

RATING YOUR RIVER'S VEGETATION

RATING	ASSESSMENT	MANAGEMENT
<p>RED</p> 	<p>VEGETATION ON THE BANKS IS MISSING, BANKS ARE BARE, OR TREES ARE FALLING INTO THE CHANNEL. BANKS MAY BE UNSTABLE.</p>	<p>THERE IS A NEED FOR EXTENSIVE GENERAL REPAIR OF THE CHANNEL AND ITS VEGETATION AND TO APPLY THE RIVERCARE PLANNING METHOD WITH FOLLOW UP DESIGN PLANS.</p> <p>STRUCTURAL WORKS MAY BE NECESSARY WHERE ALIGNMENTS ARE SEVERE. THERE ARE VARIOUS OPTIONS HERE AND YOUR DLWC ADVISOR CAN DISCUSS THEM WITH YOU.</p>
<p>YELLOW</p>  	<p>VEGETATION ON THE BANKS IS EITHER SPARSE, OF THE WRONG KIND, OR ONLY SINGLE SPECIES PRESENT. MOSTLY OLDER, LARGER TREES ARE PRESENT, WITH FEW SEEDLINGS OR YOUNG PLANTS. BANKS BECOMING UNSTABLE.</p> <p>VEGETATION GROWTH WITHIN THE BED OF THE STREAM HAS CONSTRICTED THE MAIN CHANNEL EXCESSIVELY. NO VEGETATION IS PRESENT ON THE BANKS TO RESIST ERODIVE FORCES.</p>	<p>UNDERTAKE SUPPLEMENTARY PLANTING WHERE NEEDED. AIM TO INCREASE PLANT DIVERSITY. SPELL AREAS FROM STOCK IF REQUIRED, TO ALLOW NATURAL REGENERATION. PREPARE A RIVERCARE PLAN FOR THE RIVER AND ITS VEGETATION AND IMPLEMENT THAT PLAN.</p> <p>SET AN ALIGNMENT WIDTH BASED ON RIVER PARAMETERS (SEE YOUR DLWC ADVISOR). CUT BACK OBSTRUCTING OR EXOTIC VEGETATION. LEAVE THE ROOT SYSTEM INTACT TO REDUCE THE IMPACT OF THE RIVER ON THE BANK. KEEP INSIDE POINTS AND BARS CLEAR OF OBSTRUCTING VEGETATION WITHIN THE ALIGNMENT WIDTH WHERE NEEDED. PLANT THE ERODED BANK WITH VEGETATION.</p>
<p>GREEN</p> 	<p>VEGETATION ON THE BANKS IS IN GOOD CONDITION WITH A GOOD DIVERSITY OF NATIVE TREE, SHRUB, AND GROUND COVER SPECIES.</p>	<p>PRESERVE THE EXISTING STATE.</p> <p>SPELL THE AREA FROM STOCK IF REQUIRED.</p> <p>KEEP FREE OF NOXIOUS WEEDS AND EXOTIC SPECIES.</p> <p>KEEP UP THE GOOD WORK!</p>



REVEGETATING STREAMS IN THE BRUNSWICK CATCHMENT

A GUIDE TO SPECIES AND PLANTING METHODS



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ISBN 0 7313 0315 6
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SPECIES BY STREAM AND LOCATION

STREAM	TOE	MIDDLE	UPPER
<p>ALL STREAMS</p> <p>* Brunswick River only</p> <p>** Protected sites only</p> <p>*** lower non-tidal reaches of streams only</p> <p>**** poorly drained sites</p>	<p><i>Casuarina cunninghamiana</i>*</p> <p><i>Ficus coronata</i></p> <p><i>Glochidion ferdinandi</i></p> <p><i>Lomandra hystrix</i></p> <p><i>Tristaiopsis laurina</i></p> <p><i>Waterhousea floribunda</i>***</p>	<p><i>Acacia bakeri</i></p> <p><i>Aphananthe philippinensis</i></p> <p><i>Archontophoenix cunninghamiana</i>**</p> <p><i>Arytera distylis</i>**</p> <p><i>Austromyrtus bidwillii</i>**</p> <p><i>Castanospermum australe</i></p> <p><i>Cryptocarya obovata</i></p> <p><i>Diploglottis australis</i></p> <p><i>Elaeocarpus grandis</i></p> <p><i>Endiandra globosa</i></p> <p><i>Glochidion ferdinandi</i></p> <p><i>Glochidion sumatranum</i></p> <p><i>Guioa semiglauc</i></p> <p><i>Heritiera trifoliolata</i></p> <p><i>Livistona australis</i>****</p> <p><i>Lophostemon suaveolens</i>****</p> <p><i>Melaleuca quinquenervia</i>****</p> <p><i>Milletia megasperma</i></p> <p><i>Neolitsea dealbata</i>**</p> <p><i>Sloanea australis</i>**</p> <p><i>Streblus brunonianus</i></p> <p><i>Syzygium francisii</i></p> <p><i>Syzygium moorei</i></p>	<p><i>Acacia melanoxylon</i></p> <p><i>Alphitonia excelsa</i></p> <p><i>Araucaria cunninghamii</i></p> <p><i>Commersonia bartramia</i></p> <p><i>Elaeocarpus grandis</i></p> <p><i>Elaeocarpus obovatus</i></p> <p><i>Ficus spp.</i></p> <p><i>Flindersia schottiana</i></p> <p><i>Glochidion ferdinandi</i></p> <p><i>Guioa semiglauc</i></p> <p><i>Jagera pseudorhus</i></p> <p><i>Lophostemon suaveolens</i></p> <p><i>Macaranga tanarius</i></p> <p><i>Mallotus philippensis</i></p> <p><i>Melia azedarach var. australisica</i></p> <p><i>Pittosporum undulatum</i></p> <p><i>Toona australis</i></p>

NOW GO TO THE SPECIES DESCRIPTIONS TO CHECK COMMON NAMES AND SEE WHICH ARE BEST FOR YOUR SITE

DESCRIPTION OF RIVERBANK PLANTS NATIVE TO THE BRUNSWICK CATCHMENT

HEIGHT - refers to the maximum height in an OPEN situation. Some species may grow taller in protected areas.

FROST RESISTANT - refers to the frost resistance of newly planted seedlings. 1 = none or very little frost resistance; 2 = some resistance (light frosts); 3 = frost resistant
 PROTECTION WHEN YOUNG - 1 = plant requires watering and protective canopy of taller plants; 2 = may require some watering and protection in exposed sites; 3 = requires no protection
 R.F. = abbreviation for rainforest

COMMON / BOTANICAL NAME	BRIEF DESCRIPTION	MAX. HEIGHT	FAST GROWING	PROTECTION WHEN YOUNG	FROST RESISTANT	OTHER USES / COMMENTS	RARE	WILDLIFE
MARBLEWOOD <i>ACACIA BAKERI</i>	MEDIUM TO TALL R.F. WATTLE WITH TWO TO THREE VEINED PHYLLODES AND PALE YELLOW FLOWERS IN SPRING.	15	X	2	1	USED FOR CABINET WORK. THE TALLEST GROWING WATTLE SPECIES IN AUSTRALIA.	X	
BLACKWOOD <i>ACACIA MELANOXYLON</i>	MEDIUM-SIZED BUSHY WATTLE WITH PALE YELLOW FLOWERS. VERY HARDY	10	X	3	3	USEFUL BUFFER TREE FOR PROTECTING STREAMSIDE AND RAINFOREST PLANTINGS.		SEEDS ATTRACT BIRDS
RED ASH <i>ALPHITONIA EXCELSA</i>	A MEDIUM SIZED TREE WITH SOME DROUGHT TOLERANCE. LEAVES HAVE A WHITE UNDERSIDE. HARDY	12	X	3	3	TIMBER SUITABLE FOR BUILDING OR CABINET WORK. STOCK FORAGE TREE. GOOD RAINFOREST REGENERATION TREE.		SEEDS ATTRACT BIRDS
ROUGH-LEAVED ELM <i>APHANANTHE PHILIPPINENSIS</i>	SMALL TO MEDIUM SIZED R.F. TREE WITH STIFF ELM-LIKE LEAVES AND DENSE, DARK CROWN. HARDY	12		2	2	TIMBER HARD AND SUITABLE FOR HANDLES, EDIBLE FRUIT. USEFUL R.F. REGENERATION SPECIES.		FRUIT ATTRACTS BIRDS
HOOP PINE <i>ARAUCARIA CUNNINGHAMII</i>	A TALL, STRAIGHT R.F. TREE WITH SCALY BARK AND DARK GREEN PINE-TYPE LEAVES. THE LARGE CONES ARE PRODUCED IN SUMMER.	30		2	2	USED IN PARK AND HOMESTEAD LANDSCAPING. TIMBER SUITABLE FOR LIGHT CONSTRUCTION AND PLYWOOD.		
BANGALOW PALM <i>ARCHONTOPHOENIX CUNNINGHAMIANA</i>	SINGLE-STEMMED, FEATHER-LEAVED PALM. NEEDS PLENTY OF WATER. BEST FOR WELL-WATERED, PROTECTED SITES.	8	X	1	1	COMMONLY USED IN LANDSCAPING IN YARDS AND AROUND COMMERCIAL CENTRES. BEST FOR PROTECTED SITES.		FRUIT ATTRACTS BIRDS
TWIN-LEAVED COOGARA <i>ARYTERA DISTYLIS</i>	SHRUB OR SMALL R.F. TREE. LEAFLETS ARE PRODUCED IN PAIRS. THE YELLOW FRUITS ARE PRODUCED IN SPRING/SUMMER.	8		1	1	RAINFOREST UNDERSTOREY SPECIES		FRUIT ATTRACTS BIRDS
PYTHON TREE <i>AUSTROMYRTUS BIDWILLII</i>	SHRUB OR SMALL R.F. TREE WITH DARK, DENSE, SHINY FOLIAGE. THE BARK IS BLOTCHED GREEN/ORANGE/BROWN AND CONSPICUOUS.	8		1	1	RAINFOREST UNDERSTOREY SPECIES. USED IN LANDSCAPING FOR THE ATTRACTIVE BARK.		FRUIT ATTRACTS BIRDS
BLACK BEAN <i>CASTANOSPERMUM AUSTRALE</i>	A DENSE-CROWNED R.F. TREE WITH DARK GREEN LEAVES. PRODUCES ORANGE/RED FLOWERS ON BRANCHES FOLLOWED BY LARGE PODS.	18		2	2	GOOD DECORATIVE TIMBER SPECIES USED FOR TURNERY AND CABINET WORK.		ATTRACTS HONEYEATING BIRDS
RIVER OAK <i>CASUARINA CUNNINGHAMIANA</i>	TALL, PINE-LIKE SPECIES. VERY COMMON ON THE NORTH COAST. HARDY. NEEDS MANAGEMENT AS MAY CONTRIBUTE TO EROSION.	20	X	3	3	FIXES NITROGEN. GOOD CANOPY COVER SPECIES FOR R.F. REGENERATION. DIRECT SEEDING. USED FOR DROUGHT FODDER		LARGER, OLDER TREES USED AS ROOSTING SITES.
BROWN KURRAJONG <i>COMMERSONIA BARTRAMIA</i>	SMALL TREE. WITH LARGE, TOOTHED, RUSTY HAIRIED LEAVES AND ATTRACTIVE SPRAYS OF SMALL WHITE FLOWERS IN SUMMER.	15	X	3	2	VERY HARDY REGENERATION SPECIES FOR RAINFORESTS		
PEPPERBERRY TREE <i>CRYPTOCARYA OBOVATA</i>	MEDIUM TO TALL DENSLEY-CROWNED R.F. TREE WITH HAIRY NEW GROWTH AND DARK LEAVES.	18		1	1	GOOD SHADE TREE.		FRUIT ATTRACTS BIRDS
NATIVE TAMARIND <i>DIPLOGLOTTIS AUSTRALIS</i>	ATTRACTIVE TALL R.F. TREE WITH VERY LARGE COMPOUND LEAVES AND RUSTY HAIRY NEW GROWTH.	15		1	1	ATTRACTIVE TREE USED FOR LANDSCAPING. EDIBLE FRUIT. BEST PLANTED IN PROTECTED SITES.		FRUIT ATTRACTS BIRDS
BLUE QUANDONG <i>ELAEOCARPUS GRANDIS</i>	TALL, BUTTRESSING R.F. TREE WITH SPARSE CANOPY AND LARGE BLUE FRUITS IN SPRING/SUMMER.	30	X	2	1	VALUABLE TIMBER TREE FOR INTERIOR WORK. SHADE TREE. EDIBLE FRUIT.		FRUIT ATTRACTS BIRDS
HARD QUANDONG <i>ELAEOCARPUS OBOVATUS</i>	TALL R.F. TREE TOLERANT OF WET SOILS. HARDY. PRODUCES MASSES OF SMALL BLUE FRUITS.	15		2	2	USEFUL TIMBER TREE FOR INTERIOR WORK. SHADE TREE		FRUIT ATTRACTS BIRDS
BLACK WALNUT <i>ENDIANDRA GLOBOSA</i>	SMALL, BUSHY, DENSE FOLIAGED TREE WITH GLOSSY LEAVES. THE LARGE BLACK FRUITS (4CM ACROSS) ARE PRODUCED IN AUTUMN	12		1	1	A USEFUL, ORNAMENTAL SHADE TREE WHEN GROWN IN THE OPEN.	X	
CREEK SANDPIPER FIG <i>FICUS CORONATA</i>	SMALL BUSHY TREE WITH SANDPAPER LEAVES AND HAIRY FRUITS PRODUCED ON THE TRUNK AND BRANCHES. HARDY	6		2	2	EXCELLENT RIPARIAN SPECIES WITH EDIBLE FRUIT.		FRUIT ATTRACTS BIRDS
OTHER FIGS <i>FICUS SPP.</i>	LARGE TREES WITH BUTTRESS ROOTS AND SPREADING CANOPY.	20		1	1	EXCELLENT SHADE TREE. EDIBLE FRUIT.		FRUIT ATTRACTS BIRDS.
CUDGERIE <i>FLINDERSIA SCHOTTIANA</i>	TALL TREE WITH OPEN CANOPY. VERY HARDY	20	X	2	2	VERY FAST GROWING TREE WHICH IS IDEAL FOR RAINFOREST REGENERATION. USEFUL TIMBER FOR INDOOR WORK		
CHEESE TREE <i>GLOCHIDION FERDINANDI</i>	SMALL TO MEDIUM R.F. TREE WITH SPREADING CANOPY AND ATTRACTIVE FOLIAGE. FRUIT LOOKS LIKE SMALL CHEESES. HARDY	10		2	2	EXCELLENT RIPARIAN REGENERATION SPECIES AND SMALL SHADE TREE.		FRUIT ATTRACTS BIRDS

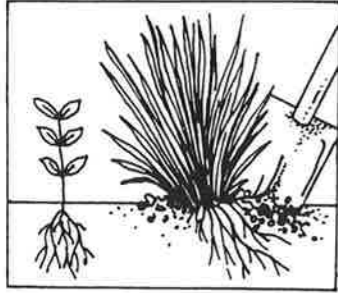
COMMON / BOTANICAL NAME	BRIEF DESCRIPTION	MAX HEIGHT	FAST GROWING	PROTECTION WHEN YOUNG	FROST RESISTANT	OTHER USES / COMMENTS	RARE	WILDLIFE
UMBRELLA CHEESE TREE <i>GLOCHIDION SUMATRANUM</i>	R.F. TREE WITH SPREADING CANOPY AND FOLIAGE SOMEWHAT LIKE AN UMBRELLA TREE. FRUIT LOOKS LIKE SMALL CHEESES. HARDY	10	X	2	2	EXCELLENT RIPARIAN REGENERATION SPECIES AND SMALL SHADE TREE.		FRUIT ATTRACTS BIRDS
GUIOA <i>GUIOA SEMIGLAUCA</i>	SMALL R.F. TREE. LEAVES WITH SILVERY UNDERSIDE. HARDY	10		2	2	ATTRACTIVE TREE FOR LANDSCAPING. USEFUL FOR RAINFOREST REGENERATION.		FRUIT ATTRACTS BIRDS
WHITE BOOYONG <i>HERITIERA TRIFOLIOLATA</i>	MEDIUM TO TALL RAINFOREST TREE WITH LEAFLETS ARRANGED IN THREES AND A BRONZE UNDERSURFACE. WINGED FRUIT ARE PRODUCED IN AUTUMN	30		1	1	ORNAMENTAL TIMBER IS USED FOR BUILDING AND CABINET WORK.		
FOAMBARK <i>JAGERA PSEUDORHUS</i>	SMALL R.F. TREE WITH ATTRACTIVE FERNY FOLIAGE AND HAIRY YELLOW-BROWN FRUITS. HARDY.	12		2	2	VERY ATTRACTIVE TREE FOR LANDSCAPING. USEFUL FOR RAINFOREST REGENERATION.		FRUIT ATTRACTS BIRDS
CABBAGE-TREE PALM <i>LIVISTONA AUSTRALIS</i>	A LARGE, STRAIGHT-TRUNKED, FAN-LEAVED PALM.	15		2	2	USED IN LANDSCAPING. SUITABLE FOR POORLY-DRAINED SITES.		
SPINY MAT-RUSH <i>LOMANDRA HYSTRIX</i>	SMALL, TUSsockY RUSH FORMING THICK CLUMPS. HARDY	1		3	3	GOOD FOR EROSION CONTROL IF PLANTED IN SUFFICIENT DENSITY. LARGE SPREADING ROOT SYSTEM		GOOD STREAM EDGE HABITAT SPECIES.
SWAMP TURPENTINE <i>LOPHOSTEMON SUAVEOLENS</i>	MEDIUM TREE WITH LARGE LEAVES AND FIBROUS, FURROWED PERSISTANT BARK. HARDY	15	X	2	2	TIMBER SUITABLE FOR PILES AND MARINE STRUCTURES. GROWS IN POORLY DRAINED SOILS.		USEFUL HABITAT TREE WHEN LARGE.
HEART LEAF <i>MACARANGA TANARIUS</i>	SMALL BUSHY, DENSE-CROWNED R.F. TREE WITH LARGE ROUNDED LEAVES WITH PINKISH VEINS. COMMON IN REGROWTH AREAS.	6	X	2	1	VERY FAST GROWING RAINFOREST REGENERATION PLANT.		
RED KAMALA <i>MALLOTUS PHILIPPENSIS</i>	SMALL BUSHY, DENSE-CROWNED R.F. TREE PRODUCING HARD RED CAPSULES IN SPRING/SUMMER. VERY HARDY	8		2	2	USEFUL RAINFOREST REGENERATION PLANT. FRUIT CAN BE USED FOR DYE. WOOD SUITABLE FOR TOOL HANDLES		
BROAD-LEAVED PAPERBARK <i>MELALEUCA QUINQUENERVIA</i>	MEDIUM SIZED TREE WITH FIVE-VEINED LEAVES AND WHITISH PAPERY BARK. CREAM BRUSH FLOWERS IN SUMMER/AUTUMN.	10	X	3	3	USEFUL SCREEN AND WINDBREAK SPECIES FOR POORLY DRAINED SITES.		FLOWERS ATTRACT HONEY EATING BIRDS
WHITE CEDAR <i>MELIA AZEDARACH</i> VAR. <i>AUSTRALASICA</i>	VERY HARDY DECIDUOUS TREE PRODUCING YELLOW FRUITS IN AUTUMN/WINTER. DROUGHT TOLERANT.	15	X	3	3	TIMBER USED FOR CABINET AND DECORATIVE WORK		FRUIT ATTRACTS BIRDS
NATIVE WYSTERIA <i>MILLETIA MEGASPERMA</i>	LARGE VINE SPECIES PRODUCING LARGE PODS SIMILAR TO BLACK BEAN TREE.	VINE		1	1	RIparIAN VINE SPECIES.		
WHITE BOLLY GUM <i>NEOLITSEA DEALBATA</i>	SMALL BUSHY TREE WITH LARGE DROOPING LEAVES WHICH ARE VIVID WHITE UNDERNEATH.	10		1	1	LANDSCAPING PLANT AND UNDERSTOREY TREE FOR PROTECTED SITES.		FRUIT ATTRACTS BIRDS
NATIVE DAPHNE <i>PITTOSPORUM UNDULATUM</i>	SMALL BUSHY TREE WITH FRAGRANT FLOWERS IN SPRING. HARDY	8	X	3	3	LANDSCAPING PLANT, LOW WINDBREAK TREE. GOOD FOR R.F. REGENERATION.		FRUIT ATTRACTS BIRDS
MAIDEN'S BLUSH <i>SLOANEA AUSTRALIS</i>	MEDIUM R.F. TREE WITH LARGE GLOSSY TOOTHED LEAVES. LIKES PLENTY OF WATER.	15		1	1	USEFUL TIMBER TREE FOR INTERIOR WORK. NEEDS A WELL-WATERED PROTECTED SITE.		FRUIT ATTRACTS BIRDS
WHALEBONE TREE <i>STREBLUS BRUNONIANUS</i>	SMALL TO MEDIUM R.F. TREE WITH GLOSSY, TOOTHED LEAVES, WIRY BRANCHES AND SMALL GREEN FRUITS IN SUMMER/AUTUMN. SLOW GROWING.	8		2	2	HARDY RAINFOREST UNDERSTOREY TREE. HAS A DENSE, COMPACT FORM WHEN PLANTED IN THE OPEN.		FRUIT ATTRACTS BIRDS
GIANT WATER GUM <i>SYZYGium FRANCISII</i>	MEDIUM, DENSE CROWNED R.F. TREE WITH DARK GREEN LEAVES, PALE BROWN BARK WITH DARK BROWN BLOTCHES, AND PURPLE FRUITS IN SUMMER/AUTUMN.	15		1	1	GOOD SHADE TREE, WITH LARGE SPREADING CROWN. TIMBER SUITABLE FOR BUILDING AND FLOORING.		
COOLAMON <i>SYZYGium MOOREI</i>	MEDIUM, DENSE CROWNED R.F. TREE WITH LARGE LEAVES. PINK FLOWERS ARE PRODUCED ALONG THE BRANCHES AND FOLLOWED BY LARGE WHITE FRUITS IN AUTUMN.	15		1	1	EDIBLE FRUIT. A VERY DECORATIVE TREE SOMETIMES RETAINED ON FARMS FOR SHADE, AND USED IN LANDSCAPING.	X	
RED CEDAR <i>TOONA AUSTRALIS</i>	LARGE R.F. TREE WITH LARGE, COMPOUND LEAVES AND SPREADING CANOPY. SEMI-DECIDUOUS. HARDY.	20	X	2	2	GOOD SHADE TREE. VALUABLE TIMBER TREE. SUBJECT TO ATTACK BY TIP MOTH		
WATER GUM <i>TRISTANOPSIS LAURINA</i>	MEDIUM SIZED TREE, WITH LIGHT FLAKY BARK AND YELLOW FLOWERS PRODUCED IN SUMMER. HARDY	10	X	2	2	USEFUL EROSION CONTROL SPECIES AND SOME VALUE FOR CABINET WORK. USEFUL NECTAR AND POLLEN SPECIES. USED FOR DIRECT SEEDING.		ROOTS PROVIDE HABITAT FOR STREAM DWELLING ANIMALS.
WEEPING MYRTLE <i>WATERHOUSEA FLORIBUNDA</i>	MEDIUM TO LARGE TREE. DENSELY CROWNED WITH WEEPING FOLIAGE AND ROUND GREEN FRUIT IN SUMMER/AUTUMN. HARDY	15	X	2	2	EXCELLENT EROSION CONTROL SPECIES WITH EXTENSIVE MAT LIKE ROOT SYSTEM		ROOTS PROVIDE HABITAT FOR STREAM DWELLING ANIMALS.

HOW DO I PLANT MY SELECTED SPECIES ?

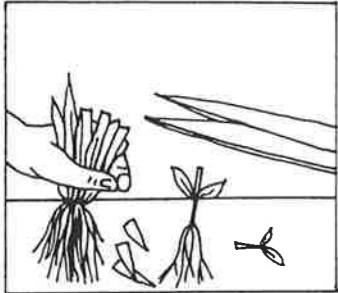
1) DIVISION OR DIRECT TRANSPLANT

Mature clumps of Lomandra or River Grass can be dug up, divided and directly transplanted to moist soil or gravel. Seedlings of Bottlebrush or Tea-tree can also be directly transplanted from site to site.

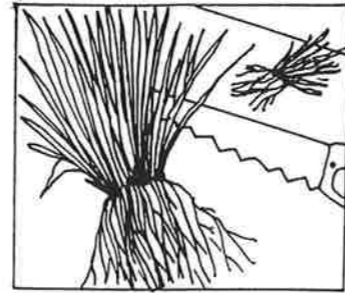
MOST SUITABLE FOR: TOE.



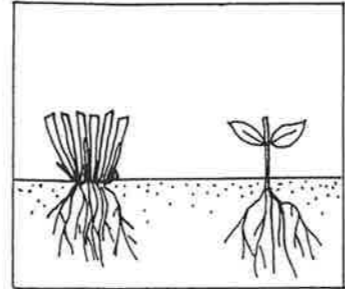
1 Dig up clump or seedling.



3 Cut off tops of leaves or stem to reduce transplant shock.



2 Divide clump with saw, mattock or tomahawk.

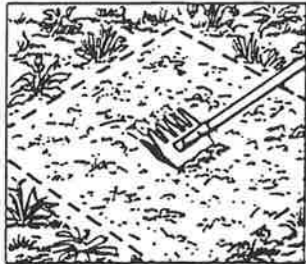


4 Plant in moist soil or gravel.

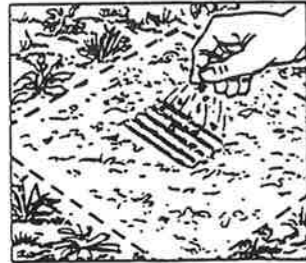
2) DIRECT SEEDING

The seed of some species (Eg. Bottlebrush, Tea-tree, Lomandra, and Water Gum) can be directly sown on site. Seed must be sown in moist, weed-free sand or gravel. The gravel is levelled no higher than 100mm above water level against the bank toe. Using this method we are reproducing the natural conditions which allow plants such as River Oaks, Tea-tree, and Bottlebrush to densely colonise gravel bars. The aim is to achieve dense colonisation, so sowing rates of up to 0.5 grams per square metre of gravel can be used.

MOST SUITABLE FOR: TOE (gravel needs to be moist).



1 Scrape the surface to remove any weeds or weed seed.



3 Mix the seed with moist sand and broadcast over the surface.



2 Rake to prepare the seed bed, and bring fines to the surface.



4 Tamp the surface for fine seed, rake then tamp for coarse seed.

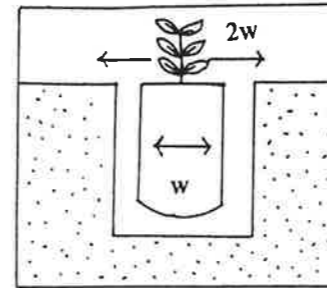
3) TRUNCHEON CUTTINGS

Branches or cuttings up to 3 metres long can be taken from mature trees and planted directly on-site. Half the stem is buried into moist gravel using a crow-bar or water jet. At present this method is mainly used for non-natives such as willows and poplars. See your DLWC adviser before using these species as they may cause problems in your stream.

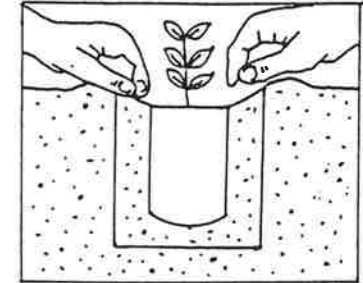
MOST SUITABLE FOR: TOE

4) STANDARD TUBESTOCK

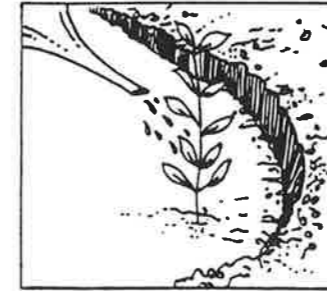
1 Plant when soil is moist and there is no danger of frost.



2 Dig hole twice the width of the pot.



3 **IMPORTANT** After planting, firm the soil to remove air pockets. If planting in coarser materials, place some fine soil in the planting hole.



4 Water in. A slight depression left around the plant will allow water to get where it is needed.

5 Give follow-up water and weed control where needed. (Weeds slow growth by taking water and nutrients).

6 Check trees regularly for damage by animals. Stake and guard where needed.

7 Mulching helps conserve water.

MOST SUITABLE FOR: TOE (0.5 to 1 metre spacings)

MIDDLE BANK (2 metre spacings)

UPPER BANK (2 metres or wider).

5) BROADACRE PLANTINGS

Involves the use of specialised equipment and tubestock for mass plantings on a large scale. See your DLWC adviser for detailed information.

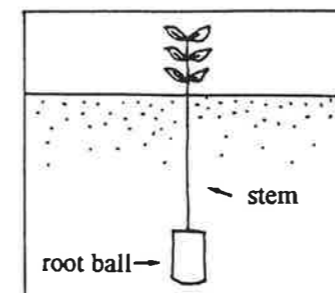
MOST SUITABLE FOR: UPPER BANK/FLOODPLAIN (flat to undulating land).

6) OTHER SPECIALISED METHODS

The use of specialised long-stem tubestock is currently being trialed. This method was developed by Wollombi Landcare Group. It involves the growth of seedlings in standard forestry tubes in a nutrient solution, and encouragement of stem elongation. Trees are planted using a water lancing jet to a depth of one metre or more. Root growth is achieved much more rapidly. Species tolerant of sediment build-up around the stem are used.

MOST SUITABLE FOR: TOE

MIDDLE BANK



Long-stemmed tube planted in sand. Root growth occurs from the nodes located along the stem.