Experience Studios.

WREXHAM AFC

Section 73 Technical Note

Operational noise breakout

6359-EXP-ACO-SKB-S73 Technical Note - Noise breakout-R02

30th January 2025

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To
Wrexham County Borough Council

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From:
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Section 73 Technical Note - Operational noise breakout

Planning application WRR P/2023/0776 was previously granted conditional approval under Section 73 of the Town and Country Planning Act 1990, specifically for the removal of Condition 3 (relating to the proposed spectator capacity of the new Kop Stand).

Since the approval of application WRR P/2023/0776 in January 2024, a new application is to be submitted by Wrexham Association Football Club (Wrexham AFC) to amend Condition 2 of the existing planning approval concerning the replacement of the approved plans of the new Kop Stand at the STōK Cae Ras Ground.

As part of the S73 application, Experience Studios have been engaged to review the design of the new Kop Stand and compare it against the previous design with regard to the control of operational noise breakout.

The following documents have been reviewed as part of the study:

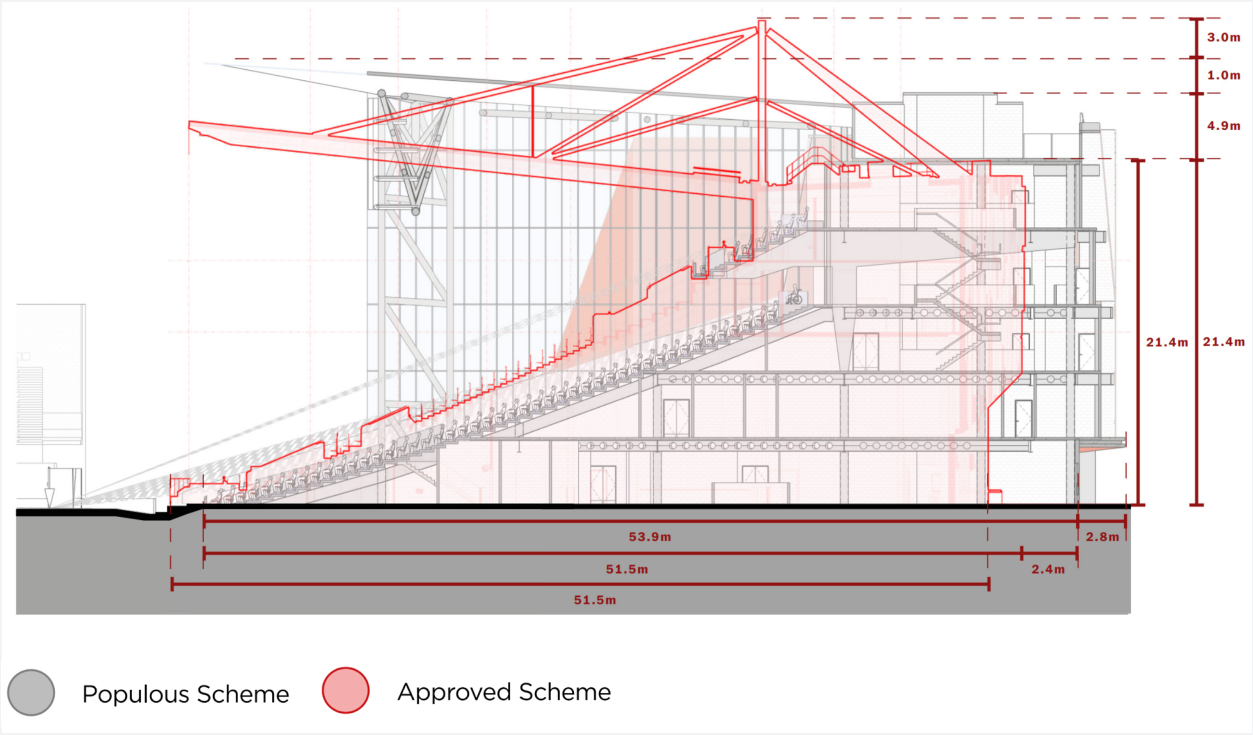
- STōK Cae Ras - Redevelopment project - Design and Access Statement, February 2025 - Rev P01 (Authored: Populous)
- Wrexham AFC – Design and Access Statement, August 2022 – Rev P02 (Authored: AFL)
- Wrexham AFC – Kop Development Noise Impact Assessment, October 2022 - Rev F03 (Authored: Ramboll)

1. Comparison between approved and Populous' schemes

1.1 The approved Kop Stand scheme submitted under application WRR P/2023/0776 comprises the construction of a new, partially enclosed stand with a maximum capacity of 5,500 spectators. The primary elements enclosing the open stand area were the aluminimum roof and the polycarbonate north and south end façades. The hospitality areas enclosed the stand to the east.

1.2 The new Populous scheme follows a similar principle, keeping the capacity of the stand at 5,500 spectators and enclosing it above and to the north, south and east.

1.3 While the materiality of the structure has evolved, the overall envelope geometry of the proposed stand remains broadly similar to the previously approved design. Notably, the new design does not introduce any additional noise breakout paths towards the identified local noise-sensitive receivers, and it is more enclosed than the previously approved scheme.



1.4 Regarding the roof, the previous application proposed an aluminium roof sheet, though specific sound insulation performance requirements were not outlined in the noise impact assessment. It is understood that the original roof material was lightweight in nature. In the Populous scheme, a standing seam roof system is proposed, incorporating sections of polycarbonate panels. It is anticipated that this new roof system will either match or better the sound insulation performance of the previously approved design. This will be developed as the design progresses.

1.5 Similarly, the side panels of the approved scheme were to be constructed from a combination of aluminium sheets and polycarbonate. In the latest proposal, the side panels will be entirely polycarbonate. The final product will be selected so as to achieve the same or better sound insulation performance than the previous proposals. Based on the proposed materials and design, it is expected that the current proposals will not result in any degradation of the sound insulation performance of the stand's north and south end façades compared to the original scheme.

2. Operational noise breakout during a football match

2.1 Given the proposed new Kop Stand facades and roof, and their materiality, it is expected that operational noise levels during a football match at the nearby noise sensitive receivers will be similar to those predicted in Ramboll's Noise Impact Assessment dated October 2022. This shows that future noise levels with the new Kop Stand in use are likely to be the same or lower than the existing levels experienced by the nearby noise sensitive receivers during a match.

3. Operational noise breakout during non-match days

3.1 New hospitality lounges are proposed within the new Kop Stand. These are to be fully enclosed, and their facade will incorporate high performance glazed curtain walling systems behind the perforated brick facade.

3.2 The sound insulation performance of the curtain walling systems and internal operational noise limits in hospitality areas will be selected such that noise breakout through the facade will not exceed the existing non-match day background noise levels at the most affected noise sensitive receivers, as proposed in Ramboll's Noise Impact Assessment dated October 2022.

3.3 Noise associated with the proposed rooftop access will be controlled through operational management measures.

4. Plant noise emissions

4.1 Plant noise emissions associated with the operation of the new Kop Stand will be designed so as to not exceed the existing background noise levels at the most affected noise sensitive receivers, in line with planning condition 16 imposed on the development. This condition states the following and is understood to be specific to plant noise emissions only.

"16. The rating level of any noise generated by reason of this development shall not exceed the pre-existing background level at any time. The noise levels shall be determined at nearby noise sensitive premises, and measurements and assessment shall be made in accordance with BS4142:2014 Methods for Rating and Assessing Industrial and Commercial Sound."

5. Conclusion

5.1 Based on the information presented above, it is expected that the design of the new Kop Stand will result in a similar impact on the nearby noise sensitive areas to that presented in Ramboll's Noise Impact Assessment dated October 2022 for the previously approved scheme.

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