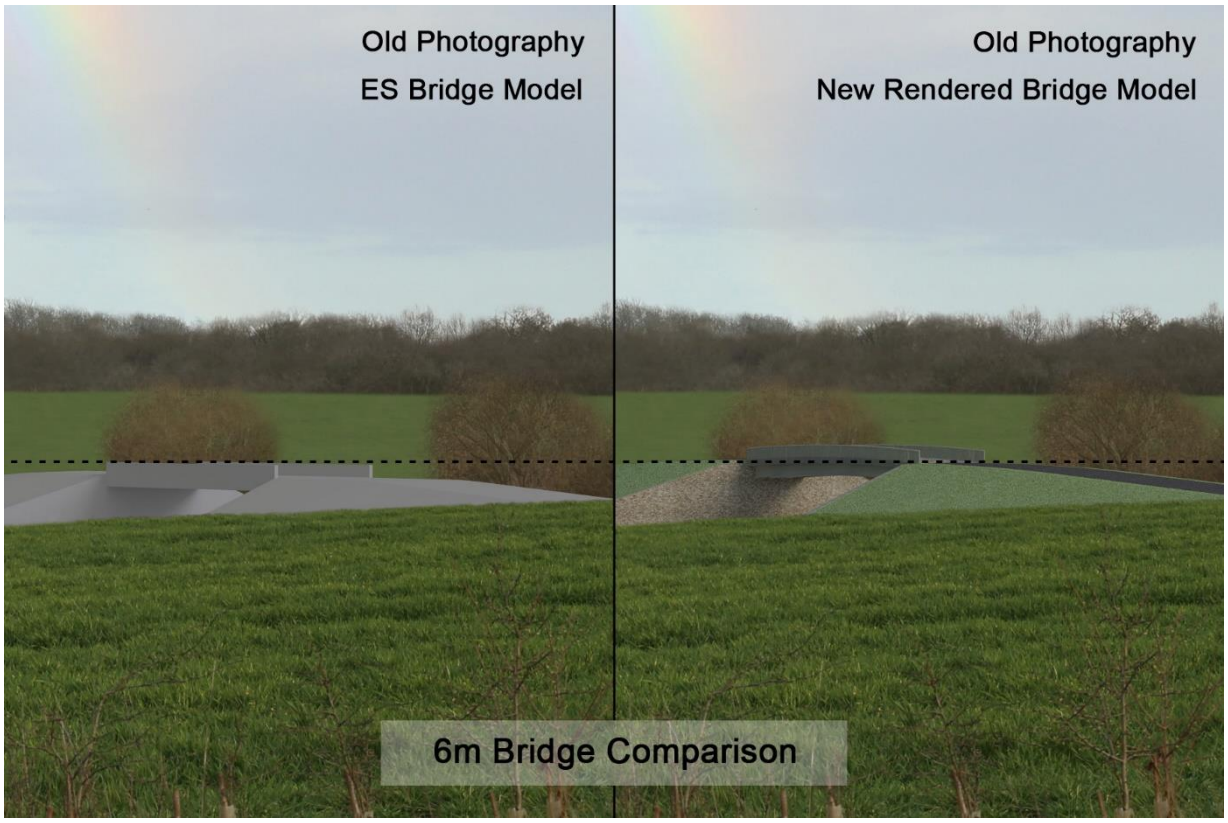


Plate 4.6: Viewpoint 2 Block and Rendered Model with 2023 Photography

Winter 2023 photography showing proposed River Fromus bridge model as presented in the ES (block) versus rendered updated bridge model for 4 m bridge and 6 m bridge design options.





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