

BOARD & BATTEN REFLECTIVE

NoiseBloc™ Board & Batten

Reflective Timber Acoustic Barrier

A single-sided reflective timber noise barrier built from close-butted 150×22mm vertical boards with a 50×22mm cover strip over every joint. It gives a continuous, gap-free acoustic screen with a minimum superficial mass of 15kg/m², for boundaries where a cost-effective, independently tested timber barrier is specified.

23dB
DL_R road traffic
BS EN 1793-2:2018

24dB
DL_R railway
BS EN 16272-2:2023

15.8kg/m²
Superficial mass
boards and cover strips

2.4m
Standard bay width
post centres

KEY SPECIFICATION

System type	Reflective, single-sided timber barrier
Acoustic boards	150×22mm sawn softwood, vertical, close butted
Cover strips	50×22mm, centred over every board joint
Rails	100×47mm at max. 600mm vertical centres
Base board	150×47mm, boards overlap by 50mm min.
Capping	150×47mm
Posts	Timber 125×100mm or steel UB (see page 4)
Barrier height	1.98m to 7.0m standard; other heights on request
Treatment	Pressure treated to BS 8417: Use Class 4 ground contact, Use Class 3 above ground
Finish	Natural treated timber

WHY SPECIFY IT

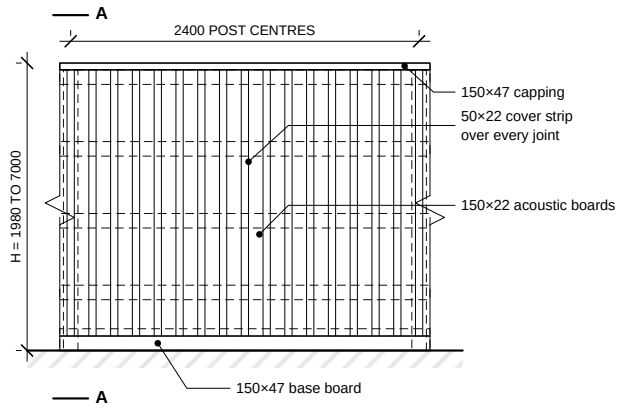
- **Independently tested** in 2025 to the current road and rail standards, by a laboratory accredited by UKAS (No. 1262). Full reports available on request.
- **Mass you can verify:** superficial mass is declared layer by layer, not as an average density.
- **Gap-free by design:** cover strips seal every joint and the boards lap the base board.
- **Engineered to suit the site:** timber or steel posts, with indicative post sizes for early-stage design.
- **Matching gates** for pedestrian and vehicle access.
- **FSC® certified timber** available on request.

TYPICAL APPLICATIONS

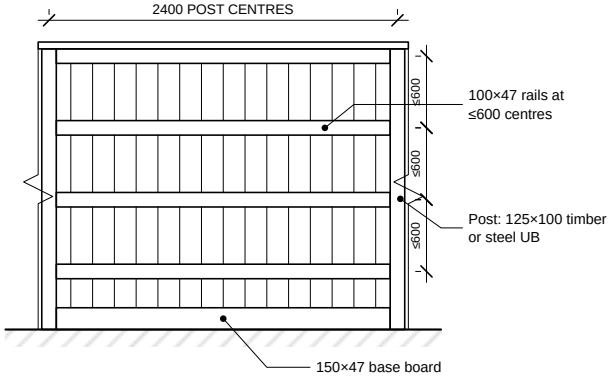
Residential developments and garden boundaries · Battery energy storage (BESS) sites · Commercial and industrial premises · Roads and railways · Sports venues and car parks

Standard details

Drawing NB-BB-R-SD01 Rev A · reduced from A3, do not scale · DXF and A3 PDF available on request



FRONT (BOARD FACE)

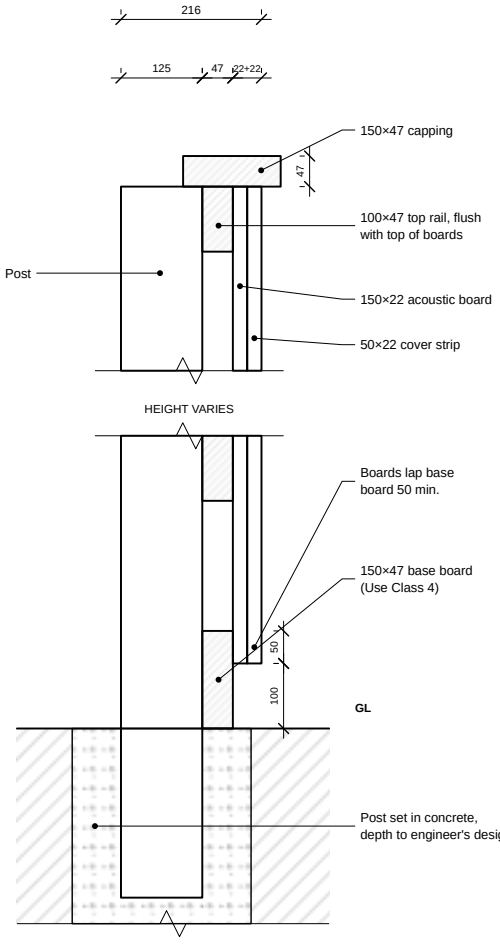


REAR (RAIL SIDE)

BB-01 TYPICAL ELEVATIONS — **SCALE 1:50**

NoiseBloc™ Board & Batten Reflective

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BB-02 SECTION A-A — **SCALE 1:10**

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Drawing notes

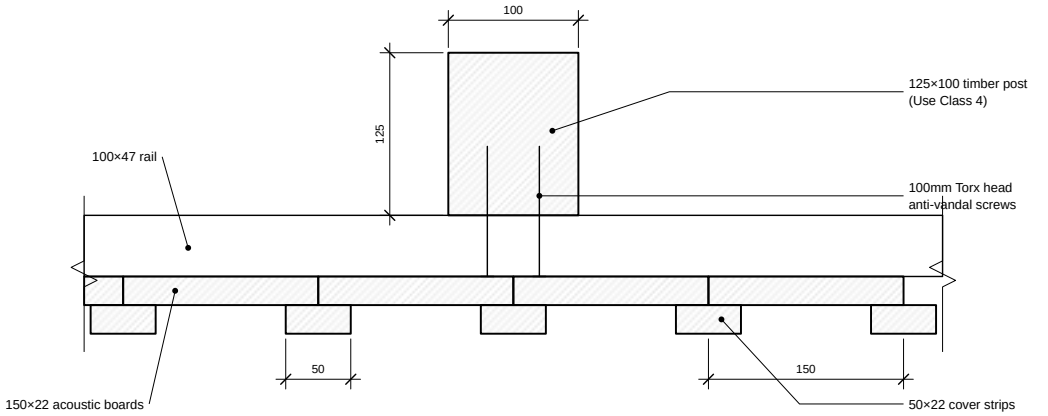
1. All dimensions in mm. Typical details only; barrier height, post sizes and setting out to project drawings.
2. 150×22 boards close butted, nailed to every rail with 50mm nails.
3. 50×22 cover strip centred over every joint, full height, 50mm nails.
4. 100×47 rails at max. 600mm centres, top rail flush with board tops, fixed with 100mm Torx head anti-vandal screws.
5. Boards and cover strips lap the 150×47 base board by 50mm min.
6. Post size, foundations and packer bolts to the structural engineer's design (indicative sizes on page 4).
7. Barrier to run continuously with no gaps at posts, ends, gates or ground level.

Using these details

Each detail carries its own reference and the NoiseBloc™ and ATF Supplies details, so it can be copied straight into project drawings and specifications. CAD files (DXF) and the full A3 drawing sheet are available from ATF on request.

Standard details: plans and joint

Drawing NB-BB-R-SD01 Rev A · reduced from A3, do not scale

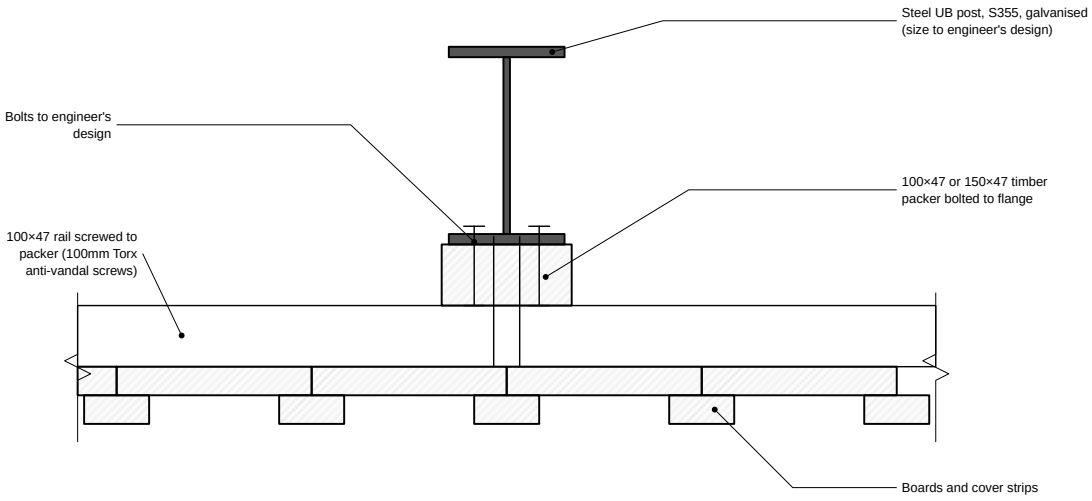


BB-03 PLAN AT TIMBER POST

NoiseBloc™ Board & Batten Reflective

SCALE 1:5

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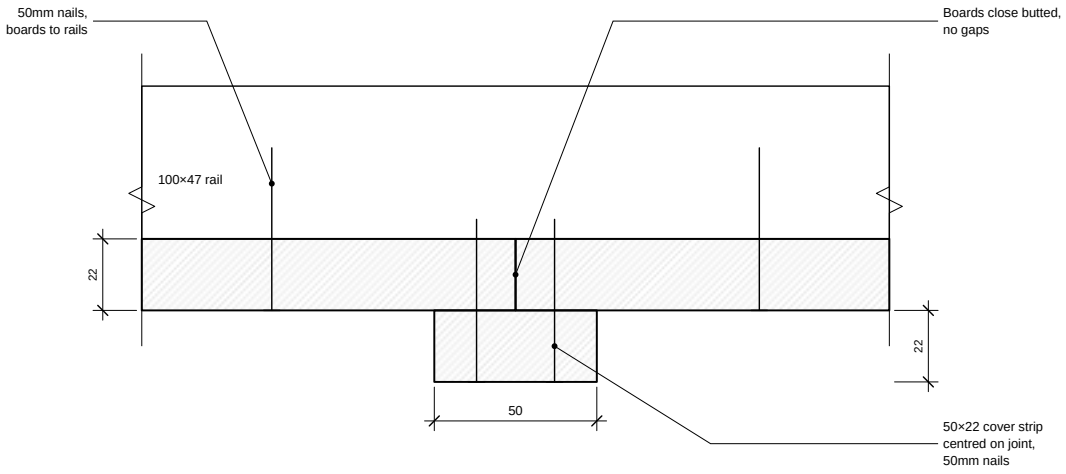


BB-04 PLAN AT STEEL UB POST

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SCALE 1:5

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BB-05 BOARD JOINT DETAIL

NoiseBloc™ Board & Batten Reflective

SCALE 1:2

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Components and materials

Component	Size (mm)	Specification	Function
Acoustic board	150×22	Sawn softwood, pressure treated	Primary reflective layer
Acoustic cover strip	50×22	Sawn softwood, pressure treated	Seals every board joint
Rail	100×47	Sawn softwood, pressure treated	Fixing for boards
Base board	150×47	Sawn softwood, Use Class 4	Seals barrier at ground level
Capping	150×47	Sawn softwood, pressure treated	Weathers board tops
Post (timber)	125×100	Softwood, Use Class 4; 15 year desired service life as standard, 20 or 40 year on request	Lower barriers
Post (steel)	UB, see table	S355, hot-dip galvanised to BS EN ISO 1461	Taller barriers
Packer (steel posts)	100×47 or 150×47	Treated softwood, bolted to post flange; width to suit flange	Fixing for rails
Rail fixings	100mm	Torx head anti-vandal screws, rails to posts or packers	Fixes rails to the structure
Board fixings	50mm	Nails, boards and cover strips to rails	Fixes the acoustic layers

SUPERFICIAL MASS

Layer	Coverage	kg/m²
Boards, 22mm	100%	11.9
Cover strips, 50×22mm	33%	3.9
Total (boards and strips)		**15.8**

Measured from weighed samples of the tested system, split between layers pro rata to timber volume. Posts, rails, base board and capping excluded. Compare kg/m² with kg/m², not with density (kg/m³).

WIND, NOT WEIGHT, SIZES THE POSTS

Post size is governed by wind load on the solid face of the barrier, not by its mass. All solid NoiseBloc™ timber barriers take the same wind load, so the post sizes opposite apply equally to Board & Batten and Premium TGV.

Timber posts (125×100mm) suit lower barriers on run positions in standard wind areas, indicatively up to about 1.85m. Taller, end-zone or more exposed barriers use steel UB posts.

INDICATIVE STEEL POST SIZES (S355 UB, 2.4m post centres)

Barrier height	Standard wind		Exposed wind	
	Run posts	End-zone posts	Run posts	End-zone posts
2.0m	127×76×13	127×76×13	127×76×13	127×76×13
2.5m	127×76×13	152×89×16	152×89×16	178×102×19
3.0m	178×102×19	203×102×23	203×102×23	203×133×25
4.0m	203×133×30	254×146×37	254×146×37	254×146×43

Run posts: more than 4 × barrier height from a free end. **End-zone posts:** within 4 × barrier height of a free end or a gap with no return corner (a return corner reduces the end-zone load). **Standard wind:** typically southern and central England, inland, low altitude. **Exposed wind:** northern England, Wales, Scotland and higher ground. Rails are 4.8m long and span three posts, so intermediate posts carry 25% more load than end-of-rail posts; the sizes allow for this. Barriers above 4.0m: steel posts to the engineer's design. Rails fix to a 100×47 or 150×47mm timber packer bolted to the post flange.

Structural design: please read

Indicative sizes only, based on generic wind assumptions to BS EN 1991-1-4 (free-standing wall, terrain category II), with each post checked to BS EN 1993-1-1 as an unrestrained cantilever. Coastal, hilltop, funnelling and embankment sites, foundations and fixings are not covered. **Post sizes, fixings and foundations must be designed and signed off by a structural engineer for each project.** ATF can arrange a site-specific structural design on request (chargeable).

Acoustic performance

ROAD TRAFFIC NOISE

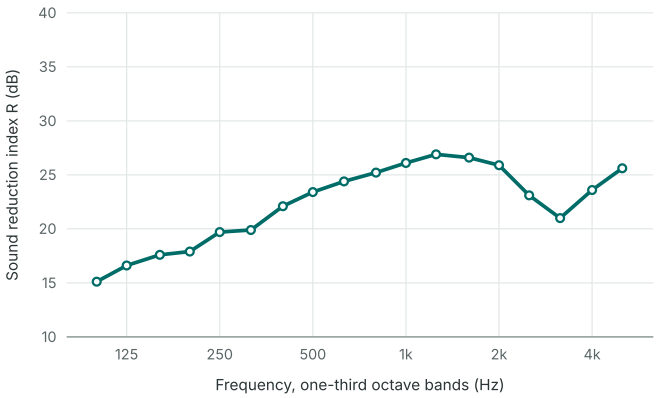
DL_R = 23dB

BS EN 1793-2:2018, rated with the normalised traffic noise spectrum of BS EN 1793-3:1998

RAILWAY NOISE

DL_R = 24dB

BS EN 16272-2:2023, rated to BS EN 16272-3-1:2023. Expanded uncertainty of the rating U = 2.4dB (95% confidence)



f (Hz)	R (dB)	f (Hz)	R (dB)
100	15.1	800	25.2
125	16.6	1000	26.1
160	17.6	1250	26.9
200	17.9	1600	26.6
250	19.7	2000	25.9
315	19.9	2500	23.1
400	22.1	3150	21.0
500	23.4	4000	23.6
630	24.4	5000	25.6

Test reference	07393-7433. One set of laboratory measurements, rated to both the road and rail standards
Date of test	12 November 2025
Test method	Laboratory airborne sound insulation under diffuse sound field conditions, conforming to BS EN ISO 10140-2:2021
Specimen	NoiseBloc™ Board & Batten Reflective, 3.6×2.8m (10.08m²)
Tested by	Independent laboratory accredited by UKAS (No. 1262) for testing to BS EN 1793-1 and -2. Full reports available on request.

Reading the numbers

DL_R is the single-number rating of the airborne sound insulation of the barrier construction itself, measured in a laboratory. It is not the noise reduction a receiver will experience on site.

The reduction on site (insertion loss) depends mainly on barrier height and length, the positions of the noise source and receiver, and ground conditions, because most sound reaches the receiver over and around the barrier rather than through it. As a rule of thumb, a barrier's sound insulation should be around 10dB higher than the insertion loss it is designed to achieve, so that sound passing through it does not limit performance. Your acoustic consultant will confirm the height and extent needed for your site.

Results relate only to the specimen tested. Performance on site depends on correct installation with no gaps.



NoiseBloc™ Board & Batten stepped to follow site levels on a residential boundary.

Specification clause

For inclusion in project specifications. Edit the bracketed items to suit the project.

Acoustic barrier

Manufacturer: ATF Supplies Nationwide Ltd, Boundary House, 36a Walworth Road, Andover, SP10 5LH. Tel 01264 366211.

Product reference: NoiseBloc™ Board & Batten Reflective.

Acoustic performance: Airborne sound insulation DL_R not less than 23dB to BS EN 1793-2:2018 (road) / 24dB to BS EN 16272-2:2023 (rail), independently tested.

Superficial mass: Not less than 15kg/m² (boards and cover strips).

Construction: 150×22mm vertical boards, close butted, with 50×22mm cover strips over every joint; fixed to 100×47mm rails at max. 600mm centres; 150×47mm base board lapped 50mm min. by boards; 150×47mm capping.

Posts: [Timber 125×100mm, Use Class 4] / [Steel S355 UB to engineer's design, with 100×47 or 150×47mm timber packer bolted to flange] at [2.4] m centres.

Height: [ ] m above finished ground level. **Length:** [ ] m.

Timber treatment: Preservative treated to BS 8417; ground contact components to Use Class 4, above-ground components to Use Class 3 [unless specified otherwise]. [FSC® certified timber required.]

Fixings: Rails fixed with 100mm Torx head anti-vandal screws; boards and cover strips nailed to rails with 50mm nails.

Installation: In accordance with the manufacturer's installation guide. The barrier shall be continuous and free from gaps.

INSTALLATION ESSENTIALS

- Set posts plumb at the specified centres, in concrete to the engineer's design.
- Fix the base board at ground level with no gap beneath.
- Fix rails at max. 600mm centres with 100mm Torx head anti-vandal screws, top rail flush with the finished board height.
- Nail boards (50mm nails) close butted, lapping the base board by 50mm min.
- Fix a cover strip centrally over every joint, then fit the capping.
- Walk the line: check for gaps at the base, joints, posts and ends.

The full NoiseBloc™ Board & Batten installation guide is available from ATF.

CARE AND MAINTENANCE

- Inspect annually and after severe weather; replace damaged or split boards promptly to keep the barrier gap-free.
- Keep vegetation and soil clear of the boards and away from the base board.
- Treat any cut ends with a suitable end-grain preservative during installation.
- A breathable stain or paint may be applied if a coloured finish is wanted.

ALSO AVAILABLE

NoiseBloc™ Premium TGV Reflective · NoiseBloc™ Board & Batten Absorptive · NoiseBloc™ Eco · Matching pedestrian and vehicle gates

TIMBER, TREATMENT AND DURABILITY

Timber	Sawn European softwood, pressure treated; FSC® certified timber available on request
Ground contact components	Posts and base boards preservative treated to Use Class 4, BS 8417
Above-ground components	Boards, cover strips, rails and capping preservative treated to Use Class 3, BS 8417, unless specified otherwise
Post service life	Timber: 15 year desired service life as standard; 20 or 40 year on request. Steel: hot-dip galvanised to BS EN ISO 1461, typically 40 years or more to first maintenance above ground in C2 to C3 (rural, suburban and inland urban) environments, per BS EN ISO 14713-1
Natural movement	Cover strips are fixed over every joint, so normal seasonal shrinkage of the boards does not open a direct sound path

Important notes. Information in this datasheet is given in good faith and is correct at the date of issue. Acoustic results relate only to the specimen tested in the laboratory; performance on site depends on site conditions and correct installation. Indicative post sizes are not a structural design; the purchaser is responsible for obtaining a site-specific structural design from a qualified engineer. Natural timber varies in colour, grain and moisture content and may develop surface checks, which do not affect acoustic performance. ATF Supplies Nationwide Ltd reserves the right to amend specifications without notice. Please check you hold the latest revision.

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Document	Revision	Date	Description
NB-TDS-BB-R	A	October 2026	First issue

FENCING DELIVERED FASTER