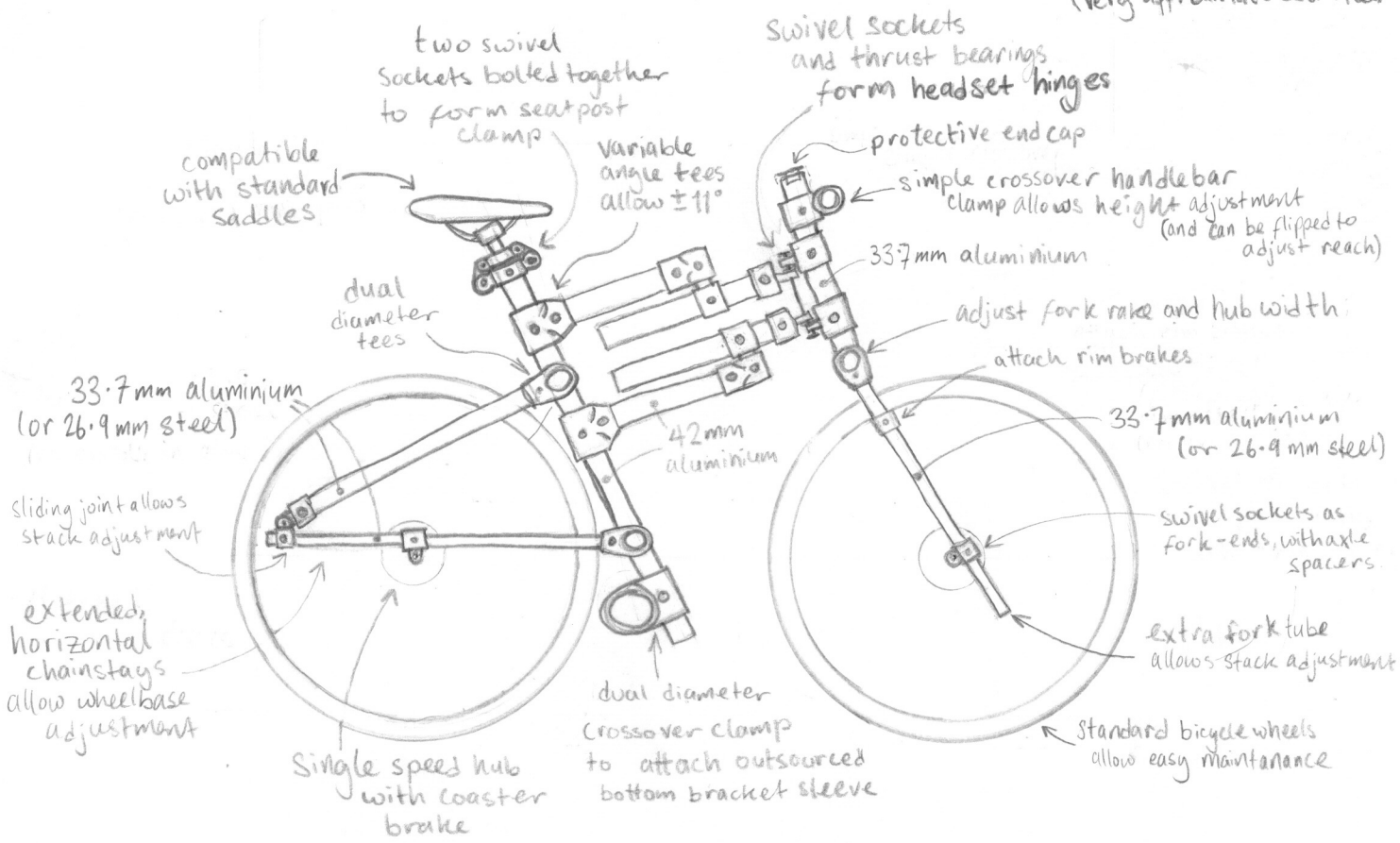
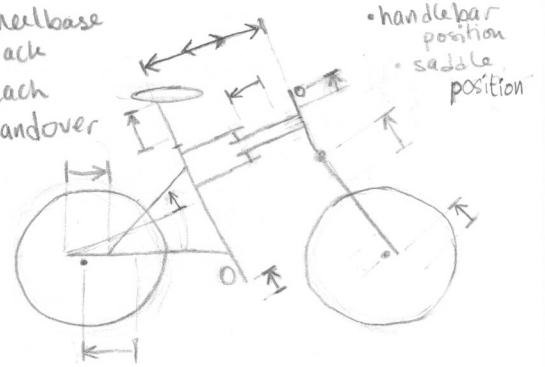
FINAL CONCEPT: DESIGN FOR ADJUSTABILITY

approx:	frame	bike
weight(kg)	19	25
cost(£)	454	554

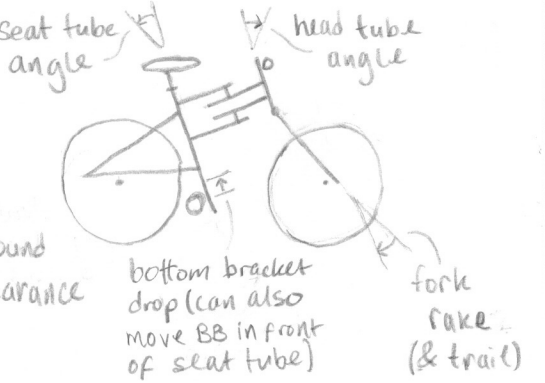
(very approximate estimates)



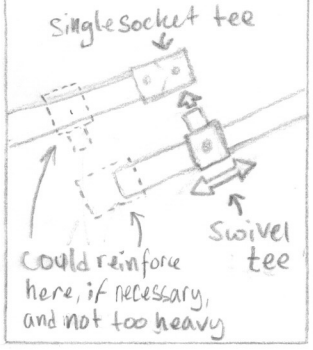
ADJUSTED for TALLER RIDER



OTHER ADJUSTMENTS

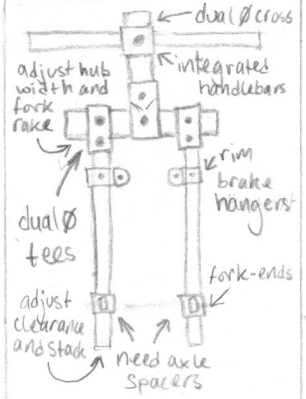


PARALLEL LENGTH ADJUSTMENT



- Geometry is simple, robust, and fully adjustable.
- All tubes except 26·9mm are aluminium
- All clamps except dual-diameter, adjustable angle, and 26·9mm are available in aluminium
- Aluminium clamps will be used where budget and availability allow, in order to reduce weight
- Otherwise, cast iron clamps will be used
- Designed for maximum adjustability, and therefore uses more clamps than previous concepts
- This will add to the cost and weight, but the design can be optimised according to the user's priorities – adjustability or weight/cost efficiency

FORK



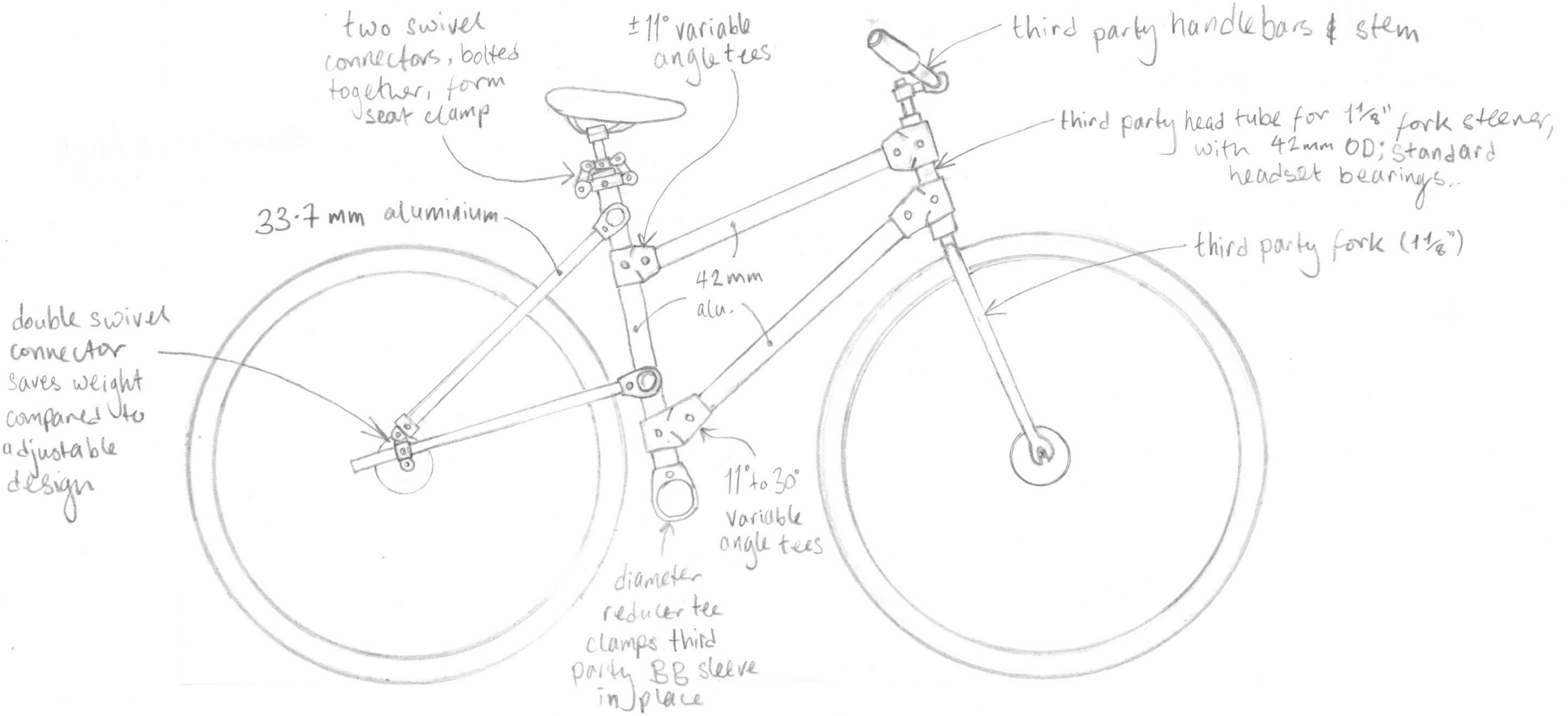
KEY CLAMPS

- Several competing brands of tube clamps
- One piece; grub screw bites into centre of tube
- Cast iron or aluminium
- Used as alternative to welding in industry
- 6 sizes, from 21·3mm to 60·3mm tube OD
- Only tooling needed is an allen key
- Rated to 8kN slip load
- Originally used for hand rails
- Also used to build temporary structures

FINAL CONCEPT: DESIGN FOR PERFORMANCE

approx...	frame	bike
w (kg)	11	17
c (£)	263	363

(very approximate estimates)



ALTERNATIVE GEOMETRIES

longer wheelbase, reach, and/or stack

slacker head tube angle and/or steeper seat tube angle

- This design is focussed on simplicity, efficiency, and performance rather than a wide range of adjustability.
- Smaller ranges of adjustment are still possible by changing the angle and position of clamps.
- As the design does not incorporate a length adjustment mechanism, the bike is not "one size fits all" and users will need to choose which length of tubes to cut according to their height.
- Fewer clamps and less tube means significant weight and cost savings (see tables in top right corners)

WHAT CAN BE ADJUSTED?

note: these are not all independent

- wheelbase
- reach
- stack
- bottom bracket drop
- seat position
- handlebar position
- head tube angle
- seat tube angle
- trail