

# Appendix 1

## bike types

TYPE OF BIKE	FEATURES	SUITED TO INDIVIDUAL	SUITED TO ENVIRONMENT
Standard bike – BMX, Road, Mountain	Two wheeler with or without gears and suspension	<p>Does this need adjustments – grip reach, step through?</p> <ul style="list-style-type: none"> <li>• Modified or extended handlebars</li> <li>• Gear change integrated to hand grip</li> <li>• One-handed brake levers (recumbent cycling may also take weight off the arm)</li> <li>• Gap adjusted between brake levers and handlebars to suit grip</li> <li>• Integrated glove to facilitate grip</li> <li>• Side crank for one-legged cycling</li> <li>• Toe clips, foot plates and ankle supports to facilitate pedalling</li> <li>• Pedal spacers for additional clearance for feet and ankles</li> <li>• Adult stabilizers to give stability to a standard bike</li> <li>• Pommel on saddle to maintain position</li> <li>• Hip and chest supports</li> <li>• Adjustments to handlebars and saddle to create more upright, supported body position</li> <li>• Ankle Foot Orthoses (AFOs)</li> </ul>	<p>Bike choice dependent on cycling environment</p> <p>Is the bike transportable by car/train (wheels or other parts that can be removed/folded)?</p> <p>What are storage considerations?</p> <p>Is the bike easy to service and to get parts for?</p> <p>What is bike size (width/length) relative to likely cycling environments?</p> <p>What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?</p>
Low and ultra-low step through bikes	Low frame, easy to get on to	<p>For individuals with good enough balance to cycle a two wheeler, but flexibility issues which cause difficulty getting on and off.</p> <p>Will the bike need to change to fit the cyclist (meet growth of the individual – child to adult)?</p> <p>Can the bike be adapted – ie conversion kit to electric-assist?</p>	<p>Is the bike transportable by car/train (wheels or other parts that can be removed/folded)?</p> <p>What are storage considerations?</p> <p>Is the bike easy to service and to get parts for?</p> <p>What is bike size (width/length) relative to likely cycling environments?</p> <p>What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?</p>

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Tricycle Two wheels back, one front Or Two wheels front, one back Or Semi-recumbent tricycle Or Fully-recumbent tricycle	<p>Greater general stability than a two wheeler</p> <p>Have space to transport items</p> <p>Two wheels to front is more stable and gives greater width perception</p> <p>Semi-recumbent combines comfortable riding position with stability</p> <p>Fully-recumbent for comfort and where there are strength as well as balance issues</p>	<p>Can be cycled much more slowly and won't overbalance Extra care required on uneven surfaces – cambers, and corners – to avoid toppling on a tricycle with two wheels to the rear Different turning movement – more emphasis on turning handlebars, less on weight shift</p>	<p>Is the bike transportable by car/train (wheels or other parts that can be removed/folded)?</p> <p>What are storage considerations?</p> <p>Is the bike easy to service and to get parts for?</p> <p>What is bike size (width/length) relative to likely cycling environment and turning lines?</p> <p>What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?</p>
Semi-recumbent and fully-recumbent bikes With or without back support	<p>Smaller wheels, larger wheelbase</p> <p>Light steering and balance</p>	<p>More comfortable than sitting</p> <p>Easier reach to the ground when sitting</p> <p>Reduced pressure on wrists</p>	<p>Lower to ground so can be visibility issues in a road scenario</p> <p>Is the bike transportable by car/train (wheels or other parts that can be removed/folded)?</p> <p>What are storage considerations?</p> <p>Is the bike easy to service and to get parts for?</p> <p>What is bike size (width/length) relative to likely cycling environments?</p> <p>What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?</p>
Tandem Standard tandem Front seat steering Back seat steering Upright front Semi-recumbent front	<p>Back seat steering allows oversight for supervision and safety if required</p>	<p>Visual impairment, able to pedal</p> <p>Balance or co-ordination issues, able to pedal</p> <p>Adult with adult or adult with child?</p> <p>Side by side good for conversation</p>	<p>Is the bike transportable by car/train (wheels or other parts that can be removed/folded)?</p> <p>What are storage considerations?</p> <p>Is the bike easy to service and to get parts for?</p> <p>What is bike size (width/length) relative to likely cycling environments?</p> <p>What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?</p>

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<b>Tandem Tricycle both pedalling</b> Both riders upright, one behind the other Both riders recumbent, one behind the other Both riders upright, side by side	Extra length or width can be difficult on a road, only suited to particular environments Steering, braking, gears controlled by one (the pilot) Sometimes independent pedalling Three or four wheels for side-by-side varieties, also semi-recumbent and recumbent Hand- and foot-crank varieties Low step-through frame varieties	Visual impairment, able to pedal Balance or co-ordination issues, able to pedal Adult with adult or adult with child? Side by side good for conversation	Is the bike transportable by car/train (wheels or other parts that can be removed/folded)? What are storage considerations? Is the bike easy to service and to get parts for? What is bike size (width/length) relative to likely cycling environments? What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?
<b>Tandem Tricycle one pedalling</b> Wheelchair roll-on/roll-off	Stronger brakes to accommodate stopping two riders Electric assist? Wheelchair attachment to front or side Heavier mechanism	Person not pedalling will lose heat more quickly	Is the bike transportable by car/train (wheels or other parts that can be removed/folded)? What are storage considerations? Is the bike easy to service and to get parts for? What is bike size (width/length) relative to likely cycling environments? What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?
<b>Hand cycles</b> Fixed frame (complete) Recumbent Wheelchair add-ons Tandem	Tricycle propelled by hand, generally in a two-hands-forward motion Often reverse-pedal brakes	Low or limited use of lower limbs Balance or co-ordination problems Wheelchair add-ons allow faster and further travel over rougher terrain Set up for a hand cycle is like that for a standard bike except the focus is on the arms and reach, ensuring the individual does not have to lean forward at maximum extension of the crank	Is the bike transportable by car/train (wheels or other parts that can be removed/folded)? What are storage considerations? Is the bike easy to service and to get parts for? What is bike size (width/length) relative to likely cycling environments? What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?

Appendix 1: Bike Types

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<b>Quad cycles</b>	Four wheels, very stable and easy to control Variable seat height	Limited use of limbs Poor muscle tone and mobility	Is the bike transportable by car/train (wheels or other parts that can be removed/folded)? What are storage considerations? Is the bike easy to service and to get parts for? What is bike size (width/length) relative to likely cycling environments? What is bike durability (sturdy tyres/solid base structure) relative to likely cycling environments?

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