CLAIMS:

1. An acoustic shield for a window, including:

one or more acoustic cavity modules locatable over at least a portion of the opening of the window, the or each module providing at least one resonance opening for reducing an overall sound pressure level of sound waves passing through the resonance opening while allowing an air flow to also pass therethrough, the acoustic cavity module including a plurality of plates aligned in a generally parallel and adjacent configuration such that a resonance cavity is defined between each pair of plates, each plate having at least one aperture, wherein the aperture(s) of each plate is/are substantially aligned with the aperture(s) of the adjacent plate to thereby form the resonance opening(s) of the module; and each resonance cavity defined between each pair of plates is open to the resonance opening of the module;

wherein the or each acoustic cavity module is designed to trap noise frequencies of between 800 to 1600Hz.

2. An acoustic shield for a window according to claim 1, wherein the apertures of each of the plates are respectively aligned within the acoustic cavity module(s).

3. An acoustic shield for a window according to claim 1 or 2, wherein the plates and the aperture provided within each said plate is generally rectilinear in shape.

4. An acoustic shield for a window according to any one of the preceding claims, wherein the aperture of each said plate provides an opening ratio of between 25 to 30%.

5. An acoustic shield for a window according to any one of the preceding claims, wherein at least one of the plates is at least partially formed from a porous material.

6. An acoustic shield for a window according to any one of the preceding claims, wherein at least one of the plates are provided with projections extending from

at least one face thereof.

7. An acoustic shield for a window according to any one of claims 1 to 4, wherein at least one plate comprises a combination of portions made from porous material, and portions having projections extending therefrom.

8. An acoustic shield for a window according to any one of the preceding claims, wherein the resonance cavity provides an internal noise trap therein.

9. An acoustic shield for a window according to claim 8, wherein the internal noise trap is provided at an internal peripheral area of the resonance cavity.

10. An acoustic shield for a window according to claim 9, wherein the internal noise trap comprises opposing elongate tapered channels respectively provided at a corner of the peripheral area.

11. An acoustic shield for a window according to claim 9, wherein the internal noise trap comprises an elongate rectilinear cavity extending between corners of the peripheral area.

12. An acoustic shield for a window according to any one of the preceding claims, wherein the acoustic cavity module(s) comprises three said plates.

13. An acoustic shield for a window according to claim 12, wherein the aperture has a rectilinear shape having a dimension of 0.107m on each side thereof, and/or wherein the plate is rectilinear in shape and has an external dimension of 0.254m in height and 0.184m in width.

14. An acoustic shield for a window according to claim 13, wherein the acoustic cavity module has an overall thickness of 0.046m.

15. An acoustic shield for a window according to any one of the preceding claims, comprising at least one acoustic metamaterial panel locatable over at least a portion of the window opening, the acoustic metamaterial panel comprising a plurality of the acoustic cavity modules.

16. An acoustic shield for a window according to claim 15, comprising a plurality

of the acoustic metamaterial panels, the panels being respectively joined by one or more hinge members to allow for folding of the acoustic shield.

17. An acoustic shield for a window according to claim 15 or 16, wherein the acoustic shield further provides a safety grille for the window.

18. An acoustic shield for a window according to any one of claims 1 to 15, wherein the acoustic cavity module comprises at least one engagement arrangement provided at an external surface of the acoustic cavity module for engaging on or more bars of a window safety grille.

19. An acoustic shield for a window according to claim 18, wherein the engagement arrangement comprises a pair of U shaped resilient members secured to opposing sides of the acoustic cavity module.

20. An acoustic shield for a window according to any one of the preceding claims, wherein the acoustic shield is configured to provide a noise reduction of 6 to 8 dB within the 800 to 1600 Hz frequency range.