Issue 9 April 2014

Planning & Design

QUALITY DECK®

Contents

by Hoppings QUALITY TIMBER PRODUCTS

Glossary of Terms

Below the Subframe

OVERSITE Area under deck. Must be free draining or of a gradient at least 1 in 40 to allow water 'run-off'.

FOOTING A concrete pier that bears the weight of the deck.

SUPPORT POST A vertical support that sits on or in a footing. Use **Q-Deck®** Multi-purpose deck post material.

BEAM The main horizontal timbers of the deck (support the joists). Usually a pair attached to either side of the support post.

JOIST Multiple horizontal timbers that support the deck boards.

MINI JOIST HANGER Connects joists to beams so both top edges are flush.

LEDGER BOARD Beam secured to building to support deck structure.

STRUCTURAL FITTING / BOLT A long substantial bolt or screw for fastening subframe elements and newel post.

NOGGINS Short pieces of timber, fitting between joists for rigidity.

WEED BARRIER A rot proof fabric laid on oversite. It allows drainage while minimising weed growth. Covering it with a layer of pea shingle maximises its performance and longevity.

Above the Subframe

DECKING The floorboards or deck boards.

NEWEL POST Vertical post that supports balustrading.

BALUSTRADING Vertical railing secured between newel posts as a feature or barrier.

BALUSTER Vertical railing otherwise known as a spindle.

HAND RAIL Top rail section of balustrade.

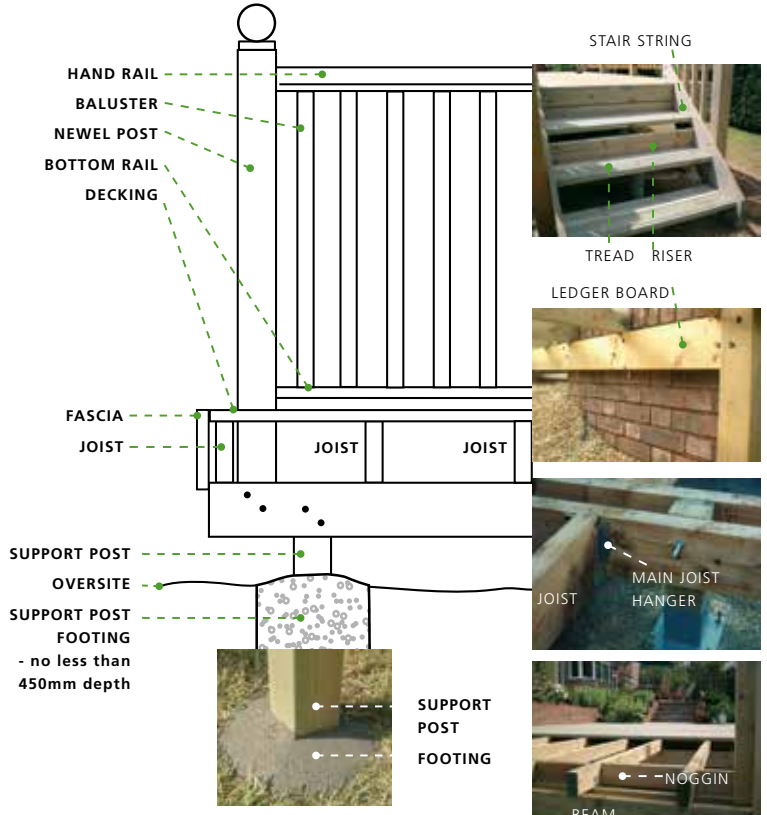
BALUSTER RAIL Top and bottom rail sections of balustrade to which spindles are fixed.

STAIR STRING An inclined member that supports a stairway tread.

RISER A vertical board attached to the front of a step between treads.

TREAD The horizontal face of each step.

FASCIA Deck boards attached vertically to outer subframe for tidy appearance.



Before You Start Planning

Although planning a deck is a fairly simple exercise, it's sometimes difficult to visualise what it will actually look like at the back of your house. Therefore, before you begin, take a good walk around your property and identify where you think you want the decking to go.

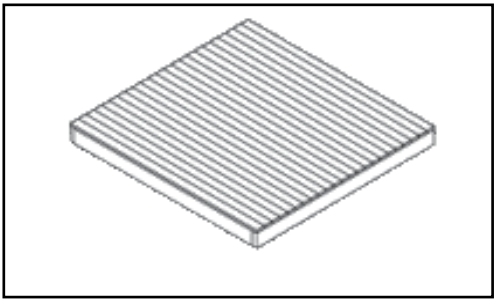
It is a good idea to start by looking at the ground the deck will occupy. Shown here are some typical deck constructions.

For ground level and partially evaluated decks the joist of the subframe should be laid on a free draining area of compacted hardcore (or similar) not straight onto earth or areas of lawn. Subframes that are laid in direct contact with earth are at increased risk of fungal decay and subsistence.

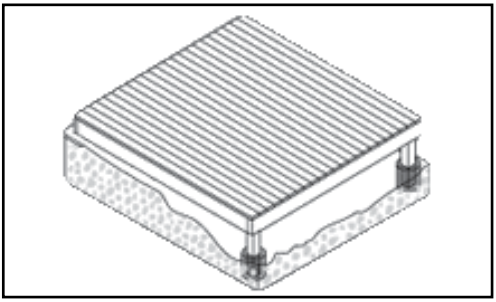
Work out who will use the deck and for what purpose. This will help you decide the size, shape and what furniture will be needed. If space is restricted you might think about building-in benches and storage planters. To help you think up what your deck will look like it's sometimes helpful to create a full size outline of the deck where you want to build it. Use whatever you may have to hand and map it out in the garden, leaving it in place to see if you're happy with it and see whether it's right for the garden taking into account factors such as the position of the afternoon sun, normal wind direction and level of privacy. Later, when you're happy draw a plan of the layout, measure out the size and shape of the deck, and map its location to the house.

If you have trees or other established features, which you want to retain, these can become the focal point and the deck can be designed around them. Make sure you allow access to the decking from existing doors and steps, and tie in the deck to any existing walkways that you may wish to retain.

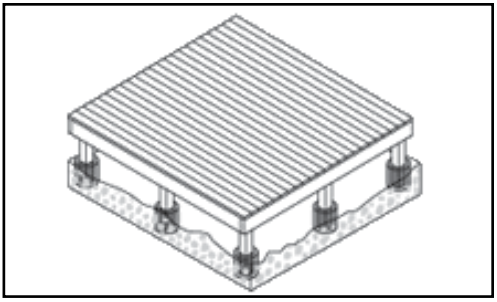
If your deck design means your deck will cover a manhole or other services to your home, ensure you design a removeable panel into the deck surface to give easy access in the future.



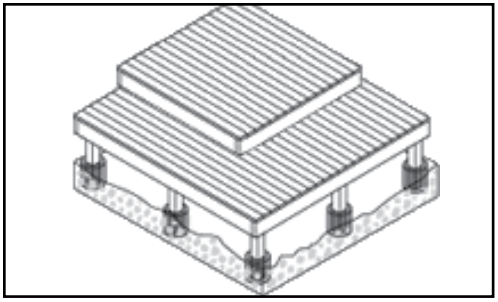
Ground level



Partially elevated



Elevated



Multi level

Planning and Design

- Select the location of your deck carefully, having regard for privacy and sun, shade or wind. Decks built in highly shaded positions will require more regular maintenance, particularly when situated under well established trees ie. leaf litter and possible sap/resin emission.
- Consider the nature of exit and entry to the home.
- Keep the size of the deck in proportion to your home and garden. In England new planning rules now apply to the size of decks in relation to the existing property or garden. For example, surfaces including decking are not permitted to cover more than 50% of a property's garden.

  Note: Q-Deck® components are preservative pre-treated to different levels of protection to the meet the requirements of industry standards. These standards are defined as 'use classes', which the table at the top of page 8 details in full.
- Consider the end use of your deck when planning the sub-frame design. You may need commercial specifications for large groups of people.
- Like all timber decking every type of pre-treated Q-Deck® timber decking has a knotty appearance. Q-Deck® Lunawood by the nature of its production has the most knotty appearance of all the Q-Deck® timber decking boards. Q-Deck® Lyptus and Garapa hardwood decking boards are in principle free from knots giving a clear natural, variable wood grain appearance. Being man-made Q-Deck® Twinson doesn't have knots and is designed to provide a very consistent a different look and feel to its wooden alternatives.
- Like all timber decking every type of Q-Deck® timber decking weathers to grey over a period of time. This is mainly due to the greying effects of ultra-violet light. The speed of greying is dependent on a number of factors including the aspect of the deck and in general can be slowed with the application of a protective coating such as Seasonite or protected more fully with the application of a pigmented protective coating such as Textrol, Aquadecks or Protext, all by Owatrol - on-going maintenance applies with all these systems as with any coating system available on the market.
- Q-Deck® Twinson is the only decking in the Q-Deck® range that retains its colour over a long period of time. This is because it is a man-made decking that uses pigments bound into the plastic element of the material. Note: The original twinson colours always fade a small extent before settling as does the striped effect on the grooved face of new Q-Deck® Twinson boards, which disappears quickly on exposure to U.V. light.
- Like many hardwoods Q-Deck® Lyptus and Garapa decking is highly susceptible to staining in contact with iron and water due to the high levels of tannin present. Only use stainless steel fixings such as Q-Deck-Tite Plus Stainless Steel Decking Screws. The black staining that can occur is easily removed using Net trol by Owatrol.
- Over time tannins present in Q-Deck® Lyptus and Garapa decking can be washed out of the timber. Please note that the fabric of a building or associated landscaping products could become stained by mobile tannin. This washing effect is more likely to occur during prolonged heavy rain and be most concentrated in the period just after fitting either type of hardwood decking. To minimise tannin bleed, Q-Deck® hardwood decking can be coated with Owatrol's Stoptan product.
- Choosing grooved or smooth deckboards - By far the majority of timber decks, boardwalks and piers built around the world are surfaced with plain timber boards. Whilst grooved deck boards are often marketed as "anti-slip" there is no evidence to suggest that they perform any better or worse than plain decking. Choice of deck board style is therefore a matter of personal preference.
- Where there is a higher than normal requirement to prevent the risk of slipperiness, for example on ramps, stairs, bridges or on public/commercial installations, then you need to consider Q-Grip®

Planning and Design

decking products that have enhanced grip characteristics or Twinson® composite decking that is easier to keep clean.

- When designing a deck to incorporate Q-Grip® slip resistant decking or Q-Grip® Strips™ it is important to consider the direction people will walk when using the deck. Q-Grip® deck boards are most effective in providing slip resistance when they are placed at an angle perpendicular (at right angles to) to the direction of pedestrian traffic (like that of a boardwalk).

  See figure (i). When placed parallel to the direction of pedestrian traffic the chance of slipping increases i.e. a slip could occur between the slip resistant aggregate strips within a board or within adjacent boards. See figure (ii).

Fig (i) Boards placed at right angles to pedestrian traffic.

Fig (ii) Boards parallel to pedestrian traffic.

- A way of minimising the distance between the aggregate strips that provide the enhanced grip is to consider the use of new Q-Grip® Strips™ and Q-Deck® York/Q-Deck® Canterbury deckboards or Q-Deck® Lunawood hidden fix.

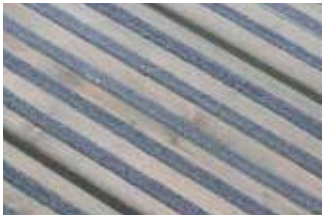
- **Planning permission**

  Timber decks differ from conventional patios and terraces most significantly in their elevation and general height of construction. For all but the simplest, patio style/ground level garden deck, property owners should satisfy themselves that planning regulations do not apply to their proposed structure. In addition to contacting the Local Authority, we strongly recommend that you talk to all your neighbours about your plans. Neighbour objections are the most usual reason for planning refusal or enforcement notices after completion.

  Local Authorities can insist that structures are dismantled and removed where consent should have been obtained, but was not. Deck structures are often considered to be exempt from planning regulations.

  This is not always the case. There are a number of specific instances where consent is required prior to building a patio, terrace or deck as shown below.

- **Situations Requiring Planning Permission**
  - Where the deck is situated within 20 metres of a highway.
  - Where the deck platform is more than 300mm (1 ft) from the ground (effective 1 October 2008).
  - If any part of the deck construction exceeds 3m in height.
  - If the structure would affect the amenity value or privacy of neighbouring properties.
  - If the deck is attached to a listed building or situated in a conservation area or National Park.



Maximum slip resistance using 5 Q-Grip® Strips™ in Q-Deck York.

Planning and Design

- **Building Regulations**
  Building Regulations (ie the involvement of building control) should be assumed to apply to every deck structure requiring planning permission.

- **When should decks have a balustrade?**
  Balustrades (or parapets) on decks can serve several functions, ranging from simple decorative boundaries to full safety barriers. Even a small change of level can be a hazard, particularly for elderly or infirm users. Unless the deck surface is flush with the surrounding ground level, a parapet or edge protection detail should be incorporated. For very low-level structures, this may take the form of a simple decorative rail, a lattice panel or a raised planter.

  The height of the parapet depends on how far the deck surface is off the ground:

  For 'low-level' decks up to 600mm from ground level - parapet height should be 900mm.

  For 'high-level' decks over 600mm high - parapet height should be 1100mm.

  Where parapets act as safety barriers, they should be designed and constructed to meet the UK building regulations (the Building Regulations for England and Wales and the Technical Standards for Scotland).

- The Q-Deck® Plus glass balustrade system is suitable for outdoor use in situations where the fall on the outside of an enclosed area is not more than 600mm high (according to BS 6399 Building Regulation requirements).

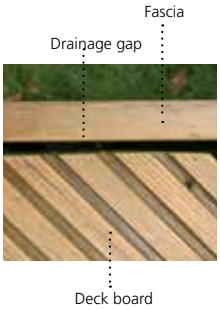
- For commercial pub and restaurant type decks it is wise to consider the use of fire retardant treated subframe and deckboard components and/or the use of deckboards with enhance grip characteristics. Q-Deck® can offer Non-Com® fire retardant treated components as special order products so please consult your Q-Deck® retailer who will pass the enquiry on to Hoppings Softwood Products for consideration.

Non-Com™ EXTERIOR
FIRE RETARDANT TREATED TIMBER

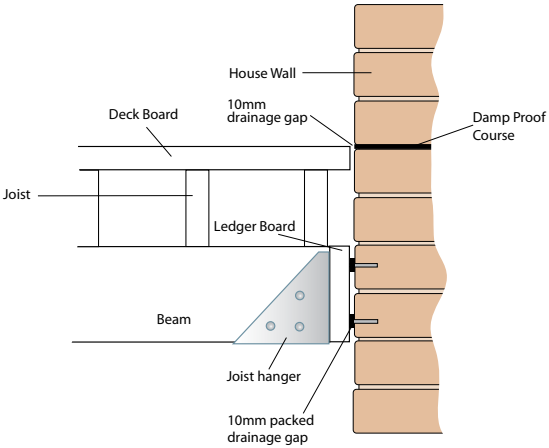
Two Q-Deck® slip resistant deckboards are available from stock and can be used over the entire deck surface for greater reassurance or strategically on areas such as steps or walkways.

- When designing and building decks, always plan to achieve a free draining structure.

- For adequate water 'run off' decks should be laid on a slight gradient (at least 1 in 80). Note: lay grooved decking down the fall to enable water 'run off' and ensure the groove ends can drain freely, ie. pack out fascia if required.



- If the deck is attached to a dwelling wall the finished deck height should not compromise the damp proof course (DPC). With 'old' houses it is advisable to keep the deck height at least two brick courses below DPC.



- We recommend a maximum span between newel posts of 2100mm.

Planning and Design

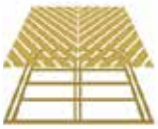
- How many deck boards do I need?

m2	Lyptus 98mm cover	Cambridge 100mm cover	Q-Deck® Lunawood 123mm cover	York 125mm cover	Canterbury/ Winchester 150mm cover	Garapa 153mm cover	Twinson 146mm cover
1	10.2m	10m	8.1m	8m	6.7m	6.6m	6.85m
2	20.4m	20m	16.2m	16m	13.4m	13.2m	13.7m
3	30.6m	30m	24.3m	24m	20.1m	19.8m	20.6m
4	40.8m	40m	32.4m	32m	26.8m	26.4m	27.4m
5	51.0m	50m	40.5m	40m	33.5m	33m	34.2m
10	102.0m	100m	81m	80m	67m	66m	68.5m
15	153.0m	150m	121.5m	120m	100.5m	99m	102.8m
20	204.0m	200m	162m	160m	134m	132m	137.0m

Please note:
The table above is the minimum quantity requirement. It is suggested that you add 10% to these figures to allow for cutting or patterned layouts.

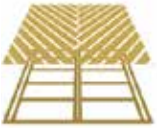
- If you need special components that are strength graded to meet Building Regulation requirements please consult your Q-Deck® retailer who will pass the enquiry onto Hoppings Softwood Products for consideration. For more information you may call our decking free phone line on 0800 849 6339.
- Choose the direction you wish to lay the deck boards - this will establish joist direction.

Parallel, 90° or 45°



Chevron

Checkaboard



Herringbone

Quadrant

Please note: Laying deck boards in Checkaboard and Quadrant can hinder drainage and will require more regular maintenance.

- Deck boards with smaller cross sections need more joists and greater support.
- Beam Span Guidance
  We recommend beams are constructed from two 44 x 145mm Q-Deck® deck joists and are placed at maximum centres of 1.8m. In this instance the maximum span between deck post centres is 2.07m (C16) or 2.24m (C24) as highlighted in the table on page 10.

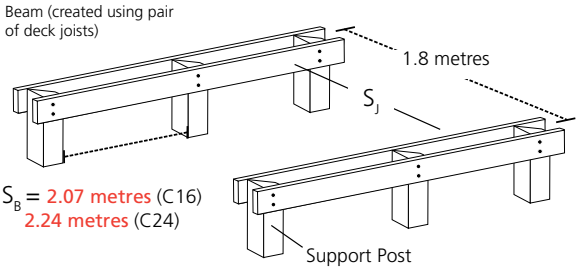
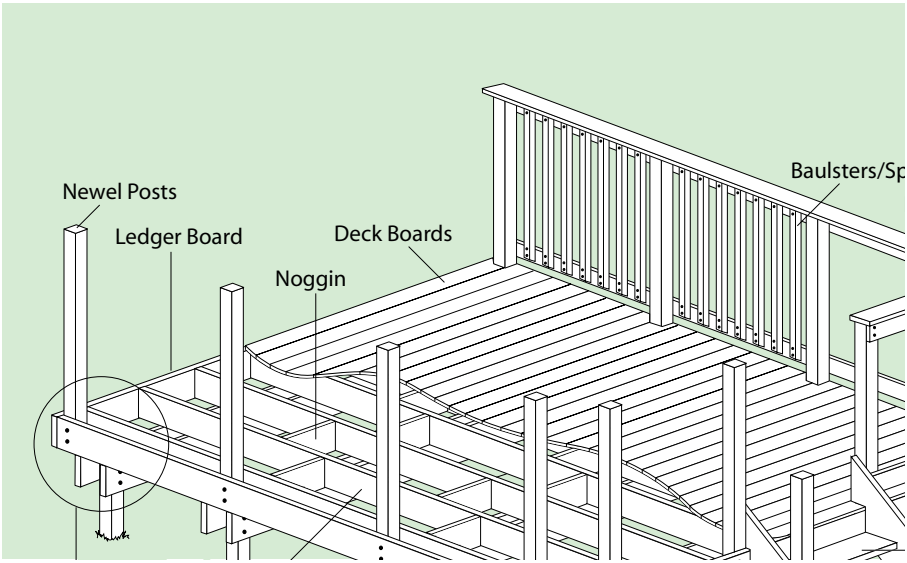


Diagram above shows figures for domestic applications (uniformly distributed load 1.5kN/m²).

Deckboard, joist and beam guidance



Joist and Deck Board Spacing Guidance

The table opposite shows figures for domestic applications (uniformly distributed load 1.5kN/m²) and commercial applications (uniformly distributed load 4.0kN/m²).

Dimensions stated represent the maximum length of unsupported joists (ie. between beams or slab etc).

Please note: Decking laid at a 45° angle will require a reduction of joist spacing centres of 30%.

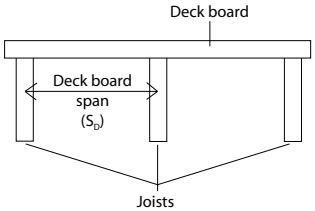
Joist Spacing (centres)

Maximum joist support centres for Q-Deck® deck boards

Deck board size (mm)	Joist centres (mm) for C16 grade joists - S_D		Description
	1.5kN/m² - Domestic	4.0kN/m² - Commercial	
21 x 90	400	250	Lyptus
20.5 x 95	250	-	Cambridge
21 x 145	600	400	Garapa
26 x 117	500	300	Lunawood
27 x 144	500	400	Winchester, Canterbury
33 x 120	600	500	York

Maximum support centres for Q-Deck® Twinson® deck boards

Deck board size (mm)	Joist centres (mm) for C16 grade joists - S_D	
	1.5kN/m² - Domestic	4.0kN/m² - Commercial
28 x 140	500	350



NOTE: This information has been prepared to assist in the preliminary design of timber decks, eg for species selection and initial member sizing. The detailed structural design for an individual deck will need to be confirmed by an appropriately qualified engineer. Reproduced with permission from TRADA (Timber Research and Development Association).

Joist and Beam Span Tables

Strength Grading

For decks 600mm or more above ground level, support posts should be of strength graded material. If you need strength graded components please consult your **Q-Deck®** retailer who will pass the enquiry onto Hoppings Softwood Products for consideration.

For more information you may call our decking free phone line on **0800 849 6339.**

C16

Table A: Maximum joist spans - Strength Class C16

	Imposed load 1.5kN/m² Joist centres (mm)			Imposed load 4.0 kN/m² Joist centres (mm)		
Joist section (mm)	400	500	600	400	500	600
width depth	Maximum clear joist span S_J (metres) (see page 30)					
45/47 x 97	2.00	1.86	1.75	1.47	1.33	1.22
45/47 x 122	2.51	2.33	2.20	1.85	1.66	1.51
45/47 x 147	3.02	2.81	2.64	2.20	1.97	1.80
45/47 x 170	3.49	3.24	3.05	2.52	2.26	2.07
45/47 x 195	4.00	3.71	3.50	2.87	2.57	2.35
45/47 x 220	4.20	4.18	3.94	3.21	2.88	2.63

Imposed loads 1.5kN/m² - domestic applications (single occupancy) 4.0kN/m² - commercial applications (dining areas, cafes, restaurants, balconies)

Table B: Double member beam spans - Strength Class C16

	Imposed load 1.5kN/m² Beam centres (mm)				Imposed load 4.0 kN/m² Beam centres (mm)			
Beam size (mm)	1.2	1.8	2.4	3.0	1.2	1.8	2.4	3.0
width depth	Maximum clear beam span S_B (metres) (see page 30)							
2 x 45/47 122	1.99	1.72	1.55	1.43	1.45	1.22	1.05	-
2 x 45/47 147	2.39	2.07	1.87	1.73	1.74	1.46	1.25	1.02
2 x 45/47 170	2.76	2.40	2.16	1.99	2.02	1.67	1.44	1.18
2 x 45/47 195	3.16	2.75	2.48	2.29	2.31	1.90	1.64	1.35
2 x 45/47 220	3.56	3.10	2.80	2.58	2.61	2.13	1.83	1.53

C24

Table A: Maximum joist spans - Strength Class C24

	Imposed load 1.5kN/m² Joist centres (mm)			Imposed load 4.0 kN/m² Joist centres (mm)		
Joist section (mm)	400	500	600	400	500	600
width depth	Maximum clear joist span S_J (metres) (see page 30)					
45/47 x 97	2.15	1.99	1.87	1.58	1.47	1.38
45/47 x 147	3.24	3.01	2.83	2.40	2.22	2.08

Imposed loads 1.5kN/m² - domestic applications (single occupancy) 4.0kN/m² - commercial applications (dining areas, cafes, restaurants, balconies)

Table B: Double member beam spans - Strength Class C24

	Imposed load 1.5kN/m² Beam centres (mm)				Imposed load 4.0 kN/m² Beam centres (mm)			
Beam size (mm)	1.2	1.8	2.4	3.0	1.2	1.8	2.4	3.0
width depth	Maximum clear beam span S_B (metres) (see page 30)							
2 x 45/47 147	2.57	2.24	2.02	1.86	1.88	1.62	1.37	1.09

Design Considerations & Recommendations to further minimise the risk of fungal decay and insect attack and thus simplify a warranty claim

Note: Q-Deck® components are preservative pre-treated to different levels of protection to the meet the requirements of industry standards. These standards are defined as 'Use Classes' (see below for full details).

Only select Q-Deck® components that are suitable (level of preservative treatment protection) for the situation or Use Class they are to be used in (refer to Use Class table opposite).

Where possible Use Class 4 components should not be cut, notched or bored if they are then to be used in ground contact. If Use Class 4 deck support posts are cut then the cut end should not be placed in the ground. If Use Class 4 deck joists for ground level or partially elevated decks are cut then they should be laid on a free draining area of compacted hardcore (or similar) not straight onto earth or areas of lawn. Subframes that are laid in direct contact with earth are at increased risk of fungal decay and poor subsistence.

Where possible Use Class 4 components should not be cut, notched or bored if they are then to be used in ground contact. If Use Class 4 deck support posts are cut then the cut end should not be placed in the ground. If Use Class 4 deck joists for ground level or partially elevated decks are cut then they should be laid on a free draining area of compacted hardcore (or similar) not straight onto earth or areas of lawn. Subframes that are laid in direct contact with earth are at increased risk of fungal decay and subsistence.

In working with Q-Deck® products, if you decide to combine a decking subframe component into your scheme from an alternative supplier or manufacturer then the Q-Deck® warranty cannot be honoured as Hoppings Softwood products have no control over the specification or quality of the non-Q-Deck® components. If you still decide to use non-Q-Deck® products then it is advisable to ensure that they are treated to Use Class 3 requirements as a minimum or use Use Class 4 for components used in ground contact.

USE CLASSES

Use Classes are defined by British and European Standards, providing a guide to the risk of decay or insect attack to timber components, depending upon their end use.

The higher the Use Class, the higher the level of preservative protection is required.

USE CLASS	TYPICAL SITUATION
1	Internal building timbers with no risk of wetting or condensation.
2	Internal building timbers with a risk of wetting or condensation.
3	External building, fencing and landscaping timbers used out of ground contact.
4	External building, fencing and landscaping timbers used in ground contact.

END GRAIN PRESERVATIVE

ENSELE® has a pale blue colouration which quickly changes to a pale green after application to blend with the treated timber.

To meet Q-DECK® warranty conditions any timber exposed by cross-cutting, notching or boring after treatment must be liberally swabbed with two coats of Ensele® brush-on end grain preservative or Ronseal end grain preserver or Hickson® Decor End Grain Preservative, in accordance with the manufacturers instructions.

For further information on Tanalised® E/ Tanalised® Extra treated timber visit www.tanalisedtimber.co.uk or contact the Lonza Wood Protection Advisory Service - telephone 01977 714000

Design Considerations continued....

- When designing and building decks always plan to achieve a free draining structure
- Deck board should be surface dry and laid with no less than 6mm gap between boards, (this allows for seasonal shrinkage or swelling). Maintain this gap when fitting boards around newel posts for a neat finish whilst still allowing water to 'run off'.

- Cut the top off the support post at an angle to aid water run off.
- If you need to attach a ledger board to the wall of a dwelling it is advisable to leave a gap between them - use a 10mm thick spacer/packer. This will maintain ventilation and enable the wall and ledger to dry.

- Bevel the top of the concrete footing around the support posts to aid water 'run off'.

- Don't let dirt and organic debris accumulate. Sweep your deck regularly and if needs be wash it if dirt does accumulate, particularly if it hinders drainage. See the deck care section on page 11 for more information.
- When using Q-Deck® Lyptus, Garapa or Twinson decking it is avisable to use Q-Deck® Use Class 4 subframe components. For Q-Deck® Lunawood the use of these specific components are a condition of the Q-Deck® Lunawood warranty.

Installation Guides

The Q-Deck® 'How to Build a Deck' video is now available online.

ON-LINE DECKING VIDEO

The following books can be purchased from good book shops or via the internet.

Timber Decking Manual.
Expert Advice from Start to Finish: Building a Deck.
The Complete Guide To Decks.
Building and Designing Decks.
Pergolas, Arbours and Arches.
RHS Practicals: Arches & Pergolas.
Ideas for Great Patios & Decks book.
Arches & Pergolas.
DECKS.
Deck & Patio Planner book.
Builders Guide To Decks.
Ortho's Guide to Decks & Patios.
Pure Deck-adence.
Deck Planner book.
Decking for dummies.

Tanalith E
PRESSURE TREATED TIMBER

Tanalith Extra
PRESSURE TREATED TIMBER WITH BUILT-IN WATER REPELLENT

Tanatone
PRESSURE TREATED TIMBER WITH BUILT-IN COLOUR

Tanalith E, Tanalith Extra & Tanatone Treated Timbers




TANALITH E pressure treated timber is timber which has been impregnated with TANALITH E wood preservative under controlled conditions in a vacuum pressure timber impregnation plant.

TANALITH E is a water based wood preservative that contains copper and proven organic biocides. When impregnated into the timber the preservative components bond with the wood structure and cannot easily be removed.

TANALITH E pressure treated timber has a long term protection against fungal and insect attack, including termites, for both in and out of ground contact, interior and exterior applications when treated to the correct end use specification.

TANALITH E pressure treated timber has an initial natural green colouration. Upon external exposure, the green colour slowly weathers to a warm, honey brown and in the longer term becomes a natural silver grey. This weathering process does not indicate any loss of preservative protection.

TANALITH E pressure treated timber is also available with built-in water repellent (TANALITH Extra) or built-in brown colour (TANATONE). With the benefit of water repellent properties, TANALITH Extra pressure treated timber is ideal for outdoor leisure and decorative timbers such as decking, cladding and playground equipment. TANATONE treated timber has a brown colouration as opposed to the traditional TANALITH green. It is ideal for rough sawn timber fencing and landscaping applications.

Recommendations provided for TANALITH E pressure treated timber apply equally to TANALITH Extra and TANATONE pressure treated timber, unless otherwise stated.

TANALITH E Wood Preservatives

TANALITH E wood preservatives are approved for use by the relevant regulatory authorities in the markets it is used. The biocides contained in TANALITH E wood preservatives are being supported under the Biocidal Products Regulation.

Treatment Specifications

TANALITH E treatment process parameters can be varied, taking into account timber species, desired service life and to match the end use (Use Class) of the timber. It is therefore extremely important that the end use and species of the timber are clearly stated within the treatment specification. Use Classes are defined in EN 335:2013 but can be summarised as follows:

- Use Class 1 - internal building timbers - no risk of wetting.
- Use Class 2 - internal building timbers - risk of wetting.
- Use Class 3 coated - external timbers used above ground contact and coated.
- Use Class 3 uncoated - external timbers used above ground contact and uncoated.
- Use Class 4 - external timbers used in ground or fresh water contact.

In accordance with EN 335:2013 Use Class 3 can also be sub-classified as 3.1 and 3.2 respectively. The interpretation of these sub-classes may vary from country to country.

TANALITH E pressure treated timbers can be produced for any above Use Classes. The specific end use suitability of ready treated TANALITH E timbers should be confirmed by the supplier of the treated timber.

Treated Timber Appearance

Colour variations of TANALITH E treated timber may occur due to the natural variability of the relative proportions of heartwood and sapwood and darkening of some hardwoods may occur. Upon external exposure, the initial green colour of TANALITH E treated timber slowly weathers to a warm, honey brown and in the longer term becomes a natural silver grey. This weathering process does not indicate any loss of preservative protection.

If required, the green colour of TANALITH E treated timber can be refreshed at any stage using coating products such as RESTOL Wood Oil, available in Garden Timber Green. Always follow the coating manufacturer's instructions in these situations. For more information on RESTOL Wood Oil visit www.restol.info

TANATONE pressure treated timber with built-in colour has a brown appearance. TANATONE will not hide or mask wood grain nor will it totally mask discolouration caused by weathering or dirt, fungal staining or wood defects. In addition, some resinous softwoods, eg redwood, may exhibit resin flecking or resin bloom around knots if treated when the timber is still fresh/unseasoned. This can occur with both TANATONE and TANALITH E pressure treated timber, but may be accentuated by TANATONE.

As with all colour applications to timber, the brown colour of TANATONE treatment will fade with time. If required, the colour can be refreshed with a brush-on colour product such as RESTOL Wood Oil.

Enhanced protection against the weather can be obtained by using TANALITH Extra pressure treated timber with built-in water repellent. Brush applied water repellent coatings, such as RESTOL Wood Oil can also be used. These are particularly effective when applied as a regular maintenance product to the surface of TANALITH Extra pressure treated timber.

Note that timber is a variable and natural product. Occasionally timber containing high or mobile resin levels can give a blue colouration at the point of treatment. Upon weathering this fades rapidly into the overall colouration of the treated timber.

Post-Treatment Machining

As far as possible all cutting, machining, notching and boring is to be carried out prior to treatment.

Where cutting, machining, notching and boring has to be carried out to treated timber, the area of timber revealed by the cross cuts, holes or notches must be liberally brushed with a suitable end grain preservative in accordance with the manufacturer's instructions to maintain the integrity of the preservative protection.

Pieces which are rip sawn, thicknessed, equalised or planed must be returned to the supplier of the treated timber for re-treatment.

On no account are fence posts to be pointed after treatment. The shortening of posts and columns should be avoided if possible, but in any event cross cutting must be restricted to the top of the post or column and the cross cut surface must liberally brushed with a suitable end grain preservative in accordance with instructions on the product label.

For more information on end grain preservatives contact the Lonza Wood Protection Advisory Service.

Gluing

TANALITH E pressure treated timber dried to less than 20% moisture content and in equilibrium or within 5% of its expected in-service moisture content, may be glued with most commonly available adhesives.

TANALITH E pressure treated timber may be glued after cleaning off any surface deposits or dirt with a wire brush, or after a light sanding.

In consultation with the adhesive manufacturer, select an adhesive appropriate to the in-service exposure condition and appropriate for load bearing or non-load bearing requirements. Consult the glue manufacturer on the suitability and use of their particular product and follow the directions of the appropriate regional standards.

For load bearing constructions, phenol resorcinol formaldehyde, resorcinol formaldehyde, phenol formaldehyde, melamine urea formaldehyde, melamine formaldehyde, urea formaldehyde, emulsion polymer isocyanate glues are generally used.

For non-load bearing constructions, emulsion polymer isocyanate, polyurethane, polyvinyl acetate, urea formaldehyde, melamine urea formaldehyde, melamine formaldehyde and phenol resorcinol formaldehyde glues are generally used.

For exterior or damp conditions, phenol resorcinol formaldehyde, resorcinol formaldehyde or phenol formaldehyde glues are generally used.

For internal dry conditions, resorcinol formaldehyde, phenol formaldehyde, melamine urea formaldehyde casein, polyvinyl acetate, urea formaldehyde, emulsion polymer isocyanate glues are generally used.

Surface Coatings

TANALITH E pressure treated timber does not have to be painted or stained to maintain its preservative properties.

Many coating products are available on the market. Always consult the coating manufacturer's recommendations before applying a coating product to TANALITH E pressure treated timber.

If TANALITH E pressure treated timber is to be painted, stained or varnished, the timber should be dried throughout the cross section. Always follow the coating manufacturer's instructions, taking note of the recommended maximum moisture content prior to application.

The preservative treatment is not a substitute for sealing of knots, base coating or priming.

If waterbased coatings are applied, some discolouration may occur in exceptional circumstances. If this happens, allow the coating to dry completely. Then apply an additional coat of product, preferably one with a high build, high solids content. It is NOT recommended to apply opaque paint systems to TANATONE pressure treated timber.

Metal Fixings & Fittings

General Advice

It is important to follow the recommendations of the manufacturer of any metal products used for specific advice regarding suitability, desired service life expectations and particular exposure conditions.

TANALITH E pressure treated timber has a long life expectancy and it is appropriate to use metal fixings and fastenings that will have a comparable length of life.

- Performance of metal fixings is influenced by the environmental conditions including moisture content, temperature, atmospheric pollution, proximity to coastal locations, timber species, as well as the thickness of any galvanising.
- For exterior use, where the timber is likely to become wet and a long service life is required, greater corrosion resistance will be achieved with use of austenitic grade 316 stainless steel, silicone bronze or copper in preference to other types of fittings.
- Galvanising provides a sacrificial zinc barrier. It is important that the specifier/end user is aware that there are many thicknesses of galvanised coating available and the thicker the galvanised coating the longer the expected service life. The level of galvanising should be commensurate with the end use. The use of an automated nail gun may break the galvanised layer in lower grade metal fixings and compromise their performance at the outset.
- Electroplated metals only provide a thin coating and are unsuitable for exterior applications.
- It is good practice to drill pilot holes for fixings, in particular when screwing near the edge or end of a piece of timber.
- Attach connectors, fasteners and fittings after preservative treatment and only after the timber has re-dried to less than 20% moisture content.
- In addition to the above, for internal building timbers, e.g. trussed rafters, it is recommended to re-dry the timber to a moisture content of 22% or less before assembly and to maintain the timber in this condition during storage and delivery to site.
- To prevent bimetallic corrosion between fastener and connector components it is important not to mix metals in the same connection. DO NOT mix galvanised and stainless steel components.
- Refer to local guidelines for slating and tiling. Nails for use with slates should be of copper, phosphor or silicon bronze. Nails for use with tiles should be austenitic stainless steel, copper, phosphor or silicon bronze. The use of aluminium and galvanised steel nails is NOT recommended.
- Eurocode 5 (EN 1995-1-1: 2004) gives minimum specifications for material protection against corrosion for fasteners and fixings used in internal building, low hazard situations (Use Classes 1 and 2) where the moisture content of the treated timber will not exceed 20% throughout its service life.
- Direct contact with aluminium should be avoided where the moisture content will exceed 18% or where condensation is possible.
- Where the use of aluminium is unavoidable in situations where moisture content will exceed 18%, it must be separated from the timber using a bituminous, epoxy or other impervious barrier or electrically insulating coating. The use of nylon/plastic washers is recommended.
- Fixings and fastenings used on safety critical and load bearing components should be inspected regularly and replaced if necessary.
- Specialist advice should be obtained in the selection of connectors for use in swimming pool buildings. Detailed advice is contained in the Nickel Development Institute document Stainless Steel in Swimming Pool Buildings 1995.

Typical Applications

It is advisable to consult with Lonza Wood Protection using the contact details given in this document if in doubt about any particular area of application or compliance with other relevant standards or specifications.

This list below, which is not totally exhaustive, gives an indication of the range of timbers and timber based products which can be treated with TANALITH E wood preservative. The treatment process parameters are varied to match the end use of the timber and its species. It is therefore extremely important that you make sure that the timber has been treated to the correct specification. The use of TANALITH Extra water repellent treated timber may be advisable for certain end use applications, such as decking, cladding and playground equipment.

Building

Structural elements and general timbers in domestic, commercial and public buildings, such as wall frames, sole plates, beams, joists, subfloors, roof timbers, external joinery, battens, cladding, roof shingles.

Garden & Landscaping

Decking systems, pergolas, gazebos, bridges, summer houses, soil retaining walls, timbers around fish ponds (but not in direct contact with the water), playground equipment, lawn edging, fencing, picnic benches and tables, way signs and litter bins. For certain applications,particularly with thin cladding type timbers, it may be appropriate to use a brush-on water repellent or TANALITH Extra treated timber which has a built-in water repellent.

Agricultural & Horticultural

Earth retaining vegetable beds (use of pressure treated timber does not affect organic status), fruit tree stakes, hop poles, vine stakes

Enclosures/Fencing

Natural round, machine turned and square sawn fence posts, rails, droppers, gates and gate posts, stiles and highway, farm and security fencing

Transport

Floors and other timbers for railway and road vehicles, container floors and linings, packing cases, cable drums and hatch covers. For treatments to meet Australian Quarantine Regulations (AQIS) contact Lonza Wood Protection directly for the latest information.

Engineering

Transmission poles, decking, shells, gantries, bridges and bridge decks, handrails, cable ducting and sound barriers.

End Use Considerations

TANALITH E pressure treated timber can be used in internal and external building applications and outdoors, both in ground contact and above the ground, without any need for further protection.

TANALITH E pressure treated timber is treated to meet the requirements of a particular end use.

When using timber for exterior situations, either treated or untreated, consideration should be given to the propensity of the material to stain light coloured adjacent faces, such as render, paving flags or coated timber surfaces, with its natural extractives during the weathering process. This staining effect can be highlighted where TANATONE treated timber has been selected, although the potential for this to occur does reduce with time.

Where used in this external environment, it is highly recommended that contact between the timber and these surfaces is eliminated by design, in order to prevent surface discolouration.

Where close tolerance work is involved it is advisable to pre-machine the timber at the in-service equilibrium moisture content prior to treatment. Consultation with the treatment supplier is advised in these situations.

Treated timber should not be used where it may come into contact with drinking water or for food preparation surfaces/structures or containers for storage.

When considering the use of TANALITH E pressure treated timber around fishponds, please contact Lonza Wood Protection for advice.

If supplying timber for treatment it is best practice to prepare the timber as fully as possible prior to treatment to ensure best results.

If any cutting, notching or drilling is made to the treated timber following treatment, any exposed surfaces should be liberally swabbed with an appropriate end grain preservative to maintain the integrity of the treatment.

Handling Precautions

You should have received the treated timber in a drip-free condition with no sign of preservative fluid on the surface. If this is not the case, the timber should be stored open stacked under ventilated conditions and protected from rain and snow to dry before use.

When working with timber, wear gloves to protect the skin against abrasions and splinters. Any cuts and abrasions should be protected by a waterproof dressing.

When power-sawing and machining, wear goggles to protect the eyes from flying particles. Wear a dust mask and, whenever possible, perform these operations outdoors to avoid accumulations of airborne sawdust or use a suitable dust extraction system around any mechanical saw or planing machine. Avoid frequent or prolonged inhalation of sawdust. Consult local regulatory authorities for further information on workplace exposure limits for wood dust.

In order to prevent injury, care should be taken when lifting or moving timber. These handling precautions equally apply to untreated and treated timber.

Personal Hygiene

After handling or working with treated timber, all exposed skin should be washed before commencing other activities, especially eating, drinking, smoking or going to the toilet.

If sawdust accumulates on clothes, clean them before re-use.

Launder heavily soiled clothes separately from other household wash items.

On-Site Precautions

All sawdust and construction debris should be cleaned up and disposed following local regulations.

Waste Disposal

TANALITH E pressure treated timber is not classified as hazardous waste. Local market regulations should be referred to.

TANALITH E treated timber and post treatment processing wastes, such as sawdust and offcuts, must not be used for animal litter or bedding or for fuel in barbecues, cooking stoves or grates.

Domestic end users should dispose of any waste treated timber, sawdust or ash through the ordinary waste collection service or at a local authority amenity/disposal site.

Any waste timber, sawdust or redundant timber from commercial or industrial use (e.g. construction sites) should preferably be recycled by re-use, or disposed of to an authorised landfill or to a correctly controlled and approved waste incinerator.

Further Information

For further information with respect toTANALITH E, TANALITH Extra, TANATONE treated timbers, end grain preservatives or RESTOL Wood Oil please contact Lonza Wood Protection using the contact details below.

Use biocides safely. Always read the label and product information before use.

Lonza

Lonza Wood Protection

Wheldon Road, Castleford, West Yorkshire,WF10 2JT.

Tel: +44 (0)1977 714000 Fax: +44 (0)1977 714001

email: timberprotectionadvice.ukca@lonza.com www.lonzawood.com

Consumer Information
Q-Grip® Slip Resistant Strips

The injection applied strips are a blend of resin, fillers and well recognised slip resistant aggregates. The strips are formed in specially machined grooves of the timber decking.

Resins are solvent and diluent free Bisphenol A epoxy with fillers.

Cured before product dispatched.

Aggregate Type: RASC Guyanan Bauxite

Colour: Grey

Particle sizes: Ranging from 0.25 to 0.5mm

PRECAUTION WHEN WORKING WITH Q-GRIP® BOARDS:

In addition to the precautions detailed in the Tanalith E consumer information sheets. The grinding and cutting of this product may produce dust and loose flying particles and we strongly recommend that personnel carrying out these tasks wear suitable Personal Protective Equipment including gloves, eye protection, particulate dust mask and ear defenders. This list is not exhaustive and may not include safety equipment required when using certain types of cutting or grinding equipment.

TESTING (SKID RESISTANCE):

No.0325(+)

Q-Grip® York and Canterbury deckboards have been tested to BS 7976(2):

2002 as advised by the UK Slip Resistance Group and are both rated as

"a low potential for slip" in wet conditions.

They are also DeckMark® Plus accredited. DeckMark® Plus is a new initiative from the Timber Decking Association to meet requests from architects and commercial designers for formal performance guidance for the slip resistance rating of deckboard surfaces or the load bearing capabilities of structures like parapets.

DeckMark® Plus is an extension of the TDA's DeckMark® quality assurance scheme. Introduced in 2000, DeckMark® was designed to give reassurance to specifiers and consumers that timber deck components have been manufactured to established quality standards. DeckMark® Plus builds on this widely adopted scheme to combine a quality accredited product with a formal performance rating. For example DeckMark® Plus now enables architects and designers to specify boards that have been independently slip tested in line with BS7976 and provide a 'low slip potential' in both wet and dry conditions.

Ensele™
END GRAIN PRESERVATIVE

ENSELE
Brush-on End Grain Preservative



- ENSELE is a brush-on, end grain timber preservative for the re-treatment of cross-cut, notched or drilled areas of TANALITH pressure treated timbers.
- Choice of products for both green and brown pressure treated timber.
- Maintains the integrity of the pressure treated timber against fungal and insect attack.
- Easy to apply - swabbing areas exposed by cross-cutting, drilling or notching of the pressure treated timber.
- Available in 1kg (green treated timber only) and 5kg (green and brown treated timber) can sizes.
- Supplied in sturdy, resealable metal cans.
- Approved by relevant national Approval Authorities.

Recommended for use with

Tanalith E
Tanatone
Tanalith Extra
Tanalith Cross

Description
ENSELE is a waterbased, end grain preservative based on copper triazole technology and is specifically designed for the re-treatment of cross-cut, notched or drilled areas of TANALITH pressure treated timbers.

Appearance
ENSELE (GREEN) is a blue, thickened liquid with little perceptible odour. Once applied, the blue colour turns to green to blend into the natural colouration of the treated timber.

ENSELE (BROWN) already has a brown colouration.

Uses
Whenever pressure treated timber is cross-cut, notched or drilled on-site, the exposed surfaces must be re-treated with ENSELE end-grain preservative to maintain the integrity of the protective system.

Application
Apply by brush directly. Stir well before and during use. Use undiluted, liberally swabbing areas exposed by crosscutting, holes or notches.

Number of Coats
Two liberal coats. Allow time for absorption along the grain of the timber before applying the second coat.

Brush Cleaning
Remove as much product as possible from the brush before washing with water. Please do not pour unused product or brush washings down the drain.

Shelf Life
Minimum 2 years in original sealed cans, stored away from extremes of temperature.

Safety Note
A material safety data sheet is available upon request at the contact details below.

Always read the label. Use biocides safely (contains copper carbonate, boric acid and propiconazole). Do not allow product to enter drains and watercourses.

Lonza
Lonza Wood Protection

Wheldon Road, Castleford, West Yorkshire, WF10 2JT.
Tel: +44 (0)1977 714000 Fax: +44 (0)1977 714001
email: timberprotectionadvice.ukca@lonza.com www.lonzawood.com