UNIQUE FEATURES

1. **Brokers solutions for development safeguarding finite resources: energy, water and food**

   The world's resources are finite and should be shared more equitably. The Long Sutton SEE minimises the consumption of resources, increasing efficiency in the use of renewables.

2. **Sustainable Settlement Extension in anticipation of a low carbon future:**
   A catalyst for change
   - Forty nine homes and nine commercial units operating without producing carbon emissions, reduced reliance on fossil fuels, reduced dependence on the national utilities infrastructure, naturally heated and naturally ventilated.
   - Large scale Innovative building solutions; 75% reduction in running costs
   - Large scale renewable energy investment; total combined generation 0.25MW each year, and total carbon emission mitigation: 108 tonnes per annum.
   - Four alternative showcase buildings: strawbale, rammed earth, cob and Hodnydod
   - Promoting a fossil fuel free life style; reducing the reliance of households on oil, gas and coal production for heat and power reduces carbon dioxide emissions.
   - Promoting a fossil free work ethic; businesses in the Employment Zone will operate free of carbon emissions, harvesting water and heating hot water from solar panels.
   - An exemplar demonstration project; the innovative and experimental design combines a broad spectrum of features and technologies to reduce dependence on finite resources.

3. **The Long Sutton SEE delivers the necessary environments that can facilitate the development of supportive neighbourhoods and community.**
   - Provides work/life opportunities; walk to work. The bespoke layout utilises the traditional association of commercial and residential development close to one another. This proximity offers the opportunity to break the cycle of energy intensive and time consuming commuting and allows flexible working arrangements.
   - Food Production: twenty five allotments on site for use by residents to produce their own food
   - Open Space requirements vastly exceed policy requirements: 49% of the site set aside to footpaths, play areas, wetlands and woodland increased biodiversity 25,518 trees and hedgerow

4. **Allied Research and Development programme**
   - Intellectual property rights shared with SHDC to support future sustainable development

5. **Boundary Treatment**
   - No boundary fencing (with the exception of the acoustic barrier), rather, box, privet and native hedges are used for boundary treatments generally.

Contact: Dr Jeremy Harrall
SEArch
9 Hoddins Way, Long Sutton, SPALDING, Lincs PE12 9JB
Tel. 01406 364646 molearch@searcharchitects.co.uk

SHDC
Planning & Development
17 DEC 2010
Ref: 1253-08

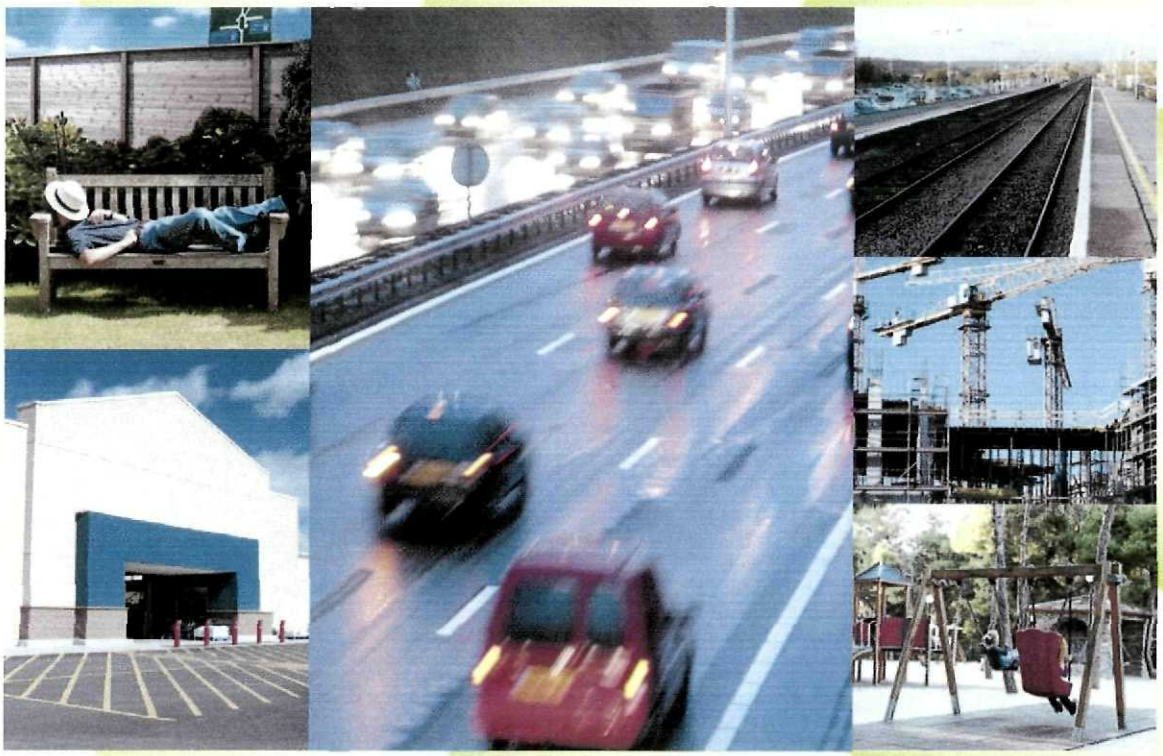
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SPECIFIERS' GUIDE 2010

Jakoustic Barriers

effective noise protection



SHDC
Planning & Development
17 DEC 2010
Ref: 1253-08

Jacksons
Quality that lasts
Fine Fencing, Gates and More

Jakoustic Jakoustic Plus Jakoustic Highway



Jakoustic Barriers

Much more than just a fence - the innovative Jakoustic timber barrier system is Jacksons' answer to noise pollution, a growing problem in our densely populated modern world.

We offer solutions for residential, commercial, industrial, railway and highway applications that can reduce noise levels by as much as 32 decibels* while maintaining an attractive and 'natural' facade.

- Jakoustic meets all residential and industrial requirements.
- Jakoustic Plus offers the extra noise protection of an additional layer of absorptive material contained within a plastic membrane.
- Jakoustic Highway is specially designed to satisfy stringent highway standards, in heights up to 12m with steel posts.

Established in 1947, Jacksons is a leading manufacturer of timber and steel fencing and gates, with expertise in automation, access control and perimeter security.

Jacksons has been given the environmental seal of approval by the Forest Stewardship Council (FSC) in addition to receiving the Programme for the Endorsement of Forest Certification (PEFC). Both certifications ensure all timber used for Jacksons' products has been sourced from well-managed forests and our Jakcure® pressure treatment provides a 25-year guarantee against rot and insect attack.

We pride ourselves not only on the quality of our products and production flexibility, but also on our responsive service to all customers, whatever the size of the project, wherever it may be in the world.

RIBA CPD presentation on "Acoustic Barriers to environmental noise pollution" is now available from Jacksons Fencing. For more details please email cpd@jacksons-fencing.co.uk

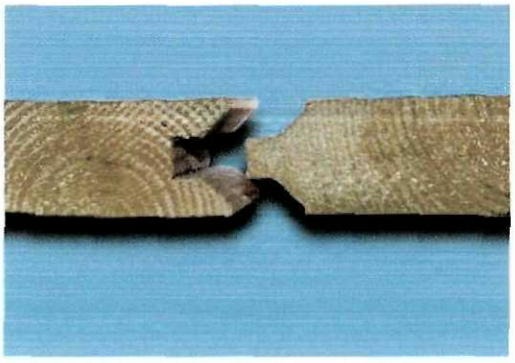
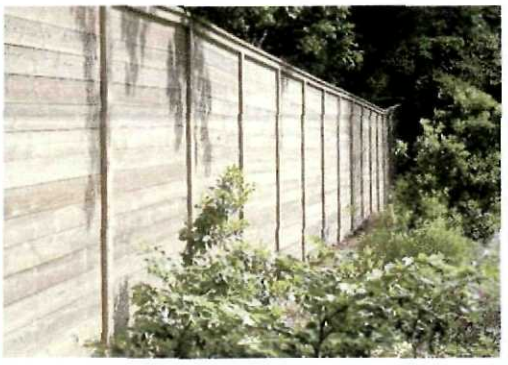
Institute of Acoustics sponsoring organisation

Jacksons Fencing are a sponsoring member of the Institute of Acoustics. Membership is for firms, organisations and individuals engaged in acoustics and whose support can advance the aims and objects of the Institute.

Jakcure® is a registered trademark of H.S Jackson and Son (Fencing) Ltd.
* Jakoustic barrier certified laboratory results

Recent Jakoustic Barrier projects include:

Client	Project	Architect/Lead Contractor
ETNA	Commercial	Torwood Fencing
St Wilfreds School	Local Authority	Proctor Brothers Ltd
Budget Insurance	Offices	AHP Architects/ Savage & Sons
Portland Homes	Residential	Jacksons Fencing
MOD	Commercial	Power Engineering
Octavia Housing	Commercial	McNicholas
Bellwinch Homes	Commercial	Jacksons Fencing
Mr Ayling	Residential	Jacksons Fencing
WS Hunts Transport	Commercial	Jacksons Fencing
Private	Residential	OK Services (France) WS
ASDA	Commercial	Key Electrical
Butterfly World	Commercial	Jacksons Fencing


Jakoustic® Barrier System

The Jakoustic system comprises of our unique timber 'tuning fork' design posts and 125mm boards featuring an *interlocking "vee" coupled with a tongue and groove.* This special profile has been carefully developed to locate the boards in such a way that eliminates gaps that sound will easily travel through, even when boards shrink and expand with changes in the weather. The fence is finished with a capping and counter rail.

It offers the additional advantages of:
- Lower labour requirements
- Quicker build on site
- More efficient storage and transport
- Improved acoustic protection

The timber posts used for most applications up to 4.0m high are a unique tuning fork design that traps the boards to provide continuous sound insulation. For barrier heights from 2.1m - 4.0m the timber posts are reinforced with a steel spur, coated black.

All timber used is Jakcure pressure treated and is covered by our 25-year guarantee. This gives it lasting protection above and below ground against all wood-boring pests and all forms of wet and dry rot.

The Jakoustic system has been vigorously tested and developed to reach the high standards associated with all Jacksons' products.

We work with a nationwide team of sound engineers to provide a detailed report on sites to ensure Jakoustic will work effectively.

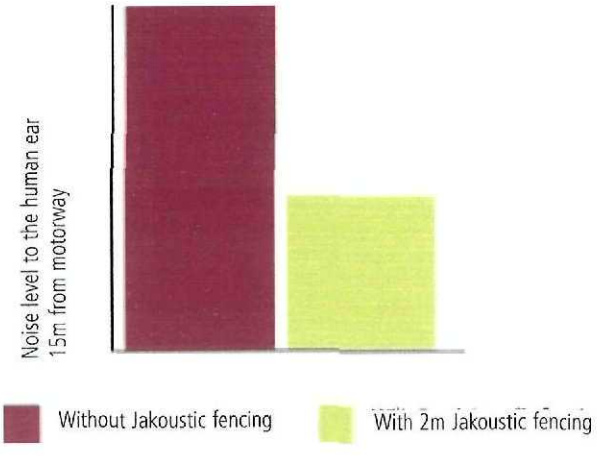
Jacksons Fencing is an ISO 9001 accredited company and all our timber treatment processes are ISO 9001 certified.

Features
- Attractive timber construction
- Unique tuning fork design posts
- Special fixings clamp the acoustic boards between posts
- Can accommodate changes in level or profile
- Complete with capping and counter rail

Benefits
- Up to 28 dB reduction in noise*
- Light weight
- Easy to install
- Able to be installed on uneven or sloping ground
- Jakcure 25 year guarantee

Applications
- Residential
- Commercial properties
- Construction sites
- Sports venues

*Jakoustic barrier certified laboratory results:
Rating according to BS EN 1793 – 2:1998
Category = B3
Laboratory sound reduction 28 dB
Superficial Mass 28kg/m2



The following data shows the results of field measurements which simulated the British Standard test procedures.

Distance from *noise source*	2.0m high fence	2.5m high fence	3.0m high fence
	SOUND REDUCTION		
5m	13.6 dB	16.5 dB	17.4 dB
10m	11.3 dB	13.5 dB	14.1 dB
15m	10.3 dB	12.5 dB	12.9 dB
20m	9.2 dB	11.9 dB	12.4 dB

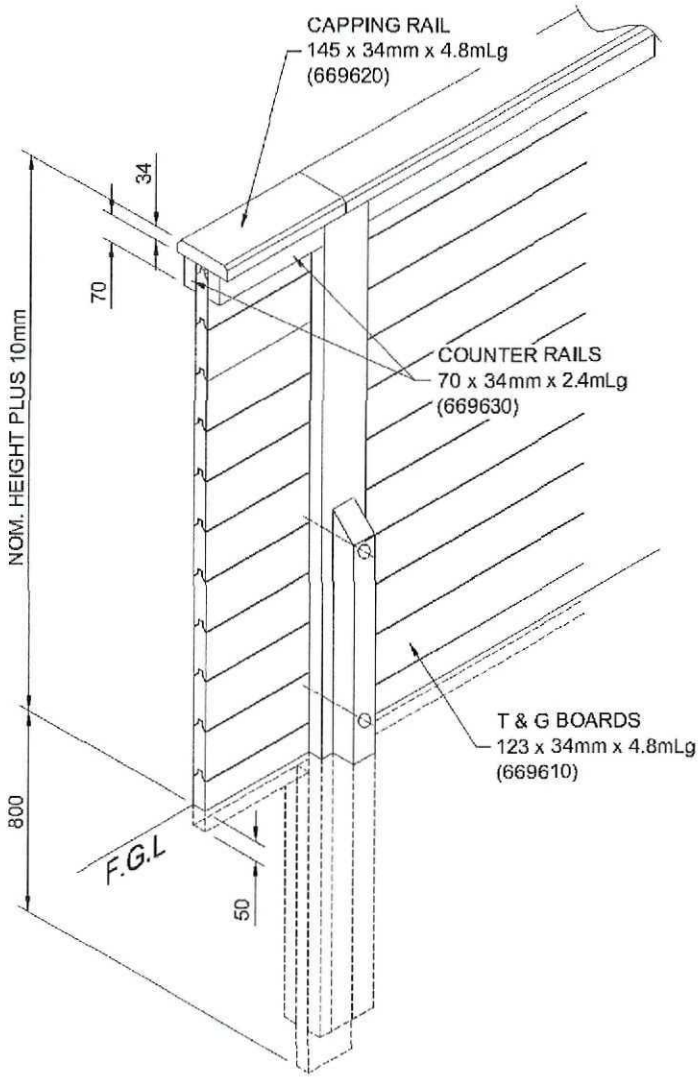
Jakoustic® is a registered trademark of H.S Jackson and Son (Fencing) Ltd.

Call the Jakoustic team on FREEfone 0800 41 43 43





Jakoustic



1. Posts are made with 'solid' bottom sections for below ground, with the top sections remaining 'open' for clamping the boards.

2. Posts are designed to be sunk into the ground to depth of 800mm. The centre section of the post is 750mm long. This allows the bottom fence board to act as a gravel board to a depth of 50mm into the ground.

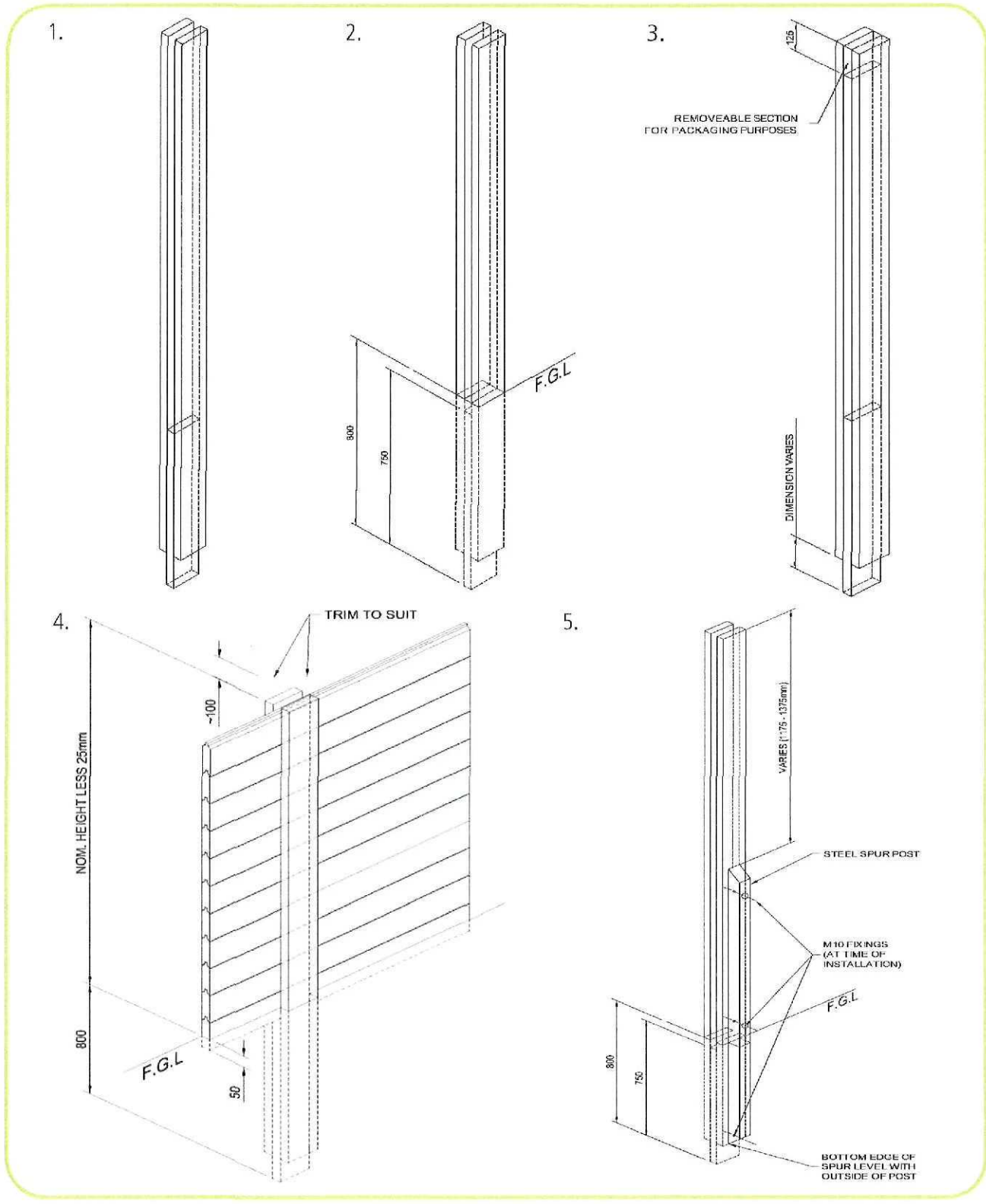
3. The bottom of the side boards will not go to the full depth of the post hole.

4. The post sides extend 125mm above the nominal height of the fence (for standard heights). Once the fence is erected they are trimmed to the same level as the top board. This arrangement facilitates any variations in board dimensions caused by moisture content. The Fence Erector needs to apply new Jakcure End Grain Preservative to cut post tops.

5. Fence systems above 2.0m high will have a steel spur post fitted to the post shown. They are designed to support the fence up to a height of 1.2 - 1.4m below the finished level of the fence. These spur posts are sent separately, for fixing to the timber post during installation on site.

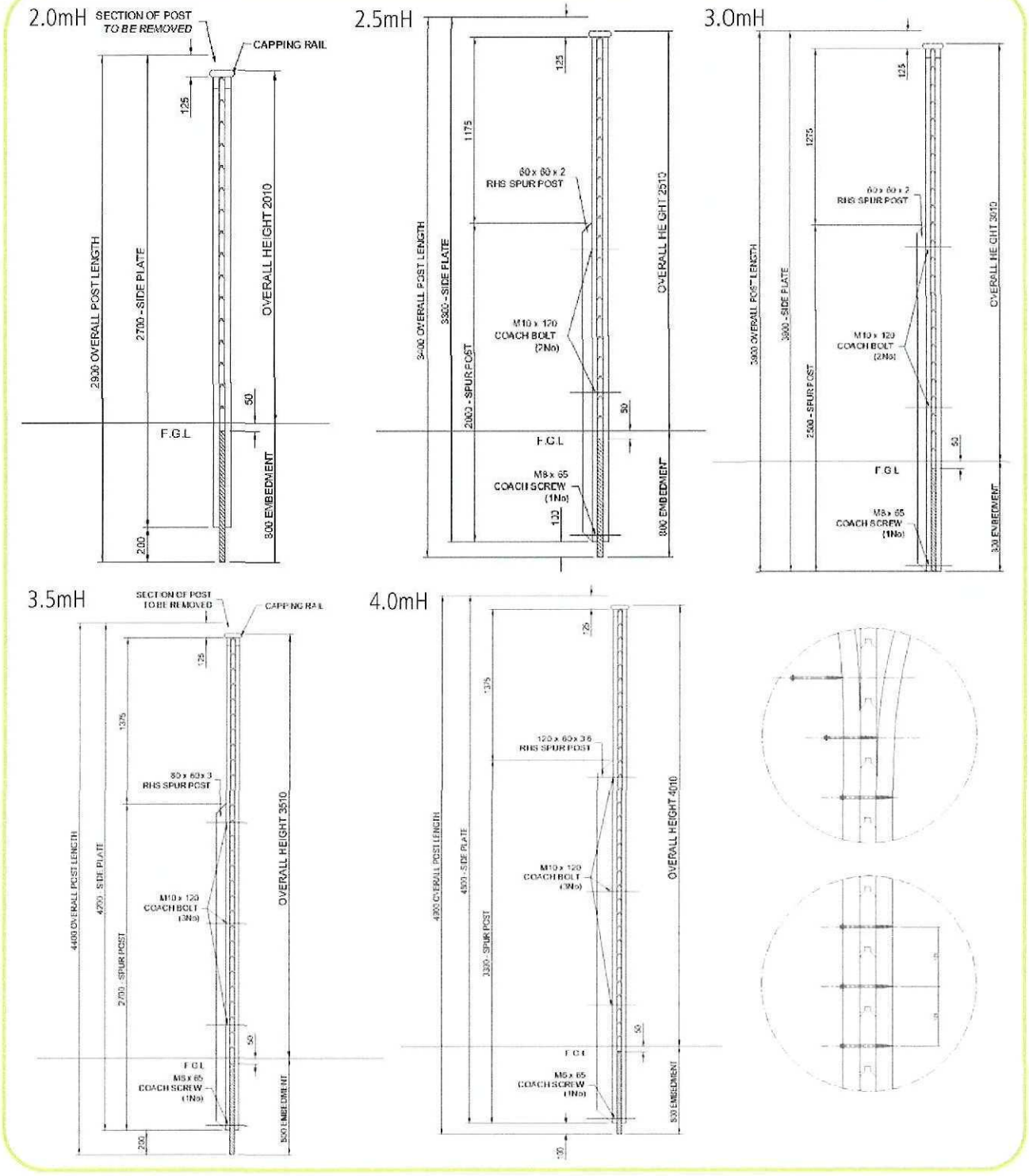
6. The screws should be used to secure completed rows of boards as the height of the fence is gradually built up, in order to maintain its strength during the build. Do not assemble the full height 'loose' as there is a risk of collapse, especially in windy conditions.

Post and fence assembly

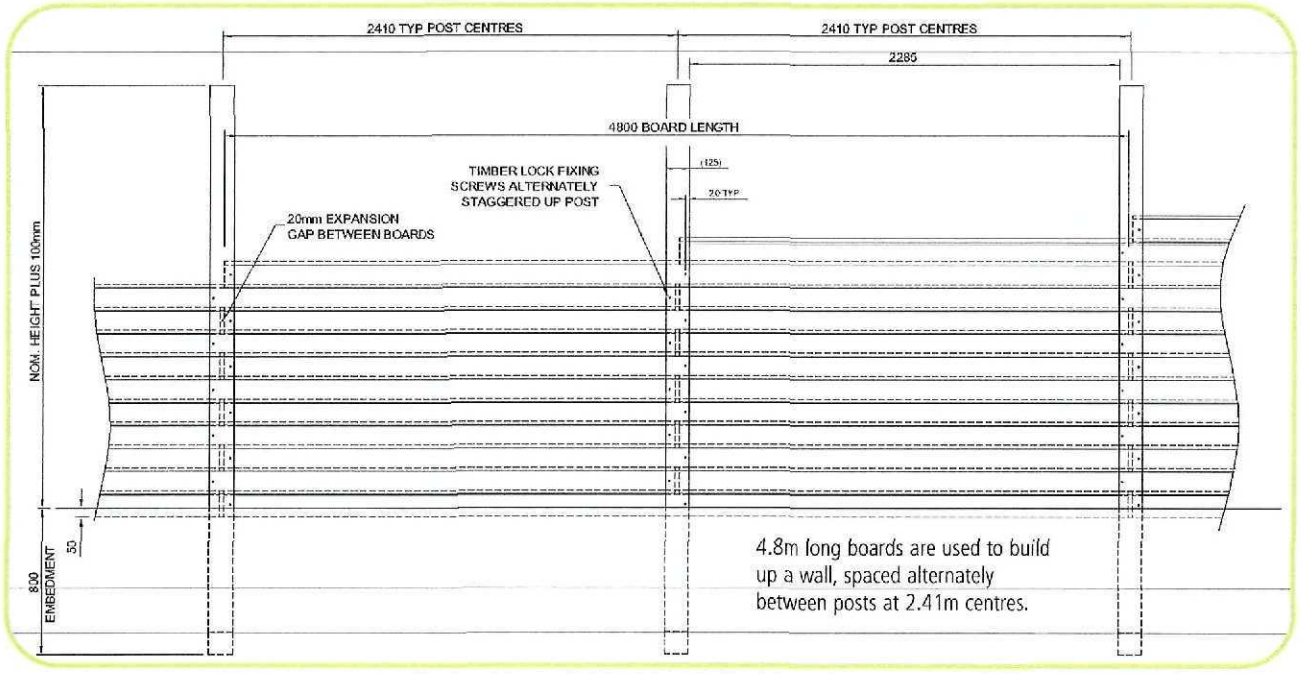








Screws are carefully chosen to have an effect of clamping the post sides to the board. This improves the acoustic properties of the fence eliminating gaps between panels and posts.





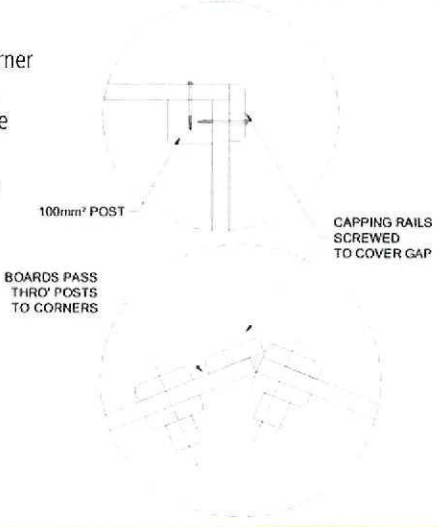
Boards are screwed as shown, giving a requirement of 2 No Timberlock screws per board. The screw positions should be staggered alternately from one side to the other, in order to prevent the post side cupping.

Top sections are finished with a capping rail and counter rail. The latter is provided to cover any gaps between the boards and the rail and leave a professional finish.

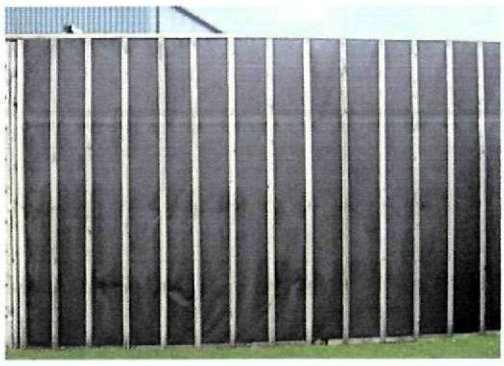


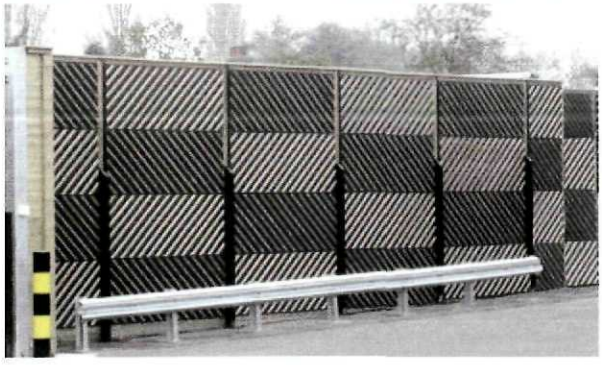
This change in level demonstrates how the boards can accommodate variations in profile at post intersections.

This diagram gives details of how a corner may be configured. Examples shown are 90° and 135° - all angles are possible.



Nominal fence height above ground (m)	Actual height above F.G.L (mm)	Nominal post height above ground (mm)	Nominal post depth below ground (mm)	Hole base to post top (mm)	Economic post length (mm)	Post side to post base dimension	Spur post item code	Spur post length (m)
2.00	1975	2100	800	2900	2700	200	N/A	N/A
2.50	2475	2600	800	3400	3300	100	669999	2.00
3.00	2975	3100	800	3900	3900	0	669998	2.50
3.50	3475	3600	800	4400	4200	200	669995	2.70
4.00	3975	4100	800	4900	4800	100	669994	3.30





Jakoustic Plus Barrier

Both our Jakoustic and Jakoustic Highway systems can be upgraded to the Plus systems.

An absorptive layer, covered with a protective membrane is incorporated on one side of the boards to further reduce noise by an average of 4 dB.

Jakoustic Plus is ideal in applications where the screen is to be used to form a compound around a noise source or a noise source is surrounded with reflective surfaces such as high fencing and buildings.

Features
- Timber Construction
- Unique tuning fork design posts or I beams
- Special fixings clamp the acoustic boards between posts
- Can accommodate changes in level or profile
- With timber capping and counter rail
- Jakoustic Barrier with an additional absorptive layer covered with a protective membrane

Benefits
- Up to 32 dB reduction in noise*
- Easy to install
- Suitable for uneven or sloping ground
- Jakcure 25 year guarantee

Applications
- Commercial Properties
- Industrial
- Railways
- Residential
- Sports venues

*Jakoustic Plus barrier certified laboratory results:
Rating according to BS EN 1793 – 2:1998
Category = B3
BS EN 1793-1:1998
Category = A3
Laboratory sound reduction 32 dB
Superficial Mass 33kg/m²

The following data shows the results of field measurements which simulated the British Standard test procedures.

Distance from noise source	2.0m high fence	2.5m high fence	3.0m high fence
	SOUND REDUCTION		
5m	17.6 dB	20.5 dB	21.4 dB
10m	14.3 dB	17.5 dB	18.1 dB
15m	14.3 dB	16.5 dB	16.9 dB
20m	13.2 dB	15.9 dB	16.4 dB

1. The sheeting must be cut to length and fixed under capping rail. Care must be taken to centre the joins on and between the posts.

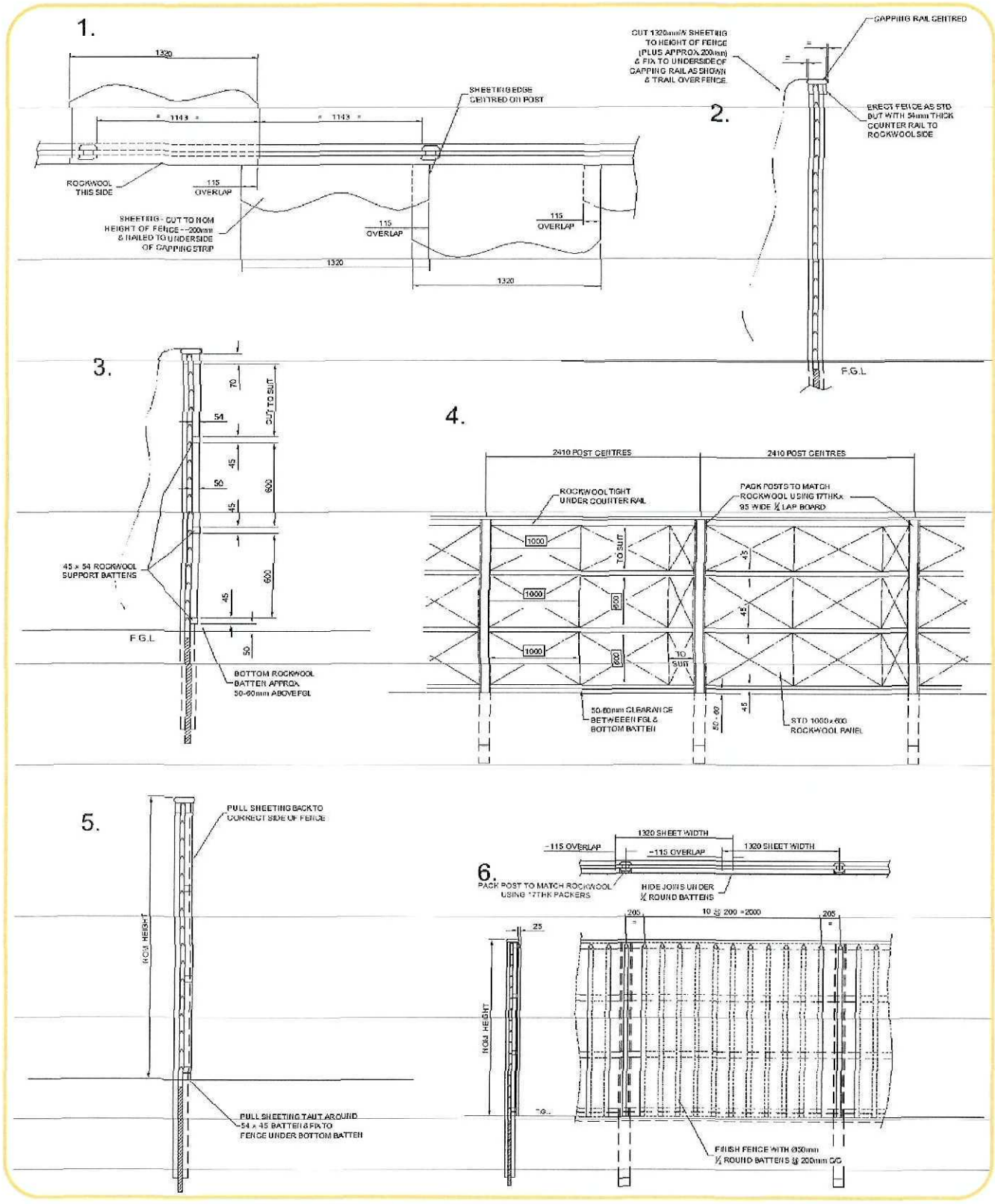
2. The counter rails are odd sizes - the Rockwool covered side has a 70 x 35mm counter rail. The capping strip is to be centred on the counter rails, with the pre-cut strips of sheeting nailed to the underside as shown.

3. Rockwool panels are to be fixed to the face of the fence. Using 54 x 54mm battens and 75mm nails to support the weight, the fence is to be clad with Rockwool sheets.

4. Rockwool panels are to be laid horizontally and cut to suit as necessary. Pack posts to match Rockwool using 17mm thick half lap boards.

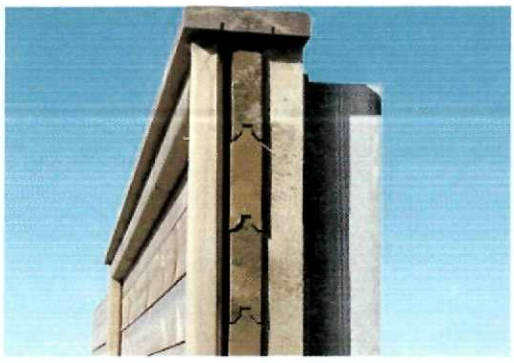
5. Plastic membrane sheets to be returned to correct size of fence. These are pulled taut around a 45 x 54mm batten and fixed to the fence under the bottom Rockwool batten.

6. The fence is finished with weathered 50mm half-round timbers, fitted vertically or at an angle at 200mm centres. These timbers will cover joins in the sheeting and protect the Rockwool.



Jakoustic Plus

Call the Jakoustic team on FREEfone 0800 41 43 43





Jakoustic Highway

This latest acoustic barrier system has been designed for Highways and Commercial applications, providing the same level of noise protection as the Jakoustic Barrier.

Jakoustic Highway 'vee' boards are affixed to galvanized steel 'I' beam posts for additional strength and rigidity, meeting not only the stringent Highways Agency standards BSEN1794-1 and 2, but also prove ideal for application in exposed locations subject to high wind loading.

The system can also be offered with capping and counter rails to further enhance its appearance. Posts can be timber-clad to match.

Jacksons Fencing is certified to 'National Highway Sector Scheme 4' for preservative treatment of timber.

Features

- Available as Jakoustic or Jakoustic Plus Barrier
- Galvanized Steel 'I' Beam Post
- Timber Interlocking Vee Boards
- Can accommodate changes in level or profile
- Optional timber capping, counter rails and post cladding

Benefits

- Up to 28 dB* or 32 dB** noise reduction
- Meets stringent Highways Agency standards
  BS EN 1793-1:1998**
  BS EN 1793-2:1998 BS EN1794-1 and 2
- Ideal for high wind loading situations
- Easy to install
- Additional absorptive layer available to further increase sound reduction (See Jakoustic Plus**)
- Suitable for uneven or sloping ground
- Jakcure 25 year guarantee

Applications

- Highways
- Industrial
- Construction sites
- Railways
- Residential
- Sports venues
- Commercial Properties

Jakoustic Highway barrier certified laboratory results:
Rating according to BS EN 1793 – 2:1998 (Category = B3)
BS EN 1794-1:2003, Annex A,B,C & E
BS EN 1793-1:1998 (Category = A3)**
Designed in accordance with BS EN 1794-2:2003
(Detailed compliance statements available)
National Highways Sector Scheme (NHSS) 4

*Jakoustic Highway
Laboratory sound reduction 28 dB*
Superficial Mass 28kg/m2

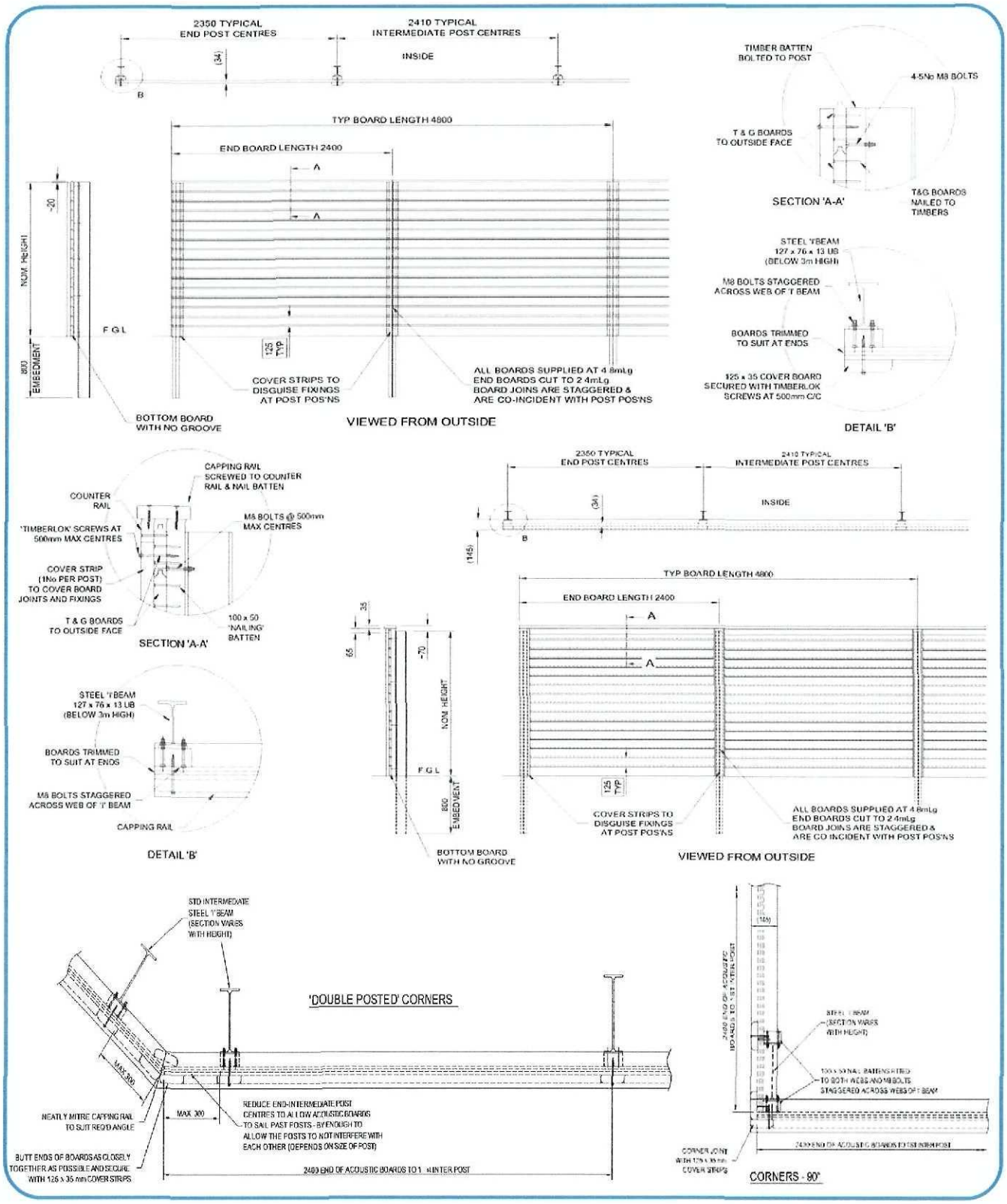
**Jakoustic Plus Highway
Laboratory sound reduction 32 dB*
Superficial Mass 33kg/m2

The following data shows the results of field measurements which simulated the British Standard test procedures.

Distance from noise source	2.0m high fence	2.5m high fence	3.0m high fence
	SOUND REDUCTION		
5m	13.6 dB	16.5 dB	17.4 dB
10m	11.3 dB	13.5 dB	14.1 dB
15m	10.3 dB	12.5 dB	12.9 dB
20m	9.2 dB	11.9 dB	12.4 dB

Jakoustic Highway System includes galvanized steel 'I' beams with nailing battens to be bolted to the front of the posts. 4.8m long interlocking vee boards are then nailed and timber lock screwed to the front of the railing battens. Cover boards are required on every steel posted job. Capping and counter rail are additional options.

Posts may be baseplated or latticed depending on application.



Call the Jakoustic team on FREEfone 0800 41 43 43





Jakoustic Gates

For a totally integrated acoustic barrier solution, we offer matching Jakoustic timber or galvanized steel framed gates. Configured as singles or pairs, swing or sliding, hung on timber or galvanized steel posts dependent on size, with optional lintels.

Bespoke gates are available in larger sizes (as per the 9m wide x 4m high slider in the photo above).

Jakoustic gates can be supplied in accordance with BS EN 1794-2 if requested.

Jakoustic fencing is also available with a range of other materials such as acrylic, steel and absorbant concrete as well as a panel system.

Jakoustic Projects



Grimshaw Kinnear - 100m of 3m high Jakoustic fencing



Torwood - 450m of Jakoustic Highway from 4m to 6.5m high



2m high x 1m wide gate within 3m high Jakoustic fencing



Butterfly World - 205m of 1.8m high Jakoustic fencing

For further information, UK and International enquiries, please contact the Jakoustic team on 0800 41 43 43 or +44 (0)1233 750393 or email acoustic@jacksons-fencing.co.uk
Jacksons Fencing Head Office Stowting Common Ashford Kent TN25 6BN
www.jacksons-fencing.co.uk

Jacksons
Quality that lasts
Fine Fencing, Gates and More

Jakoustic® is a registered trademark of H.S.Jackson and Son (Fencing) Ltd. We reserve the right to alter specifications in accordance with our policy of continuous improvement.