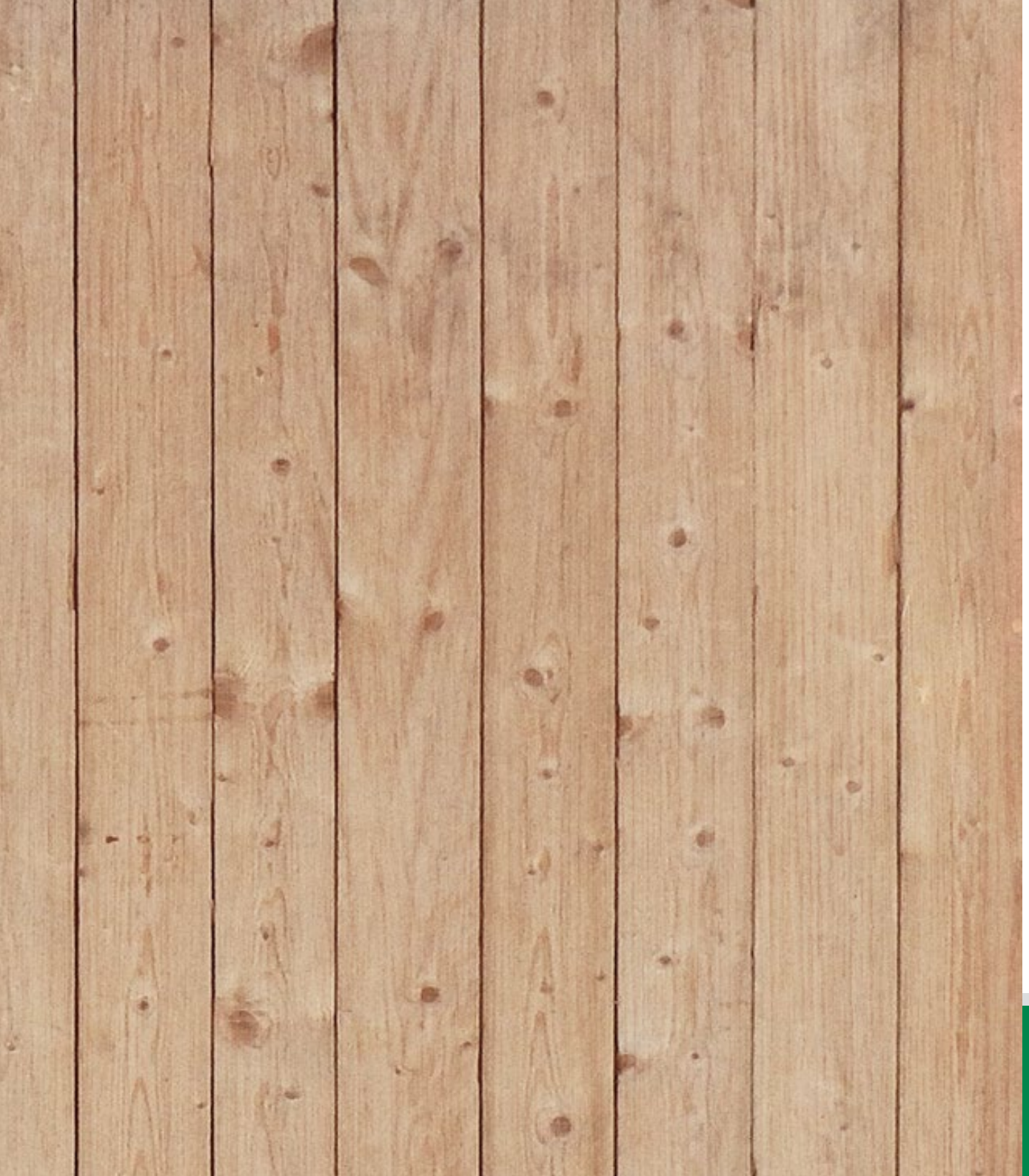


NORclad®
TOTAL CLADDING SOLUTIONS

Timber Cladding Guide

V1.0 2014

NORclad®
TOTAL CLADDING SOLUTIONS

6 Crown Glass Place
Nailsea
Bristol
BS48 1RD

Email: sales@norclad.co.uk
Tel: (01275) 794735
Fax: (01275) 794441

www.norclad.co.uk

Contents

With over 35 years of experience in developing, manufacturing, marketing and the distribution of a range of sustainable timber product solutions, NORclad® with its experienced team are proud to continue to develop our business with our valued clients, suppliers, and our own people.

The foundation of our culture is partnership. A clear open, honest and trusting relationship with all our valued clients and suppliers, leads to greater mutual success.

In today's modern and fast changing world, the difficult economic times we all face, constant pressures and demands on all of our precious time, NORclad® have developed a range of innovative and sustainable timber products which offer significant benefits, and at the same time are very cost effective.

Alistair Brown
Managing Director

NORclad® Profiles

These profile drawings are a representation of the most popular within the NORclad® range.
A service offering bespoke non-standard profiles is available on request.

Size: Ex 25mm x 150mm
Cover Width: 125mm
Desc: PTG Open V Joint
Code: NWC1

Size: Ex 25mm x 150mm
Cover Width: 125mm
Desc: PTG Open Square Joint
Code: NWC2

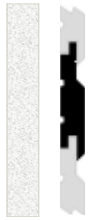
Size: Ex 25mm x 150mm
Cover Width: 125mm
Desc: PTG Open Round Joint
Code: NWC3

Size: Ex 25mm x 150mm
Cover Width: 130mm
Desc: Shiplap
Code: NWS1

Size: Ex 32mm x 150mm
Cover Width: 125mm
Desc: Feather - Edge
Code: NWFE2

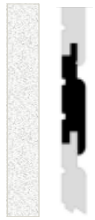
Size: Ex 25mm x 150mm
Cover Width: 132mm to 152mm
Desc: Chamfered Cladding
Code: NWCC1

Size: Ex 25mm x 150mm
& 25mm x 50mm or 75mm
Cover Width: 165mm
Desc: Board & Batten
Code: NWBB1



Size: Ex 25mm x 100mm
Cover Width: 75mm
Desc: PTG Open V
Joint (Secret Nail)
Code: NWSN1

Size: Ex 25mm x 100mm
Cover Width: 75mm
Desc: PTG Open Square
Joint (Secret Nail)
Code: NWSN2



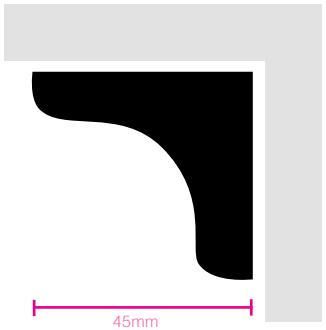
Size: Ex 25mm x 100mm
Cover Width: 75mm
Desc: PTG Open Round
Joint (Secret Nail)
Code: NWSN3

NORclad® Trims

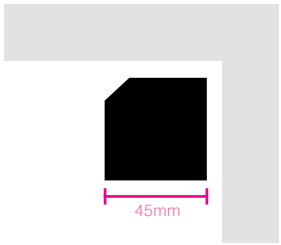
These profile drawings are a representation of the most popular within the NORclad® range.
A service offering bespoke non-standard trims is available on request.

Size: Ex 75mm x 75mm
Desc: Angle
Code: NWA1

Size: Ex 63mm x 63mm
Desc: Angle
Code: NWA3



Size: Ex 50mm x 50mm
Desc: Angle
Code: NWA2



Size: Ex 50mm x 50mm
Desc: Angle
Code: NWA4

Timber Species Options

We have developed a portfolio of species to select from depending on various factors under consideration when ordering/specifying cladding.

The varied range of species offered by NORclad® will stimulate customers requiring cladding to make the right choice to satisfy their requirements. All the timber species offered come from renewable sources and offer a low carbon footprint when compared with other construction materials.

By speaking to NORclad® and clearly specifying what you want from your cladding, selecting one of the species with if necessary one of the additional treatment services offered by NORclad® will give you the cladding solution you require.

Kiln Dried Scots Pine-European Redwood *(Pinus Sylvestris)*

Commercially known as European Redwood and comes from mainly privately owned and some state owned forests in Sweden. Known for its good quality slow grown redwood, the forests in Sweden are managed in accordance with PEFC or FSC forestry certification and Swedish Forestry Laws ensuring all timber comes from sustainable sources. The timber produced typically works and machines well and is naturally resinous. Its low moisture content (usually between 12-14%) and open cell structure make it the exceptional species when pressure treating giving protection against rot and fungal decay for a minimum of 30 years out of ground contact and 15 years in ground contact when treated with a suitable pressure treatment. Customers interested in this timber species should now consider the various pressure treatment services offered by NORclad® to complete the job.

Imported Western Red Cedar *(Thuja Plicata)*

Commercially grown in Canada and the Coastal Pacific north west of the USA. It is very slowly grown with a close fine straight grain and is predominantly a red/brown colour. It is an extremely stable timber and generally defect free with very few knots. If an almost knotless finish is required care should be taken at point of order to ensure the correct grade of Western Red Cedar is specified. When exposed to rain and sunlight Western Red Cedar will go a silver grey colour in quite a short timescale. Rated as durable, the heart wood will give a service life in excess of 60 years out of ground contact.

Kiln Dried Siberian Larch *(Larix Sibirica)*

Regarded as the only true Siberian Larch so it is important to specify this particular Larch species which comes from the Lake Baykal region of Siberia. It has a consistent creamy yellow brown colour and is slow grown with a tight straight grain. Siberian Larch has live inter-grown knots similar to those in Swedish European Redwood and it contains a natural fungicide called arabinoglactan giving it a service life in excess of 50 years out of ground contact. It is a strong durable and hardwearing timber and when exposed rain and sunlight will go a silver grey colour.

UK Grown Western Red Cedar *(Thuja Plicata)*

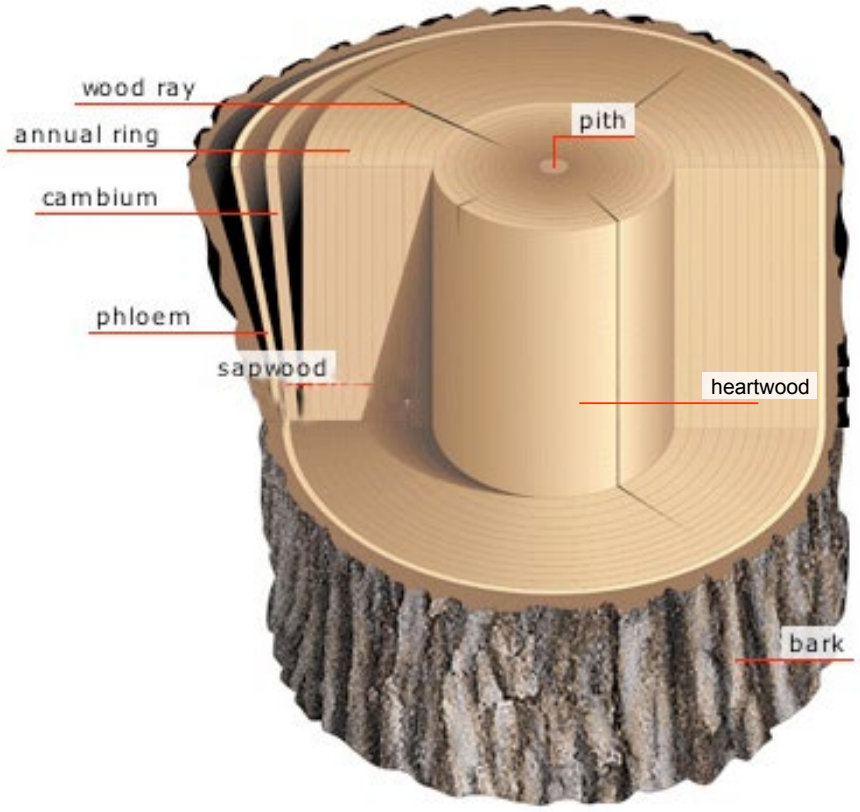
Commercially introduced into the U.K. in the 1950's. Freshly machined it is a pale reddish brown colour weathering to a silver grey when exposed to rain and sunlight. It typically has a straight close grain and is exceptionally stable in use. U.K. grown Western Red Cedar contains aromatic oils giving it natural resistance of up to 50 years from insect and fungal attack as long as the timber is in a position to dry out when it has become wet. U.K. grown Western Red Cedar falls slightly short of the imported variety as it is rated as only moderately durable.

UK British Grown Larch *(Larix Deciduas)*

British larch which is a very strong and durable timber. It is a very light brown colour and has frequent dark knots. This makes it usually unsuitable for machining profiles and the knots tend to loosen and fall out when drying or machining. Its best used with a sawn finish. It typically has a good straight grain but can be prone to splitting and has a high resin content which in certain conditions can ooze out. Over time when exposed to rain and sunlight British Larch will turn a sliver/grey colour.

Wood as a Building Material

According to the Building Research Establishment, energy use in buildings is responsible for around 50% of total UK emissions of carbon dioxide, virtually as much as industry and transport combined. So as well as creating new energy efficient buildings, architects and specifiers bear the responsibility for selecting building components which use the least energy in their production



Different Parts of a Tree

Sapwood

The sapwood is the younger, softer outer portion of a tree that lies between the heartwood and the cambium (formative layer just under the bark). As comparatively new wood, sapwood is less durable and more permeable than heartwood.

Heartwood

Heartwood is the older, harder central portion of a tree. It usually contains deposits of various materials that frequently give it a darker colour than sapwood. Denser and more durable than sapwood, heartwood is found primarily in aged trees.

Ten Benefits of Wood

1. Wood is carbon neutral because trees absorb Co2 as they grow. In-fact, because of the Carbon Sink effect of forests, wood from sustainably managed forests can actually be better than carbon neutral.

2. Wood has the lowest embodied energy of any mainstream building material. Compared to sawn softwood the amount of energy required to produce other materials are as follows. A ton of bricks requires four times, concrete five times, steel six times and aluminium 126 times.

3. Europe's forests are growing by over 1,500,000 acres every year the equivalent of three football pitches every hour.

4. Timber certification now allows consumers to select timber from these sustainably managed forests and follow its path along the supply chain

5. Over 97% of the softwood used in the UK comes from European forests.

6. Trees absorb one tonne of Co2 and produce three quarters of a tonne of oxygen for every cubic meter grown.

7. Using Softwood Timber Cladding on a typical three bedroom house can reduce the Co2 footprint of the house by 2.4 tonnes.

8. Wood is waste efficient. Virtually all parts of a tree can be utilised. Even waste products are converted into particleboard and chipboard. Wood is recyclable, it can be disposed of safely and it is biodegradable

9. Wood is available in a wide variety of densities, colours, strengths and sizes. The technical performance of timber is covered by many British Standards and readily available technical data.

10. The cellular structure of wood provides good thermal insulation. The equivalent thickness of wood is 15 times better as an insulator than concrete, 400 times better than steel and 1770 times better than aluminium. For example a 2.5cm board has a better resistance to the loss of heat than 11.4cm brick wall.

Pressure Treated Timber Cladding

Why Do We Pressure Treat Timber?

- Protection against attack by wood boring beetles or termites.
- Protection against fungal decay. The benchmark figure for this is where the moisture content of timber is greater than 20% and remains that way. Under these conditions timber will decay naturally.

Should Timber Be Pressure Treated?

When deciding if timber should be treated for a particular end use we must carefully consider what conditions the piece of timber will be subject to during its life.

What Timber Can Be Pressure Treated

Different species of timber are selected depending on end use and different species of timber require pressure treating in different ways. When we pressure treat timber, it is not just a surface coating, the treatment actually goes into the timber. Different species of timber have different cell structures which make some more permeable to preservative treatment than others. It follows that the higher the Hazard Class the more treatment is required to penetrate the timber.

Cladding Timber Selection

All the Norclad® range requiring pressure treatment is machined from a high quality European Redwood Joinery timber with a low moisture content. The timber is treated to a Hazard Class 3 and this species is selected due to good treatability of the Sapwood and the natural durability of the Heartwood.

30 Year Warranty

By selecting the correct Species for end use and then Pressure Treating this Species in accordance with the requirements of a Hazard Class 3 process, all pressure treated cladding in the NORclad® range can be offered with a 30 year Warranty against rot and fungal decay. *Please see the Warranty Statement.*

Micronized (Brunnea) System of Pressure Treating Timber

The NORclad® range is pressure treated using a revolutionary new wood preserving process. Wood pressure treated with MicroPro technology offers many benefits including a modern fresh appearance, improved colour fastness and Green Guard Certification.

Other species in the NORclad® range can also be treated. Please contact us for more information.

NORclad®
TOTAL CLADDING SOLUTIONS

Case Study

Hayesfield Girls School

This project helps to demonstrate the clever use of timber, with the main emphasis being to use natural sustainable locally grown Cedar and Larch to aid a low carbon foot print.

Both species are moderately durable, and the detailing in design and quality of build has produced a spectacular building and welcoming education environment.

How do we Pressure Treat Timber?

The pressure treatment process begins with untreated wood products being transferred into a treatment cylinder. Once the wood is inside the cylinder, the door closed and sealed, and a computerised process control system starts the pressure treatment process.

The first step in the treatment process begins when a vacuum pump removes the air from the treating cylinder. This opens the cells in the timber by taking air out of them.

When the vacuum step is complete, the next part of the process is transferring the treatment solution from the storage tank into the cylinder.
Once the cylinder is full with treatment solution, the next step is to pressurise the cylinder using a pressure pump. The increased pressure in the cylinder forces the treatment solution into the wood through the open cells.

When the pressure cycle is complete, the next step is to transfer the remaining treatment solution back into the storage tank.

The final step in the pressure treatment cycle is to initiate a final vacuum.

Once the final vacuum step is complete, the cylinder door is opened and the pressure treated wood is removed from the treatment cylinder and the process is completed.

The treated wood is then stored in a drip area to dry.

Osmose-Koppers MicroPro - Revolutionary new technology!

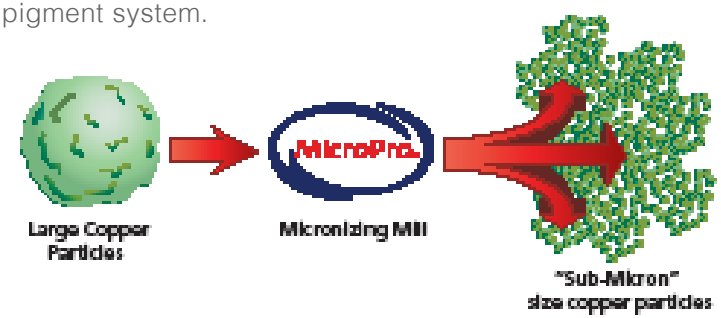
MicroPro technology is a revolutionary new wood preserving process system. The Osmose-Koppers MicroPro wood preservative system is based on micronizes copper and quaternary compounds. Wood pressure treated with MicroPro technology offers many benefits.

Modern Fresh Appearance!

MicroPro pressure treated wood is lighter in colour compared to current copper based treated products. The unique appearance will help differentiate the product in the market place. The attractive colour allows DIY enthusiasts and contractors to build with treated timber that appears lighter, fresher, and more natural in appearance.

Osmose-Koppers MicroShades (Brunnea)

MicroPro pressure treated wood products can also be available in an attractive brown (Brunnea) colour when produced in conjunction with the MicroShades colour pigment system.



The MicroPro Process

Unlike current preservative formulations the MicroPro technology introduces the copper into the timber cells in a micronized solid format.

Reduces Copper Release

Wood products treated with the Osmose-Koppers MicoPro preservative system result in the release of less copper into aquatic and terrestrial environments compared to standard treated wood products.

GREENGUARD Environmental Institute

The GREENGUARD Environmental Institute is an industry-independent organization that aims to protect human health and improve quality of life by enhancing indoor air quality and reducing people's exposure to chemicals and other pollutants. As an ISO-IEC Guide 65:1996 accredited, third-party certifying body, the GREENGUARD Environmental Institute certifies products and materials for low chemical emissions and serves as a public resource for choosing healthier products and materials for indoor environments.

The GREENGUARD Certification Program requires that products undergo independent, scientific testing and on going monitoring of their chemical emissions. Only products that meet GREENGUARD's stringent emissions standards qualify for certification. These standards are based on established criteria from key public health agencies. The GREENGUARD Environmental Institute is guided by an independent advisory board that consists of experts in the areas of indoor air quality, public and environmental health, building design and construction, and public policy.

Osmose-Koppers MicroPro: GREENGUARD Certified!

Osmose-Koppers MicroPro technology has been awarded the GREENGUARD Children & Schools Certification.

GREENGUARD Children & Schools Certification indicates that a product has undergone rigorous testing and has met stringent standards for low volatile organic compound (VOC) emissions. Products certified to this criteria are suitable for use in schools, offices and other sensitive environments.

The Certification Programme is among the most stringent chemical emissions standards in the world requiring products to be tested annually and monitored quarterly for more than 10,000 different chemicals.

"By achieving GREENGUARD Certification for their MicroPro technology, Osmose-Koppers has demonstrated to buyers, retailers, and consumers their commitment to environmental excellence, healthy lifestyles, and sustainable living"

Henning Bloech, Executive Director of GEI.

NORclad®
TOTAL CLADDING SOLUTIONS

Case Study

Llandough Hospital

This was an exciting project which required an engineered sustainable cost effective Brise Soleil solution to soften the solid primary structure of the project.

NORclad® MicroShades “Brunnea” was selected for a number of reasons including a 30 year Osmose-Koppers treatment warranty against rot and fungal (out of ground contact) with little or no maintenance required on an ongoing basis and an excellent BREEAM rating.

Chain of Custody

The choice of materials by buyers in every market sector is now influenced by environmental concerns and to compete effectively, wood products must show their environmental credentials.

In the timber trade, there is an increasing demand for FSC® and PEFC™ certified wood. Major companies and government bodies increasingly favour suppliers which offer chain of custody certification.

Companies which have already obtained certification have been successful in increasing their customer base.

What is FSC and PEFC?

FSC stands for Forest Stewardship Council®
PEFC stands for Programme for the Endorsement of Forest Certification™

Both of the above organisations are global bodies that are involved in guaranteeing that timber comes from a responsible source.

What is Chain of Custody?

Chain of Custody certification, is an assessment from an independent, qualified expert who verifies in writing that the wood flow system applied by a business traces the flow of wood from certified forests through the business and meets the exacting requirements of the certification scheme.

In short Chain of Custody certification monitors the amount of timber a company buys from responsible and well managed sources. It traces and records the movement of all timber through the business and when the timber package is then sold to customers, it confirms all procedures have been followed by stating an FSC or PEFC claim on sales documents.

FSC® C007915

Fire Retardent

The NORclad® range of cladding is available with fire protection to the following British and European standards:

Euroclass B-s1-d0 (s1 Smoke Production - d0 Flaming Droplets). BS EN 13823 & BS EN 11925-2 Single Burning Item

Equivalent to UK “Class O” BS 476: Part 6 & BS 476: Part 7

Factory applied and suitable for internal and external use the product has the following benefits:

- It is without colour or odour
- It will remain effective for the lifetime of the cladding
- It is safe for humans and animals
- It is non toxic and non allergic
- It is not broken down by water or humidity
- It does not leach
- Available on short lead times

The fire retardant penetrates the structure of the timber and does not require an additional protective finishing coat.

It can be over coated with stains, varnishes and most paints (tests may be required) and left naturally the timber may darken slightly.

It has non flammable properties which become part of the substrate, restricting ignition and the spread of flame, and it is not converted into smoke when exposed to high temperatures with carbon char being restricted to the immediate area. Treated material, when exposed to temperatures of up to 1700 degree C, are subject to charcoal forming, severely restricting the spread of flame.

Certificates of compliance for each job relevant British and/or European Standards are available upon request and delivery to site of each consignment of cladding treated with fire retardant.

NORclad®
TOTAL CLADDING SOLUTIONS

Case Study

The “Purifier”

A project using a range of timber cladding/façade and decking products.

NORclad® MicroShades “Brunnea” cladding and other bespoke products were selected based on sustainability, a 30 year Osmose-Koppers treatment warranty against rot and fungal (out of ground contact) with little or no maintenance required, and other important considerations such as cost and ease of installation.

Painting and Staining

The NORclad® range of cladding can be offered with a finish from a basic priming finish through to a factory finish.

Options Available

Translucent Finish

This is a finish typically a stain, where the properties of the base timber i.e. grain, knots etc can still be seen through the coating.

Opaque Finish

This is typically a paint finish in a chosen colour made up of several coats. Both finishes are made up firstly with a base coat or primer and this is followed by either one or two finish coats.

Branded coatings such as Becker Acroma, Boehme, Teknos and Sikkens are generally used, though a specific customer requirement can usually be accommodated. All shades on the RAL colour chart are available and most customer requirements will be satisfied here.

Where all aspects of warranty conditions have been adhered to, a manufactures warranty can be supplied specific to a job.

Minimum Installation Requirements

In all cases, the material used to produce NORclad® Cladding and Trims is a natural material and as such will respond to the environment.

The various species of timber used to produce the NORclad® range will swell or shrink as they gain or lose moisture. This happens as the timber seeks to achieve equilibrium with the moisture content of the surrounding air.

It is vital for the future performance of all NORclad® products that the moisture content is at equilibrium before it is installed. It is only by ensuring this, movement later on will be minimised.

Acclimatisation and Storage

The NORclad® range of pressure treated and untreated products are not dried prior to delivery and therefore require time to acclimatise when they reach site.

NORclad® products must be sticked every layer with vertically aligned sticks and stored in a well ventilated dry location for a minimum of 30 days or until the timber reaches equilibrium with the surrounding air. It is important to check overall measurements of the product prior to installation as tolerance on dimension allows for 5-8 mm deviation until the product acclimatises to equilibrium moisture content.

When on site and prior to installation, the NORclad® range of products need protecting from direct sunlight, water saturation, snow, ice, dirt and other elements. Store all products flat and off the ground on bearers and a vapour barrier so that moisture is not absorbed through the bottom boards of the stack. Protect with a waterproof covering elevated in the centre so that water does not collect on the cover. It is important that the bundle is not completely sealed so that a good air circulation is achieved. Ideally the NORclad® products should be stored in an enclosed building prior to use.

Finishing NORclad® Cedar and Larch Products Prior to Installation

If NORclad® Cedar and Larch products are to be coated on site; it is recommended that the finish is applied to all surfaces including ends prior to installation.

Coatings on these NORclad® products are required to protect the timber from water penetration, UV degradation and helps prevent staining caused by mildew and extractives. In addition pre coating these products can increase the service life of top coats.

Before deciding on a pre-finish coat it is good practice to establish what the intended finish coat is to ensure the product you select is compatible.

On Site Cutting

All on site cuts made to the NORclad® range of products which have been treated or coated (painted) must be finished with an appropriate end seal. End grain absorbs liquid 250 times more rapidly than other wood surfaces and must therefore be protected regardless of the prevailing weather conditions at time of installation.

For MicroPro and MicroShades (Brunnea) pressure treated products, a concentrated end seal product must be used on all on site cuts as recommended by Osmose-Koppers Ltd. For Cedar products in the range, end cuts must be sealed with an alkyd oil wood primer. For painted products end cuts must be sealed with paint coating solution being used on the cladding.

Fixings

It is recommended that fixing should be carried out by a professional rainscreen Carpenter/Installer.

The following is a general guide:

Most cladding is designed for horizontal application. Only use specially specified claddings for vertical use. For horizontal applications the tongue should be placed at the top with the groove at the bottom. This will ensure water flows away from the boards, and does not get trapped.

Cladding should be applied to impregnated battens approximately 38 x 50, 50 x 50 mm square, but we recommend you check with your architect, specifier and or NHBC local office.

- It is critical that each board is independantly fixed, with 2 fixings as per attached drawing.
- It is important to allow free flow of air behind the cladding via a ventilated backing structure.
- Install flashings where appropriate in order to direct water away from the cladding.
- Install a minimimum of 200mm above ground contact, and do not place or bring vegetation into contact with the cladding.
- Avoid placing the cladding where it can be affected by indirect wetting.
- Always end seal the cladding after any cutting.

All products in the NORclad® range must be fixed using Stainless Steel Fixings and there are no exceptions to this. The nail must sit flush to the board surface. Hand nailing is recommended for all installations to ensure there are no overdriven nails. Where nails are overdriven the nail hole must be filled with an exterior grade wood putty specifically designed for filling exterior nail holes.

Softwood boards are normally nailed to treated softwood battens. Annular ring-shank nails are preferred for their improved holding power. Small head nails are suitable for most softwoods, but larger heads are recommended for western red cedar as smaller head nails can sometimes pull through this softer wood.

Care should be taken when using nail guns. Some nail gun fixings have a D shaped head which can give a visually unacceptable final appearance, additionally virtually headless pins are not recommended for fixing cladding boards.

When using annular ring shank nails the fixing into the batten should normally be 2.0 times the thickness of the cladding board (or 2.5 times for WR Cedar). Nail fixings should be at least 20mm from the end of the boards and 15mm from the edges.

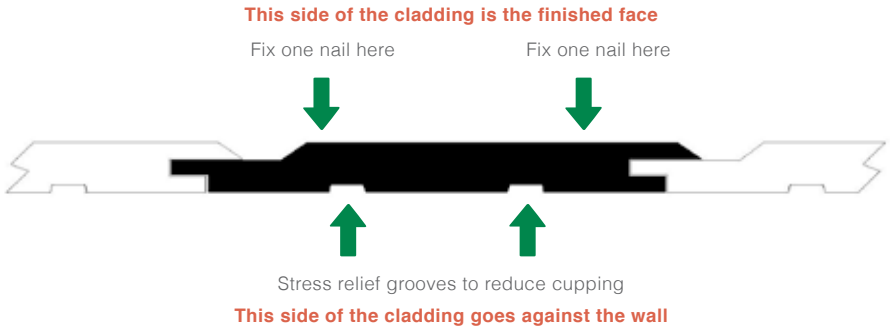
Secret nailing with single nails is not recommended for conventional tongued and grooved board because of the risk of the tongue splitting.

Overlapping boards above 100mm should be double nailed. Nails should preferably be located at the quarter points in the board width and it is important each board is nailed independently.

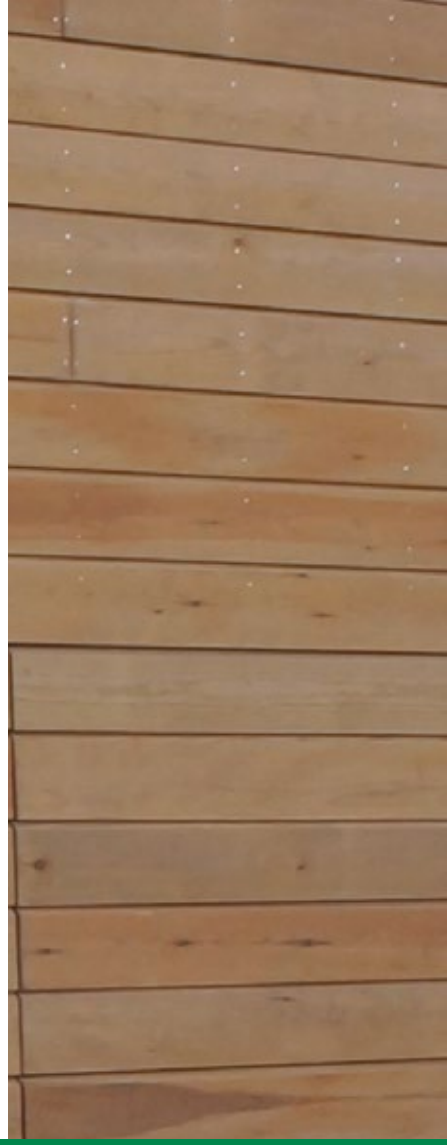
How to fix NORclad® Cladding

The most important point is to fix the boards separately, that is not to fix nails through more than one board. This is to allow the boards to move independently when they expand and contract.

We suggest the nails are fixed through the thickest part of the cladding, that is to the left of the left stress groove and to the right of the right groove – see attached diagram. Fit the boards tightly together as they will shrink over time. When fixing end to end fix this as tightly as possible.



For all boards, stainless steel nails should be used in order to avoid long term rust stains on the wood. Stainless steel will weather to a matt grey colour similar to that of bleached wood, reducing the visibility of the nails in the long term. Even where a surface coating is used stainless steel nails should be used.



Best Practice Installation facts

- Only treat timber products in their final dimensions.

- Re-working at the installation site should be limited to cross cutting, drilling or notching. All exposed surfaces should then be given two liberal brush coats of a suitable preservative as recommended by the manufacturer of the industrial wood preservative used in the original treatment.

- It is important to remember that the penetration achieved by brush is less that achieved in the pre-treatment process and it is best to avoid or minimise re-working.

Installation Guide

• Treated wood must never be rip sawn along its length. If this takes place, it must be returned to the treatment plant and retreated prior to use.

• 30 Year Warranty applies only to orders where UC3 is specified for out of ground contact components.

Osmose-Koppers Micronized pressure treated timber from NORclad Ltd, when used in the appropriate Use Class (UC) situations, has a 30 year guarantee against failure of the timber from fungal decay or insect attack.

It does not cover the costs of removal or reinstatement of such components or consequential costs or loss due to failure of the component. Claims must be brought within two weeks of the expiry of the 30 year period, at the latest and must be accompanied with proof of purchase and a sample of the failed material.

• The terms rot and fungal decay as used in this guarantee mean attack by wood destroying fungi that disintegrate the wood cell walls but do not include stating fungi associated with the weathering of wood. Weathering of wood is not fungal decay or rot of any type or definition

• The term insect attack refers to attack by wood destroying insect that destroy the timber structure such as Termites.

• The term failed refers to damage caused by insects and/or fungi to such an extent that the component is no longer fit for purpose.

This guarantee does not affect the statutory rights of the customer.

Conditions

1) Only NORclad Ltd Micronized treated to UC3 must be used.

2) All NORclad Ltd Micronized pressure treated timber in the NORclad® Range of products must be installed in accordance with the 'Minimum Installation Requirement' Document with special attention if the timber is cross cut, notched or bored during installation, then exposed surfaces must be coated with a suitable end coat preservative according to the correct application directions.

Exclusions

This Warranty does not apply to

1) Any NORclad Ltd Micronized component supplied for use outside of European markets.

2) Any NORclad Ltd Micronized component removed from their original installation and re-used at a new location.

3) Any damage caused to products used in commercial or industrial structures.

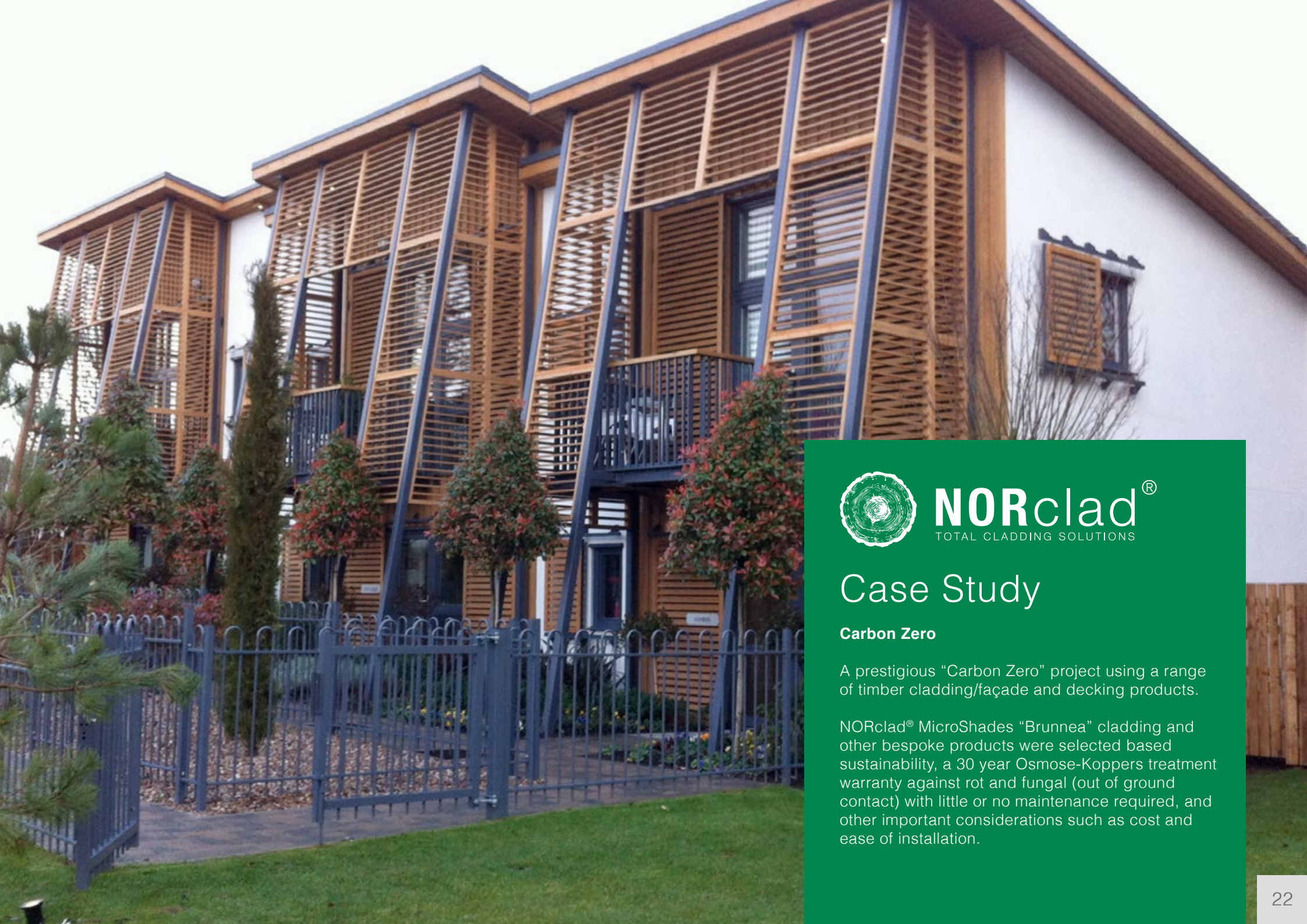
4) Building poles, commercial vineyards stakes or peeler core landscape timbers.

5) Damage caused by weathering of wood, including but not limited to raised grain, splitting, cracking, twisting, warping, shrinkage, swelling or any other physical property of the wood, or where untreated material is exposed by the effects of this weathering.

6) Timber degrade which is the result of the natural movement of wood in service, including weathering, twisting and splitting of components.

7) A piece of treated timber that is cut, drilled or notched after preservation unless the exposed area has been treated with an effective end coat.

8) Areas of wood where preservative surface penetration is consistently limited to less than 3mm or is effectively unachievable due to natural variations in the wood substrate and/or abnormal growth characteristics.



NORclad®
TOTAL CLADDING SOLUTIONS

Case Study

Carbon Zero

A prestigious “Carbon Zero” project using a range of timber cladding/façade and decking products.

NORclad® MicroShades “Brunnea” cladding and other bespoke products were selected based sustainability, a 30 year Osmose-Koppers treatment warranty against rot and fungal (out of ground contact) with little or no maintenance required, and other important considerations such as cost and ease of installation.

Warranty Statement for Micronized NORclad® Range of Products

Working in co-operation with Osmose-Koppers, the pressure treatment processing plant used to treat the NORclad® range of claddings has implemented quality procedures enabling it to produce micronized timber products that carry a 30 year service life warranty for treated timber used in an out of ground contact situation.

MicroPro/MicroShades (Brunnea) Timber is treated in accordance with quality procedures which have been set out by Osmose-Koppers Timber Technologies. These procedures are regularly audited by Osmose-Koppers to ensure the standards are maintained.

All timber for the warranty scheme is selected to ensure greater treatment penetration and long term protection for out of ground contact material.

When ordering treated products it is important to specify the Use Class required and for out of ground contact material this is Use Class 3 where a 30 year warranty is required.

Our timber with a 30 year warranty is sold as a new product range NORclad® micronized timber. By ordering these products you can have confidence that it has been treated to be fit for purpose and will have a 30 year service life against rot and fungal decay.

Hazard Class 3	External Joinery, Fence Rails, Decking, Featheredge, Barge and Fascia Boards, External Cladding, External Joinery
Hazard Class 4	External Joinery, Fence Rails, Decking, Featheredge, Barge and Fascia Boards, External Cladding, External Joinery

Importance of Correct Specification

At NORclad Ltd great emphasis is put on establishing every customers intended end use of timber products at initial point of contact. This facilitates correct species selection and pressure treatment cycle to ensure the timber supplied is fit for purpose.

MicroShades (Brunnea) Colour Fastness

The Osmose-Koppers Microshades process impregnates wood with a blend of Osmose-Koppers MicroPro preservative and Microshades (Brunnea) pigments.

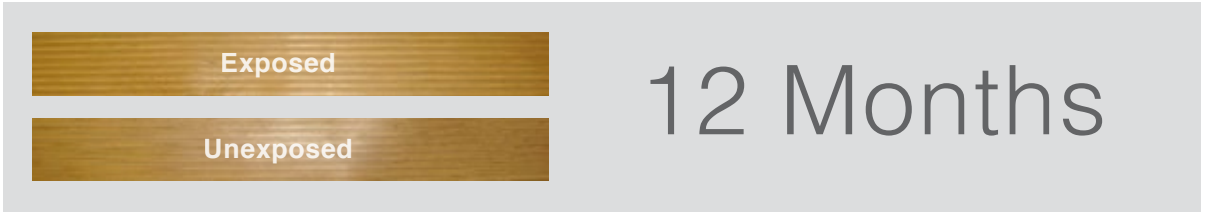
From experience to date, exposure trials and commercial practice, Osmose-Koppers would expect the appearance of Microshades (Brunnea) treated wood to enrich after initial exposure. The wood colour and its intensity will then remain relatively consistent for a period of up to 2 years, depending on exposure aspect. Beyond this point, the colour will fade gradually and evenly. The rate of fade will be totally determined by exposure conditions. Microshades (Brunnea) treated wood in sheltered conditions could hold its colour for many years.

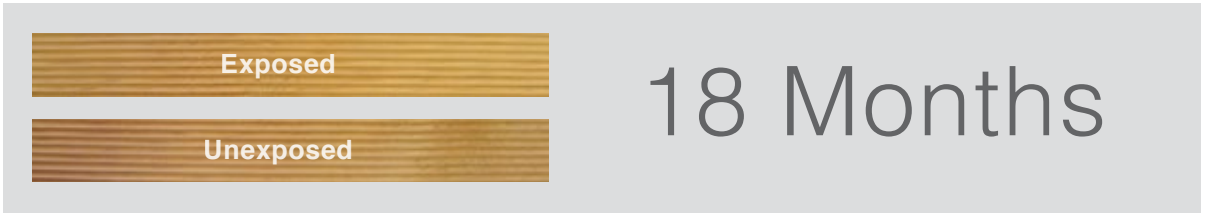
To get the best performance from Osmose-Koppers Microshades (Brunnea) treated cladding and decking, material is to be protected from full or part immersion in water and from mechanical damage whilst stored on site, before fitting. Treated cladding timber components in service are to be designed and installed so as to readily shed water and not be in contact with the ground.

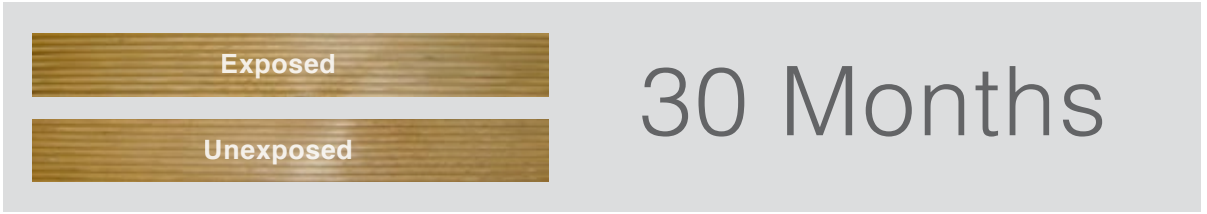
What follows are some details on laboratory tests carried out on Microshades (Brunnea) treated timber by Osmose-Koppers with exposure tests up to four years and also some pictures of Microshades (Brunnea) timber cladding in situ.

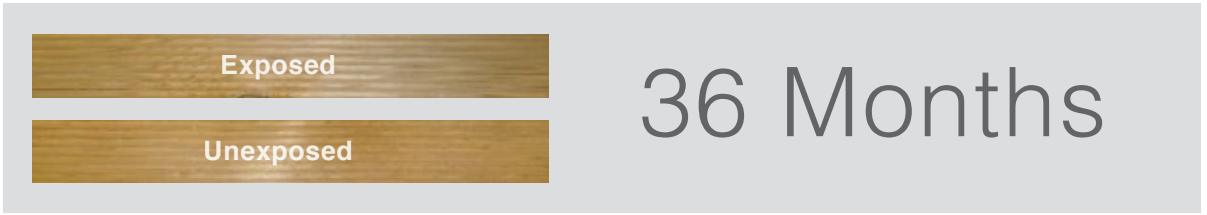
Weathering Example

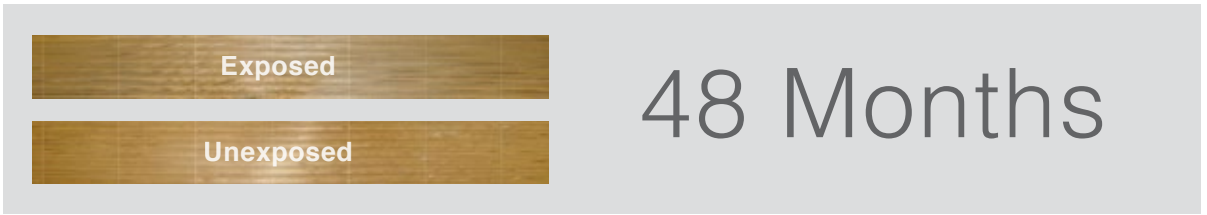
Species: European Redwood
Treatment: MicroShades (Brunnea)
Profile: Decking
Exposure: 45deg South











NORclad®
TOTAL CLADDING SOLUTIONS

Painted Cladding Solutions

See page 26 for more information.

Painted Cladding Solutions

- 15 year warranty against rot and decay.

New Forest Cladding

A new colour cladding system manufactured in the United Kingdom produced from sustainable sourced timber.

It carries a 15 year Warranty against rot & fungal decay as we well as up to 10 year Mechanical Warranty on the coating depending on the customers chosen substrate, coating manufacture, finish and profile choice.

All standard profiles are specially designed with no sharp edges to ensure excellent coating adhesion and in addition to the standard profiles, a bespoke machining facility is available on request.

Features

- Optional finish: sawn / structured / planed
- Standard range of profiles/trims & colours
- Non-standard profiles and full RAL colour range available on request
- No minimum order
- Nationwide delivery service

Standard Profiles

Size: Ex 25mm x 150mm **Code:** NWPC1
Desc: T&G

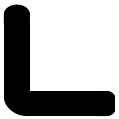
Size: Ex 25mm x 150mm **Code:** NWPC2
Desc: T&G

Size: Ex 32mm x 150mm **Code:** NWPC3
Desc: F/Edge

Standard Trims

Size: Ex 50mm x 50mm
Desc: Angle
Code: NWPA1

Size: Ex 50mm x 50mm
Desc: Angle
Code: NWPA2



Size: Ex 50mm x 50mm
Desc: Angle
Code: NWPA3

Standard Colours

FOREST GREEN	PEBBLE GREY	PEARL	EBONY

Others available on request!

Gallery

PROJECT:

Sainsbury's - Penzance

SECTION: Ex 25mm x 150mm
PROFILE: PTG Open V Joint (NWC1)
SPECIES/COLOUR: European Redwood / Brunnea

For more pictures and case studies of our work, please visit our website:

www.norclad.co.uk

Gallery

PROJECT:

Taylor Wimpey

SECTION: Ex 32mm x 150mm
PROFILE: Featheredge
SPECIES/COLOUR: European Redwood/Brunnea

For more pictures and case studies of our work, please visit our website:

www.norclad.co.uk

Gallery

PROJECT:

Wellsway School

SECTION: Ex 25mm x 150mm
PROFILE: PTG Open V Joint (NWC1)
SPECIES/COLOUR: European Redwood / Brunnea

For more pictures and case studies of our work, please visit our website:

www.norclad.co.uk

Gallery

PROJECT:

Barratt Homes

SECTION: Various
PROFILE: PSE / Eased Edges
SPECIES/COLOUR: European Redwood / Brunnea

For more pictures and case studies, please visit our website:

www.norclad.co.uk

Gallery

PROJECT:

Galliford Try/Linden Homes

SECTION: Ex 25mm x 150mm
PROFILE: PTG Open V Joint (NWC1)
SPECIES/COLOUR: European Redwood/Brunnea

For more pictures and case studies of our work, please visit our website:

www.norclad.co.uk