



LOW RISE EXTERNAL WALLS ACOUSTIC OPINIONS

The Nasahi® External Wall System has been designed to provide excellent acoustic performance.

Table 1: Predicted acoustic ratings of external wall systems

| External Wall System | Nasahi Panel Size | Calculated Acoustic Performance |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------|
| | | Airborne Rw (Ctr) |
| Option 1: <ul style="list-style-type: none"> One layer of 10mm standard grade plasterboard 90mm timber stud R2 insulation 16mm batten Nasahi Panel 4mm cementitious render | 50mm Nasahi Panel | 47 (-4) |
| | 62mm Nasahi Panel | 47 (-4) |
| | 75mm Nasahi Panel | 48 (-4) |
| Option 2: <ul style="list-style-type: none"> One layer of 10mm standard grade plasterboard 76mm metal stud R2 insulation 16mm batten Nasahi Panel 4mm cementitious render | 50mm Nasahi Panel | 54 (-9) |
| | 62mm Nasahi Panel | 54 (-7) |
| | 75mm Nasahi Panel | 55 (-7) |
| Option 3: <ul style="list-style-type: none"> One layer of 10mm standard grade plasterboard 92mm metal stud R2 insulation 16mm batten Nasahi Panel 4mm cementitious render | 50mm Nasahi Panel | 54 (-7) |
| | 62mm Nasahi Panel | 55 (-7) |
| | 75mm Nasahi Panel | 56 (-7) |
| Option 4: <ul style="list-style-type: none"> One layer of 13mm standard grade plasterboard 90mm timber stud R2 insulation 16mm batten Nasahi Panel 4mm cementitious render | 50mm Nasahi Panel | 47 (-4) |
| | 62mm Nasahi Panel | 47 (-3) |
| | 75mm Nasahi Panel | 47 (-3) |



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| | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------|
| Option 5: <ul style="list-style-type: none"> • One layer of 13mm fire-rated plasterboard • 90mm timber stud • Acoustic insulation • 16mm batten • Nasahi Panel • 4mm cementiousrender | 50mm Nasahi Panel | 47 (-3) | |
| | 62mm Nasahi Panel | 47 (-3) | |
| | 75mm Nasahi Panel | 48 (-3) | |
| | Option 6: | 50mm Nasahi Panel | 48 (-3) |
| Option 6: <ul style="list-style-type: none"> • Two layers of 13mm fire-rated plasterboard • 90mm timber stud • Acoustic insulation • 16mm batten • Nasahi Panel • 4mm cementiousrender | 62mm Nasahi Panel | 49 (-3) | |
| | 75mm Nasahi Panel | 50 (-3) | |
| | Option 7: | 50mm Nasahi Panel | 47 (-3) |
| | Option 7: <ul style="list-style-type: none"> • One layer of 16mm fire-rated plasterboard • 90mm timber stud • Acoustic insulation • 16mm batten • Nasahi Panel • 4mm cementiousrender | 62mm Nasahi Panel | 48 (-3) |
| 75mm Nasahi Panel | | 49 (-3) | |
| Option 8: | | 50mm Nasahi Panel | 45 (-4) |
| Option 8: <ul style="list-style-type: none"> • One layer of 10mm standard grade plasterboard • 90mm timber stud • R2 insulation • 16mm batten • Nasahi Panel • No render | | 62mm Nasahi Panel | 46 (-4) |
| | 75mm Nasahi Panel | 47 (-4) | |

Note: Exact acoustic performance of the external wall system is dependant on the specification of the products used.

Reference Document: Renzo Tonin & Associates, Acoustic Opinions Report No. TH736-01F02 R8, Dated 16th April 2020.



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PERFORMANCE
INFORMATION

PAGE 3 OF 3

Table 2 - Typical Acoustic Performances of Various External Wall types

| DESCRIPTION | SYSTEM THICKNESS (MM) | ACOUSTIC PERFORMANCE Rw+Ctr |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------|
| Nasah [®] 50mm External Wall System, 4mm render, 16mm Batten, 90mm timber frame, R2 Insulation, 10mm Plasterboard. | 170 | 43 |
| Brick veneer, Timber Frame and Internal Plasterboard | 250 | 50 |
| Rendered EPS, Timber Frame and Internal Plasterboard | 174 | 29 |
| Weatherboards and 120mm mineral wool insulation | 120 | 23 |

Note: Exact acoustic performance of the external wall system is dependant on the specification of the products used.

☐ Reference Document: Renzo Tonin & Associates, Acoustic Opinions Report No.TJ101-01F02 Acoustic Opinions (r3), Dated 27th April 2016.