



REVEGETATING STREAMS IN THE HASTINGS CATCHMENT

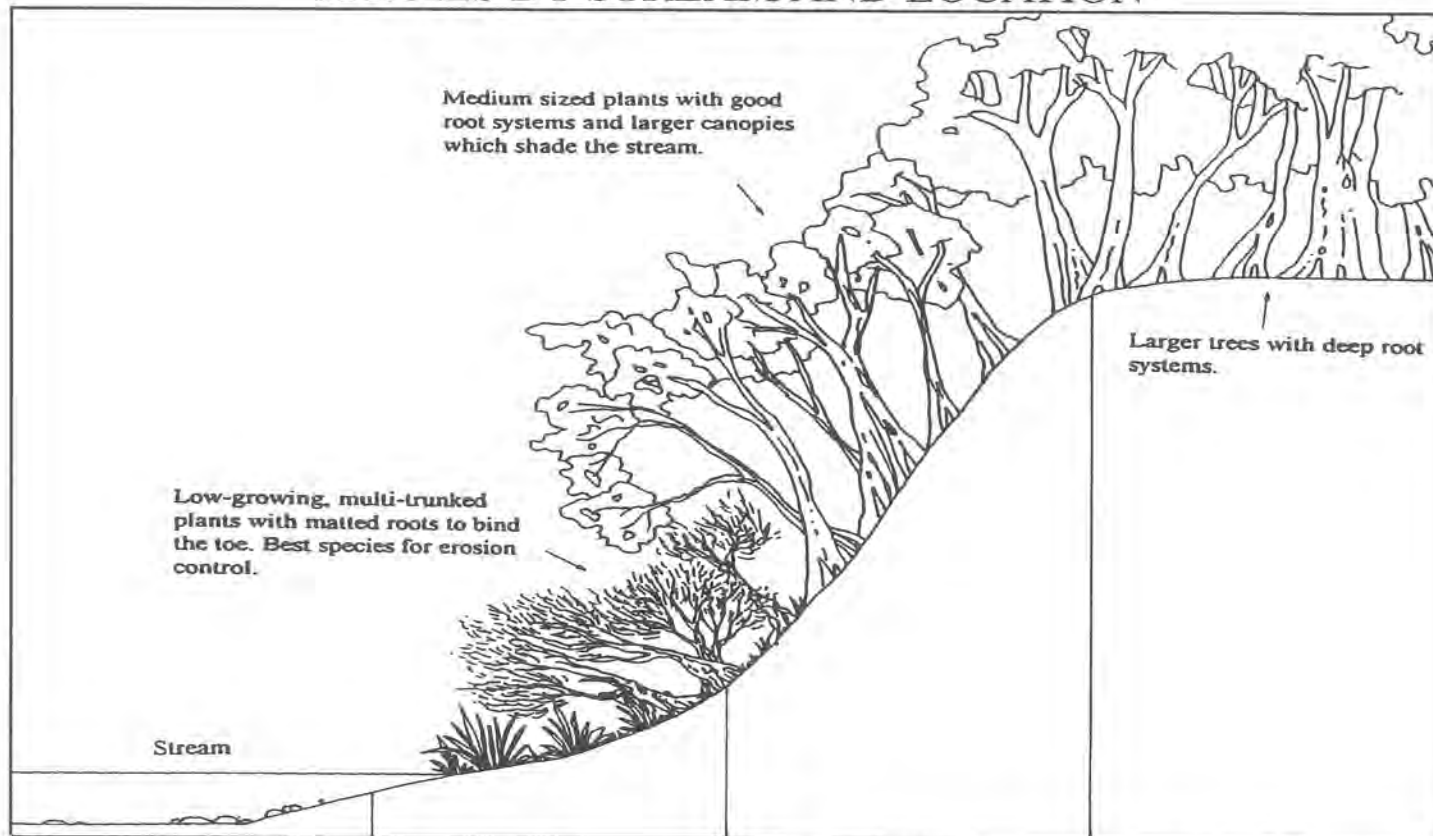
A GUIDE TO SPECIES AND PLANTING METHODS



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SPECIES BY STREAM AND LOCATION



STREAM	TOE	MIDDLE	UPPER
<p>Sewarts River, Camden Haven River, lower Herons Creek, lower Pappinbarra River, lower Mortons Creek, Wilson River, Pipers Creek, Smiths Creek, Cooperabung Creek, and lower Hastings River (downstream of Bagnoo)</p> <p>* denotes not present in the Stewarts & Camden Haven Rivers</p> <p>** denotes species for drier steep banks along Herons & Upsalls Creeks</p> <p>*** denotes found on Upsalls Creek only</p> <p>**** absent from Wilson River and tributaries</p>	<p><i>Callistemon viminalis</i>*** <i>Leptospermum brachyandrum</i>* <i>Lomandra hystrix</i> <i>Lomandra longifolia</i> <i>Potamophila parviflora</i>* <i>Tristaniopsis laurina</i> <i>Waterhousea floribunda</i></p>	<p><i>Acmena smithii</i> <i>Acacia melanoxylon</i> <i>Acacia floribunda</i> <i>Alectryon subcinereus</i> <i>Alphitonia excelsa</i> <i>Aphananthe philippinensis</i> <i>Backhousia myrtifolia</i> <i>Archontophoenix cunninghamiana</i> <i>Callicoma serratifolia</i> <i>Casuarina cunninghamiana</i>* <i>Cordyline stricta</i> <i>Cryptocarya glaucescens</i> <i>Cryptocarya meisneriana</i> <i>Cryptocarya microneura</i> <i>Cryptocarya obovata</i> <i>Daphnandra micrantha</i> <i>Diploglottis australis</i> <i>Ehretia acuminata</i> <i>Elaeocarpus obovatus</i> <i>Endiandra discolor</i> <i>Ficus coronata</i> <i>Guioa semiglauca</i> <i>Glochidion ferdinandi</i> <i>Jagera pseudorhus</i> <i>Mallotus philippensis</i> <i>Neolitsea dealbata</i> <i>Rhodomyrtus psidioides</i> <i>Syzygium australe</i> <i>Tristaniopsis laurina</i> <i>Waterhousea floribunda</i>****</p>	<p><i>Acacia irrorata</i> <i>Acacia melanoxylon</i> <i>Allocasuarina torulosa</i>** <i>Alphitonia excelsa</i> <i>Callistemon salignus</i> <i>Commersonia fraseri</i> <i>Cryptocarya rigida</i> <i>Eucalyptus grandis</i> <i>Eucalyptus microcorys</i>** <i>Eucalyptus pilularis</i>** <i>Lophostemon confertus</i>** <i>Melia azedarach var. australasica</i> <i>Syncarpia glomulifera</i>** <i>Toona australis</i></p>
<p>Hastings River & tributaries upstream of Bagnoo (including Forbes River, upper Pappinbarra River, lower Thone River, lower Ellenborough River)</p>	<p><i>Callistemon sieberi</i> <i>Leptospermum brachyandrum</i> <i>Lomandra hystrix</i> <i>Lomandra longifolia</i> <i>Potamophila parviflora</i> <i>Tristaniopsis laurina</i></p>	<p><i>Acacia melanoxylon</i> <i>Acmena smithii</i> <i>Alectryon subcinereus</i> <i>Alphitonia excelsa</i> <i>Aphananthe philippinensis</i> <i>Backhousia myrtifolia</i></p>	<p><i>Acacia floribunda</i> <i>Acacia irrorata</i> <i>Acacia melanoxylon</i> <i>Allocasuarina torulosa</i> <i>Alphitonia excelsa</i> <i>Angophora subvelutina</i></p>

STREAM	TOE	MIDDLE	UPPER
Hastings River & tributaries upstream of Bagnoo (cont.) * best planted in protected sites		<i>Casuarina cunninghamiana</i> <i>Cordyline stricta*</i> <i>Cryptocarya meisneriana*</i> <i>Cryptocarya microneura*</i> <i>Cryptocarya obovata</i> <i>Ehretia acuminata</i> <i>Elaeocarpus obovatus</i> <i>Ficus coronata</i> <i>Glochidion ferdinandi</i> <i>Guioa semiglauca</i> <i>Hymenoporum flavum</i> <i>Mallotus philippensis</i> <i>Melicope micrococca*</i> <i>Pittosporum undulatum</i> <i>Rhodomyrtus psidioides</i> <i>Streblus brunonianus</i> <i>Syzygium australe</i> <i>Tristaniopsis laurina</i>	<i>Callistemon salignus</i> <i>Eucalyptus amplifolia</i> <i>Eucalyptus intermedia</i> <i>Eucalyptus saligna</i> <i>Eucalyptus tereticornis</i> <i>Melia azedarach var. australasica</i>
Comboyne Plateau & upper Ellenborough River * best planted in protected sites	<i>Callistemon sieberi</i> <i>Carex gaudichaudiana</i> <i>Lomandra hystrix</i> <i>Lomandra longifolia</i> <i>Tristaniopsis laurina</i>	<i>Acacia melanoxylon</i> <i>Acmena smithii</i> <i>Acradenia euodiformis*</i> <i>Alectryon subcinereus</i> <i>Alphitonia excelsa</i> <i>Backhousia myrtifolia</i> <i>Brachychiton acerifolius</i> <i>Callicoma serratifolia*</i> <i>Ceratopetalum apetalum*</i> <i>Cryptocarya glaucescens*</i> <i>Cryptocarya erythroxyton*</i> <i>Cryptocarya meisneriana*</i> <i>Daphnandra micrantha*</i> <i>Doryphora sassafras*</i> <i>Dysoxylum fraserianum*</i> <i>Ehretia acuminata</i> <i>Elaeocarpus obovatus</i> <i>Endiandra muelleri*</i> <i>Ficus coronata</i> <i>Glochidion ferdinandi</i> <i>Guioa semiglauca</i> <i>Heritiera actinophylla*</i> <i>Hymenoporum flavum</i> <i>Mallotus philippensis</i> <i>Neolitsea dealbata*</i> <i>Pittosporum undulatum</i> <i>Sloanea woollsii*</i> <i>Syzygium australe</i> <i>Toona australis</i> <i>Tristaniopsis collina</i> <i>Tristaniopsis laurina</i>	<i>Acacia floribunda</i> <i>Acacia irrorata</i> <i>Acacia melanoxylon</i> <i>Banksia integrifolia</i> <i>Callistemon salignus</i> <i>Ehretia acuminata</i> <i>Eucalyptus amplifolia</i> <i>Eucalyptus grandis</i> <i>Eucalyptus saligna</i> <i>Eucalyptus tereticornis</i> <i>Hakea salicifolia</i> <i>Lomatia arborescens</i> <i>Mallotus philippensis</i> <i>Melia azedarach var. australasica</i>

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 HASTINGS 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
WHITE SALLOW WATTLE <i>ACACIA FLORIBUNDA</i>	SMALL TO MEDIUM, BUSHY WATTLE WITH WEeping HABIT AND PALE YELLOW FLOWERS. HARDY.	6	X	3	3	USEFUL WINDBREAK SPECIES OR SCREEN PLANT.		ATTRACTS INSECT EATING BIRDS
GREEN WATTLE <i>ACACIA IRROBATA</i>	SMALL, FERN-LEAVED WATTLE WITH PALE YELLOW FLOWERS. VERY HARDY.	6	X	3	3	GOOD CANOPY SPECIES FOR PROTECTING R.F. PLANTINGS		ATTRACTS INSECT EATING BIRDS
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
LILLY PILLY <i>ACMENA SMITHII</i>	MEDIUM-SIZED R.F. TREE WITH A DENSE HABIT AND PINK TO PURPLE FRUIT	10		2	2	SOME FORMS MAKE USEFUL WINDBREAKS IF GIVEN SUFFICIENT WATER		FRUIT ATTRACTS BIRDS
BONEWOOD <i>ACRADENIA EUODIIFORMIS</i>	MEDIUM-SIZED R.F. TREE WITH DARK GREEN LEAFLETS IN THREES. WRINKLED, HAIRY. YELLOWISH BROWN FRUITS PRODUCED IN SUMMER.	10		1	1	RAINFOREST UNDERSTOREY PLANT FOR WELL-WATERED PROTECTED SITES. TIMBER CAN BE USED FOR TURNERY.		FRUIT ATTRACTS BIRDS
WILD QUINCE <i>ALECTRYON SUBCINEREUS</i>	MEDIUM-SIZED R.F. TREE WITH A DENSE CROWN. OFTEN BUSHY TO THE GROUND	8		2	2	USEFUL R.F. REGENERATION SPECIES. TIMBER SUITABLE FOR SMALL TURNERY.		SEEDS ATTRACT BLACK COCKATOOS
FOREST OAK <i>ALLOCASUARINA TORULOSA</i>	A MEDIUM SIZED TREE WITH DROUGHT TOLERANCE. TREES ARE PINE-LIKE AND PRODUCE HARD, WOODY NUTS. HARDY	10		3	3	TIMBER SUITABLE FOR DECORATIVE TURNERY. STOCK FORAGE TREE.		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
BROAD-LEAVED APPLE <i>ANGOPHORA SUBVELUTINA</i>	A MEDIUM TO TALL, ROUGH-BARKED TREE WITH BROAD LEAVES AND CHARACTERISTIC GNARLED, OR TWISTED, GROWTH. HARDY.	18		3	3	OFTEN RETAINED ON FARMS AS A SHADE TREE. IT IS A USEFUL, POLLEN TREE FOR BEES.		PROVIDES NESTING SITES FOR BIRDS
ROUGH-LEAVED ELM <i>APHAMANTHE 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
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
GREY MYRTLE <i>BACKHOUSIA MYRTIFOLIA</i>	SLOW GROWING BUSHY R.F. TREE WITH SOME DROUGHT TOLERANCE. USUALLY FOUND ON STEEP ROCKY BANKS. HARDY.	8		2	2	SCREEN PLANT. WOOD HARD AND TOUGH AND SUITABLE FOR HANDLES THE MOUNTAIN AND COASTAL FORM OF THIS COMMON BANKSIA ARE USED FOR LANDSCAPING AND SCREEN PLANTINGS. ONLY USE THE MOUNTAIN FORM FOR TABLELAND PLANTINGS.		GOOD HOST FOR ORCHIDS AND FERNS
MOUNTAIN BANKSIA <i>BANKSIA INTEGRIFOLIA</i>	SMALL TREE WITH OLIVE-GREEN LEAVES WITH A BRIGHT WHITE UNDERSURFACE. PALE YELLOW FLOWERS IN AUTUMN. HARDY	10	X	3	3	ORNAMENTAL TREE. USED EXTENSIVELY IN URBAN AREAS FOR ITS BRILLIANT RED FLOWERS		ATTRACTS HONEYEATERS
FLAME TREE <i>BRACHYCHITON ACERIFOLIUS</i>	MEDIUM SIZED, DECIDUOUS R.F. TREE WITH LARGE 3-LOBED LEAVES. PRODUCES MASSES OF BRIGHT RED FLOWERS IN SPRING/SUMMER.	15		1	2	USEFUL UNDERSTOREY SPECIES IN PROTECTED, SHADY AREAS.		FLOWERS ATTRACT HONEYEATERS
CALLICOMA <i>CALLICOMA SERRATIFOLIA</i>	SHRUB OR SMALL R.F. TREE WITH DISTINCT TOTTERED LEAVES AND WHITE UNDERSIDE. USUALLY ON SHADED ROCKY BANKS. NEEDS WATER TO ESTABLISH	8		1	1	GOOD WINDBREAK SPECIES. GROWS IN A WIDE RANGE OF SOILS INCLUDING POORLY DRAINED SITES.		
WILLOW BOTTLEBRUSH <i>CALLISTEMON SALIGNUS</i>	SMALL TREE WITH PAPERY BARK. PINK NEW GROWTH AND WHITE BOTTLEBRUSH FLOWERS. VERY HARDY.	6	X	3	3			

COMMON / BOTANICAL NAME	BRIEF DESCRIPTION	MAX. HEIGHT	FAST GROWING	PROTECTION WHEN YOUNG	FROST RESISTANT	OTHER USES / COMMENTS	RARE	WILDLIFE
RIVER BOTTLEBRUSH <i>CALLISTEMON SIEBERI</i>	MULTI-STEMMED SHRUB WITH HARD FURROWED BARK AND PALE PINK OR CREAM BOTTLEBRUSH FLOWERS. VERY HARDY.	3		3	3	EXCELLENT EROSION CONTROL SPECIES IN ROCKY, HIGH ELEVATION AREAS. USED FOR DIRECT SEEDING.		FLOWERS ATTRACT HONEYEATERS
WEeping BOTTLEBRUSH <i>CALLISTEMON VIMINALIS</i>	MULTI-STEMMED TREE WITH HARD FURROWED BARK AND RED BOTTLEBRUSH FLOWERS. VERY HARDY.	5	X	3	2	EXCELLENT EROSION CONTROL SPECIES. USED FOR DIRECT SEEDING.		FLOWERS ATTRACT HONEYEATERS
TUFTED SEDGE <i>CAREX GAUDICHAUDIANA</i>	SMALL, TUSSOCKY SEDGE WITH SHARP-EDGED, DARK GREEN LEAVES AND DARK BROWN FLOWER SPIKES.	1		3	3	EXCELLENT EROSION CONTROL SPECIES WHICH CAN BE EASILY GROWN BY DIVISION OF MATURE PLANTS		INSTREAM HABITAT
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 FOODER		LARGER, OLDER TREES USED AS ROOSTING SITES.
COACHWOOD <i>CERATOPetalum APETALUM</i>	MEDIUM SIZED R.F. TREE WITH TOOTHED LEAVES AND ATTRACTIVE PALE TRUNK WITH PROMINENT RINGS.	12		1	2	CABINET TIMBER SPECIES.		
BRUSH KURRAJONG <i>COMMersonia FRASERI</i>	SMALL TREE, WITH TOOTHED LEAVES, OFTEN FORMING THICKETS WITH ATTRACTIVE SPRAYS OF SMALL WHITE FLOWERS IN SPRING.	6	X	3	3	VERY HARDY REGENERATION SPECIES FOR RAINFORESTS		
SLENDER PALM-LILLY <i>CORDYLInE STRICTA</i>	SLENDER SHRUB, OFTEN FORMING CLUMPS, WITH LONG, NARROW LEAVES.	2		1	1	LANDSCAPING, UNDERSTOREY PLANT IN SHADED AREAS.		FRUIT ATTRACTS BIRDS
PIGEONBERRY ASH <i>CRYPTOCARYA ERITHROXYLON</i>	A MEDIUM TO TALL R.F. TREE WITH DARK GREEN LEAVES WITH A WHITISH UNDERSURFACE. BLACK FRUITS IN AUTUMN TO WINTER	15		1	2	TIMBER SUITABLE FOR INDOOR WORK SUCH AS FLOORING AND FURNITURE. BEST PLANTED IN PROTECTED SITES.		FRUIT ATTRACTS BIRDS
JACKWOOD <i>CRYPTOCARYA GLAUCEscENS</i>	A MEDIUM SIZED, DENSE-CROWNED R.F. SPECIES PRODUCING WRINKLED BLACK FRUIT IN AUTUMN.	10		1	2	CABINET TIMBER SPECIES. BEST PLANTED IN PROTECTED SITES.		FRUIT ATTRACTS BIRDS
THICK-LEAVED LAUREL <i>CRYPTOCARYA MEISSNERIANA</i>	A SMALL R.F. SPECIES WITH DARK GLOSSY LEAVES, PRODUCING SMOOTH BLACK FRUIT IN AUTUMN.	5		1	2	UNDERSTOREY SPECIES		FRUIT ATTRACTS BIRDS
MURROGUN <i>CRYPTOCARYA MICRONEURA</i>	A MEDIUM SIZED R.F. SPECIES PRODUCING SHINY BLACK FRUIT IN SUMMER/AUTUMN.	10		1	2	REASONABLY HARDY SPECIES FOR R.F. PLANTINGS.		FRUIT ATTRACTS BIRDS
PEPPERBERRY TREE <i>CRYPTOCARYA OBOVATA</i>	MEDIUM TO TALL DENSELY-CROWNED R.F. TREE WITH HAIRY NEW GROWTH AND DARK LEAVES.	18		1	1	GOOD SHADE TREE.		FRUIT ATTRACTS BIRDS
ROSE MAPLE <i>CRYPTOCARYA RIGIDA</i>	SMALL DENSE R.F. TREE WITH DARK LEAVES WITH A WHITISH UNDERSURFACE PRODUCING BLACK FRUITS IN SUMMER/AUTUMN.	6		2	1	GOOD UNDERSTOREY SPECIES FOR RAINFOREST PLANTINGS OR MOIST EUCALYPT FOREST.		FRUIT ATTRACTS BIRDS
SOCKETWOOD <i>DAPHNANDRA MICRANTHA</i>	MEDIUM-SIZED, STRAIGHT-STEMMED R.F. TREE WITH COMPACT, DENSE CANOPY AND HORIZONTAL BRANCHES.	12		1	1	SOMETIMES USED FOR ORNAMENTAL R.F. PLANTINGS. BEST PLANTED IN PROTECTED SITES.		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
SASSAFRAS <i>DORYPHORA SASSAFRAS</i>	MEDIUM TO TALL R.F. TREE WITH DARK GREEN LEAVES AND A DENSE COMPACT CANOPY. LEAVES HAVE A SASSAFRAS ODOUR WHEN CRUSHED.	20		1	1	TIMBER SUITABLE FOR CABINET WORK AND TURNERY. BEST PLANTED IN PROTECTED SITES.		
ROSEWOOD <i>DYsoXYLUM FRASERIANUM</i>	MEDIUM TO TALL R.F. TREE WITH SHADY SPREADING CROWN. NEEDS WATER TO ESTABLISH.	18		1	1	TIMBER IS ROSE-SCENTED AND USED FOR CABINET WORK. BEST PLANTED IN PROTECTED SITES.		FRUIT ATTRACTS BIRDS
KODA <i>ERRETTIA ACUMINATA</i>	MEDIUM-SIZED R.F. TREE, DECIDUOUS WITH GREY FISSURED BARK AND MASSES OF ORANGE FRUITS IN SUMMER/AUTUMN.	10		2	2	FRUITS ARE ORNAMENTAL.		
HARD QUANDONG <i>ELAEoCARTUS OBOVATIS</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

COMMON / BOTANICAL NAME	BRIEF DESCRIPTION	MAX. HEIGHT	FAST GROWING	PROTECTION WHEN YOUNG	FROST RESISTANT	OTHER USES / COMMENTS	RARE	WILDLIFE
ROSE WALNUT <i>ENDIANDRA DISCOLOR</i>	BUSHY TREE WITH SWELLINGS ON THE LEAF UNDERSIDE. PRODUCING BLACK FRUITS IN AUTUMN.	12		1	1	THE PINK TIMBER CAN BE USED FOR INTERIOR WORK		FRUIT ATTRACTS BIRDS.
GREEN-LEAVED ROSE WALNUT <i>ENDIANDRA MUELLERI</i>	BUSHY TREE WITH PINK NEW GROWTH AND BLACK FRUITS IN AUTUMN.	12		1	1	BEST PLANTED IN PROTECTED SITES.		FRUIT ATTRACTS BIRDS.
CABBAGE GUM <i>EUCALYPTUS AMPLIFOLIA</i>	MEDIUM TO TALL EUCALYPT WITH SMOOTHISH, WHITE BARK USUALLY WITH GREY PATCHES, SAPLINGS HAVE VERY LARGE LEAVES. HARDY.	25	X	3	3	USEFUL SHADE TREE. MEDIUM IMPORTANCE AS A POLLEN SOURCE FOR BEEKEEPERS.		FLOWERS ATTRACT BIRDS. HABITAT TREE
FLOODED GUM <i>EUCALYPTUS GRANDIS</i>	VERY TALL EUCALYPT WITH SMOOTH WHITE BARK	40+	X	3	2	GOOD HARDWOOD TIMBER TREE FOR LIGHT CONSTRUCTION. GOOD POLLEN TREE.		FLOWERS ATTRACT BIRDS. HABITAT TREE
PINK BLOODWOOD <i>EUCALYPTUS INTERMEDIA</i>	MEDIUM TO TALL EUCALYPT WITH ROUGH GREYISH-BROWN, SCALY BARK AND LARGE CAPSULES. HARDY.	30		3	3	USEFUL HARDWOOD TIMBER TREE. MEDIUM IMPORTANCE AS A POLLEN SOURCE FOR BEES.		FLOWERS ATTRACT BIRDS. HABITAT TREE
TALLOWWOOD <i>EUCALYPTUS MICROCORTIS</i>	TALL, DENSE-CROWNED EUCALYPT WITH RUSTY COLOURED STRINGY BARK. HARDY.	35+	X	3	3	GOOD QUALITY HARDWOOD TIMBER TREE USED IN HEAVY OR LIGHT CONSTRUCTION, SLEEPERS, POSTS, AND POLES, SHADE TREE		FLOWERS ATTRACT BIRDS. HABITAT TREE
BLACKBUTT <i>EUCALYPTUS PILULARIS</i>	VERY TALL EUCALYPT WITH SMOOTH WHITE BARK ON THE UPPER TRUNK AND BRANCHES WITH A DARK, ROUGH-BARKED TRUNK	35+	X	3	2	GOOD HARDWOOD TIMBER TREE FOR GENERAL CONSTRUCTION, SLEEPERS, POSTS AND POLES. GOOD POLLEN TREE.		FLOWERS ATTRACT BIRDS. HABITAT TREE
SYDNEY BLUE GUM <i>EUCALYPTUS SALICINA</i>	VERY TALL EUCALYPT WITH SMOOTH WHITE BARK THAT SHEDS IN RIBBONS	40+	X	3	3	GOOD HARDWOOD TIMBER TREE USED FOR ALL FORMS OF CONSTRUCTION. GOOD POLLEN TREE.		FLOWERS ATTRACT BIRDS. HABITAT TREE
FOREST RED GUM <i>EUCALYPTUS TERETICORNIS</i>	A MEDIUM TO TALL EUCALYPT WITH PATCHY, WHITE-GREYISH BARK. OFTEN GROWS ON ALLUVIAL FLOODPLAINS. VERY HARDY.	30	X	3	3	TIMBER SUITABLE FOR HEAVY CONSTRUCTION AND FENCING. GOOD SHADE TREE. USEFUL POLLEN SOURCE FOR BEES.		KOALA FOOD TREE
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
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
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
HAKEA <i>HAKEA SALICIFOLIA</i>	SMALL BUSHY TREE OR SHRUB WITH WHITE FLOWERS AND HARD, WARTY FRUITS WITH WINGED SEEDS. HARDY.	6	X	3	3	USEFUL SCREEN AND WINDBREAK TREE ADAPTING TO MOST SOILS AND ASPECTS.		USED BY SMALL BIRDS AND HONEYEATERS
BLACK BOOYONG <i>HERITIERA ACTINOPHYLLA</i>	MEDIUM TO TALL RAINFOREST TREE WITH DARK GREEN LEAFLETS ARRANGED IN FIVES. WINGED FRUIT ARE PRODUCED IN AUTUMN	30		1	1	ORNAMENTAL TIMBER IS USED FOR BUILDING AND CABINET WORK.		FLOWERS ATTRACT BIRDS
NATIVE FRANGIPANI <i>HYMENOSPORUM FLAVUM</i>	SMALL R.F. TREE PRODUCING NUMEROUS YELLOW AND WHITE FLOWERS IN SPRING. HARDY.	10	X	3	3	USEFUL SPECIES FOR R.F. REGENERATION		FRUIT ATTRACTS BIRDS
FOAMBARK <i>JAGERA PSEUDORHUS</i>	SMALL R.F. TREE WITH ATTRACTIVE FERRY FOLIAGE AND HAIRY YELLOW-BROWN FRUITS. HARDY.	12		2	2	VERY ATTRACTIVE TREE FOR LANDSCAPING. USEFUL FOR RAINFOREST REGENERATION.		GOOD HABITAT SPECIES FOR SHADING THE STREAM EDGE.
THIN-FRUITED TEA TREE <i>LEPTOSPERMUM BRACHYANDRUM</i>	SMALL, MULTI-TRUNKED TREE. THE BARK PEELS IN SPRING, TURNING FROM A COPPER COLOUR TO WHITE. VERY HARDY.	4	X	3	3	GOOD EROSION CONTROL SPECIES. CAN BE USED FOR DIRECT SEEDING.		GOOD STREAM EDGE HABITAT SPECIES.
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.
SPINY MAT-RUSH <i>LOMANDRA LONGIFOLIA</i>	SMALL, TUSSOCKY RUSH FORMING THICK CLUMPS. HARDY. GROWS IN MORE OPEN AREAS THAN L. HYSTRIX	1		3	3	GOOD FOR EROSION CONTROL. IF PLANTED IN SUFFICIENT DENSITY. LARGE SPREADING ROOT SYSTEM		GOOD STREAM EDGE HABITAT SPECIES.

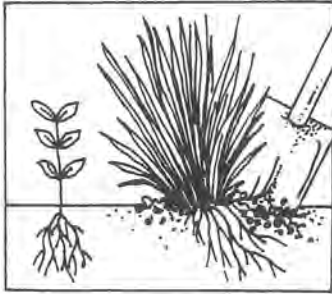
COMMON / BOTANICAL NAME	BRIEF DESCRIPTION	MAX. HEIGHT	FAST GROWING	PROTECTION WHEN YOUNG	FROST RESISTANT	OTHER USES / COMMENTS	BARK	WILDLIFE
TREE LOMATIA <i>LOMATIA ARBORESCENS</i>	A TALL SHRUB TO SMALL TREE WITH STIFF, TOOTHED LEAVES. WHITE FLOWERS PRODUCED IN SUMMER. BLACK SEED CASING PERSISTANT ON TREE.	4		3	3	OFTEN USED IN LANDSCAPING AND NATIVE GARDENING IN OPEN SITUATIONS DUE TO ITS HARDINESS		FLOWERS ATTRACT HONEYEATERS
BRUSH BOX <i>LOPHOSTEMON CONFERTUS</i>	TALL TREE WITH DENSE CROWN WHEN GROWN IN OPEN. LARGE LEAVES AND SALMON-COLOURED SMOOTH BARK. HARDY	25	X	2	1	GOOD HARDWOOD TIMBER. SHADE TREE. GOOD QUALITY NECTAR AND POLLEN FOR BEES.		USEFUL HABITAT TREE WHEN LARGE.
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		
WHITE CEDAR <i>MELLA 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
WHITE EUODIA <i>MELICOPTE MICROCOCCA</i>	SMALL R.F. TREE WITH LIGHT GREEN FOLIAGE. LEAFLETS ARRANGED IN THREES.	10	X	1	2	USEFUL RAINFOREST REGENERATION SPECIES ON PROTECTED SITES.		FRUIT ATTRACTS BIRDS
WHITE BOLLY GUM <i>NEOLTZSEA 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>PITTIPOPORUM 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
RIVER GRASS <i>POTAMOPHILA PARVIFLORA</i>	DENSE, TUSsockY GRASS THAT OCCURS ON LARGER RIVERS. USUALLY GROWING WITHIN THE STREAM	1.5		3	3	EXCELLENT EROSION CONTROL SPECIES WHICH CAN BE EASILY GROWN BY DIVISION OF MATURE PLANTS		INSTREAM HABITAT
NATIVE GUAVA <i>RHODOMYRTUS PSIDIODES</i>	A BUSHY, SMALL TREE WITH LIGHT BROWN SCALY BARK. PRODUCES YELLOW, FLESHY FRUITS IN LATE SUMMER/AUTUMN.	6		1	2	THE FRUIT IS EDIBLE. USEFUL RAINFOREST REGENERATION SPECIES		FRUIT ATTRACTS BIRDS
YELLOW CARABEEN <i>SLOANEA WOOLLSII</i>	MEDIUM R.F. TREE WITH LARGE 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 BRUNONIAVIS</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
TURPENTINE <i>SYNCARPIA GLOMULIFERA</i>	MEDIUM TO TALL TREE WITH DARK GREEN LEAVES AND TOUGH, STRINGY BARK.	20		3	2	TIMBER USED IN MARINE WORK DUE TO ITS DURABILITY UNDERWATER. RESISTANT TO TERMITES.		FRUIT ATTRACTS BIRDS
BRUSH CHERRY <i>SYZIGIUM AUSTRALE</i>	SMALL, DENSE CROWNED R.F. TREE WITH DARK GREEN LEAVES AND RED FRUITS FROM SUMMER TO EARLY WINTER.	10		2	2	EDIBLE FRUIT. GOOD RIPARIAN R.F. REGENERATION SPECIES.		FRUIT ATTRACTS BIRDS. GOOD HOST FOR FERNS.
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		
HILL WATER GUM <i>TRISTANTOPSIS COLLINA</i>	MEDIUM SIZED TREE. WITH LIGHT FLAKY BARK AND YELLOW FLOWERS PRODUCED IN SUMMER. HARDY	10		1	2	VERY SIMILAR TO WATER GUM THOUGH USUALLY GROWS FURTHER FROM THE STREAM IN MOIST, PROTECTED LOCATIONS.		ROOTS PROVIDE HABITAT FOR STREAM DWELLING ANIMALS.
WATER GUM <i>TRISTANTOPSIS 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>WATERHOSEA 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 ?

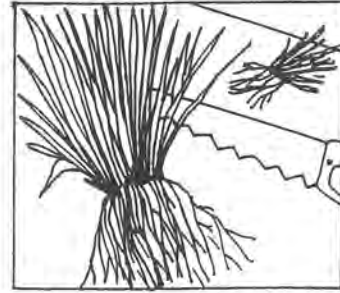
1) DIVISION OR DIRECT TRANSPLANT

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.

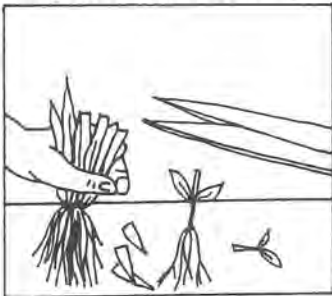
MOST SUITABLE FOR: TOE:



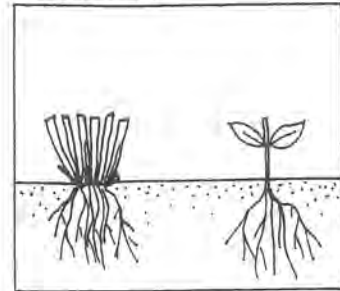
1 Dig up clump or seedling.



2 Divide clump with saw, mattock or tomahawk.



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

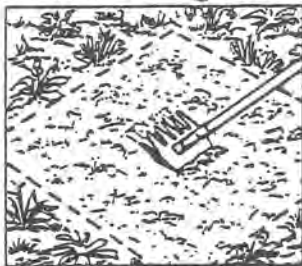


4 Plant in moist soil or gravel.

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.

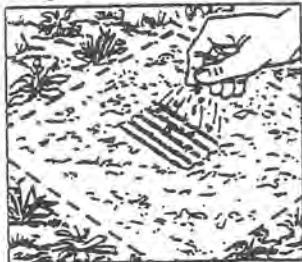
MOST SUITABLE FOR: TOE (gravel needs to be moist).



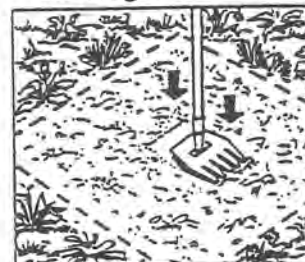
1 Scrape the surface to remove any weeds or weed seed.



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



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



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

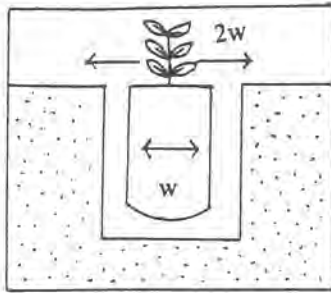
3) TRUNCHEON CUTTINGS

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.

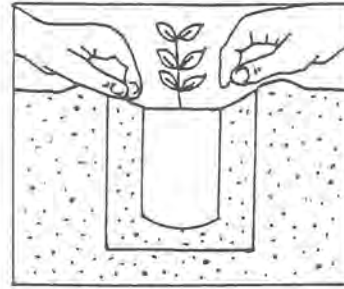
MOST SUITABLE FOR: TOE

4) STANDARD TUBESTOCK

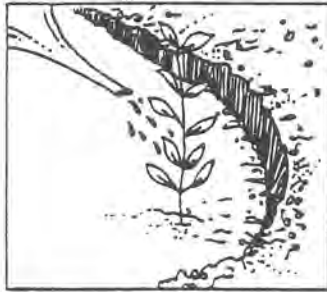
1 Plant when soil is moist and there is no danger of frost.



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.

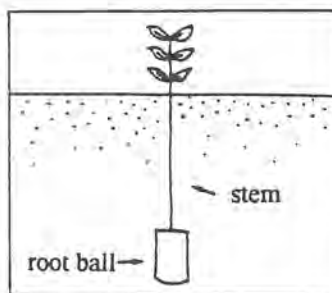
MOST SUITABLE FOR: UPPER BANK/FLOODPLAIN (flat to undulating land).

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.

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 EROSION 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>