Bike cover proposal

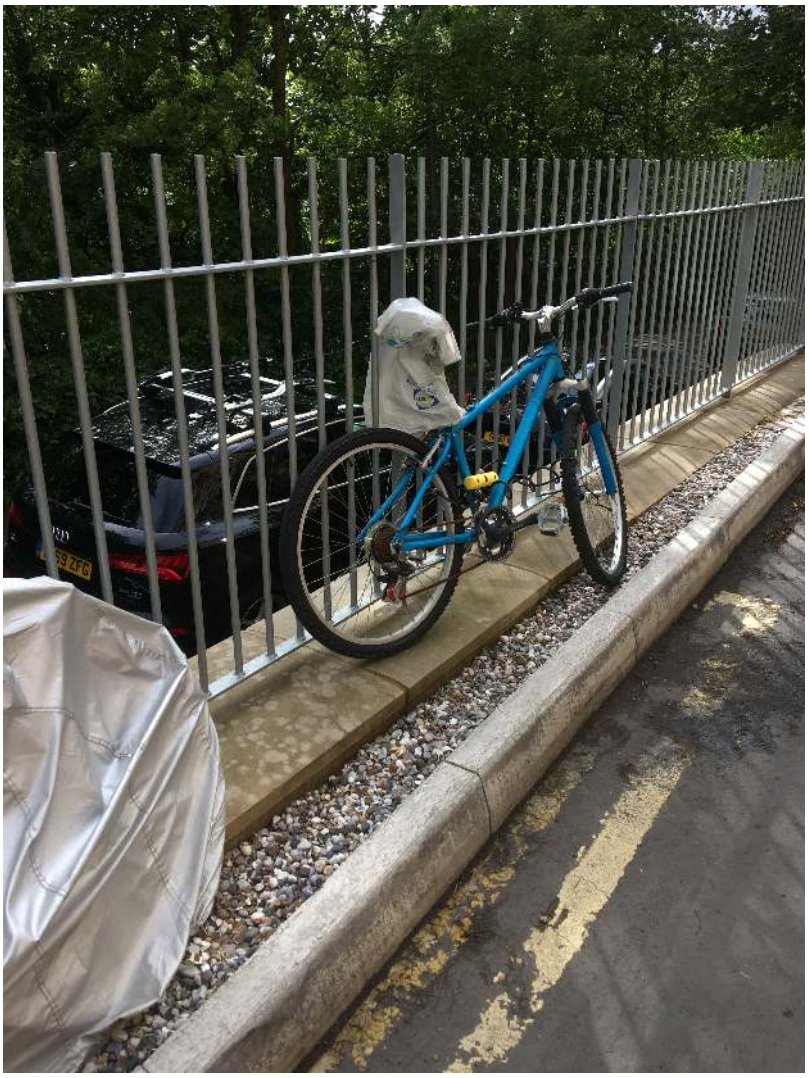
Problem

Bicyles are most convenient when they are stored where they are needed: generally on the street in front our flats or houses, similar to where cars are stored. But storing a bike on the street has a number of problems:

- bikes are vulnerable to the weather, particular in wet cities such as Glasgow, and are not self contained within painted metal and glass boxes, like cars. In particular, if the saddle and handlebars are wet, it's unpleasant for the cyclist.
- bikes are light and easily stolen, unlike cars, and so they need to be attached to rigorously immobile objects; a
- Planning permission is often required for permanent shelters (such as a bike shed), especially at the front of buildings. There have been some recent legislative changes to address this, but it remains much easier to not require permission.
- Accessories such as pumps, locks, tools, helmets, lights and so on are most convenient when stored with the bike (at point of starting cycling). But they are easy to see and steal when a bike is parked in the street (unlike car headlights, for example)

Existing solutions

- Improvised covers



Problem: insubstantial, doesn't cover whole bike, not clear where to store.

- Storage boxes

Problem: limited supply, requiring planning process and a company to run. Rental cost. Cannot be moved. Only available where installed.

- commercial bike covers

Problem: how to store when bike removed? How to remove quickly, especially when wet? - they sometimes become a soggy mess. No permanent attachment to environment.

- Sheffield / "toast" racks

These provide storage, but not weather-proofing, and need to be installed in ground. Sometimes there's competition for space.

Alternative storage

- In flat close (entry corridor and stairs): but this can be fire hazard, and is common place of theft. Also often requires carrying up stairs
- At back of flat, either outside or in shed / cupboard: often though the back of tenement flats has worse access, as lane may only go in one direction, and may be muddy / dirty / unsafe / with bad surface / light.
- In flat: this takes up space (or time, if e.g. hung from ceiling). Also carrying a bicycle up stairs is difficult, especially with other luggage such as shopping. And dirty / wet bikes can be a nuisance

Some tenements, like this one in Berlin, have former coal storage converted for bicycle usage. In Glasgow, though, this is very rare:

Proposal

A semi-portable shelter could be made which is PARASITIC upon existing permanent structures such as fences, sheffield bicycles stands or lamp-posts, which are already commonly found outside flats (and don't need planning permission). It could be made from recycled materials, in particular PVC truck tarpaulin. Such an object would provide weather protection and a measure of security, both through the "out of sight, out of mind" principle of hiding a valuable object from view, and perhaps through the incorporation of substantial locks and other protection in the design.

This could be understood as a combination of a Freitag-style messenger bag and the larger

metal bicycle shelters which are increasingly installed in cities.

...combined with...

...equals...

Design aims

- Portable object: should be possible to transport it on a bicycle!
- Made from recyced materials
- Made from commonly available materials: anyone should be able to build one, without need specialist parts or tools.
- Fast access: should be quick and easy to remove and recover bicycle, with minimum of faff. Water from rain on surface should not soak cyclist when moving cover.
- Unobtrusive design, so that neighbours don't complain (camoflague?)
- Non-duplication: existing structure of bicycle and street furniture should be used structurally.
- Simplicity, adaptability and universality: design should be simple, while accomodating most common shapes of bicycle, and allowing some adjustment and modifiation.
    - in particular, variations in supporting fence type should be accomodated

Comparisons

PVC adverts on railings:

Tarpaulin on airport luggage trucks:

Folding street tables for pub:

Camping van cover

Door covers in Malta:

Materials

Similar to Freitag bags:

- PVC tarpaulin - from HGVs (trucks). Can be obtained from recycling yards. Approx 2m x

2.5m per cover
- Used seatbelts (for handles)
- Possibly, old bicycle tubes for edging

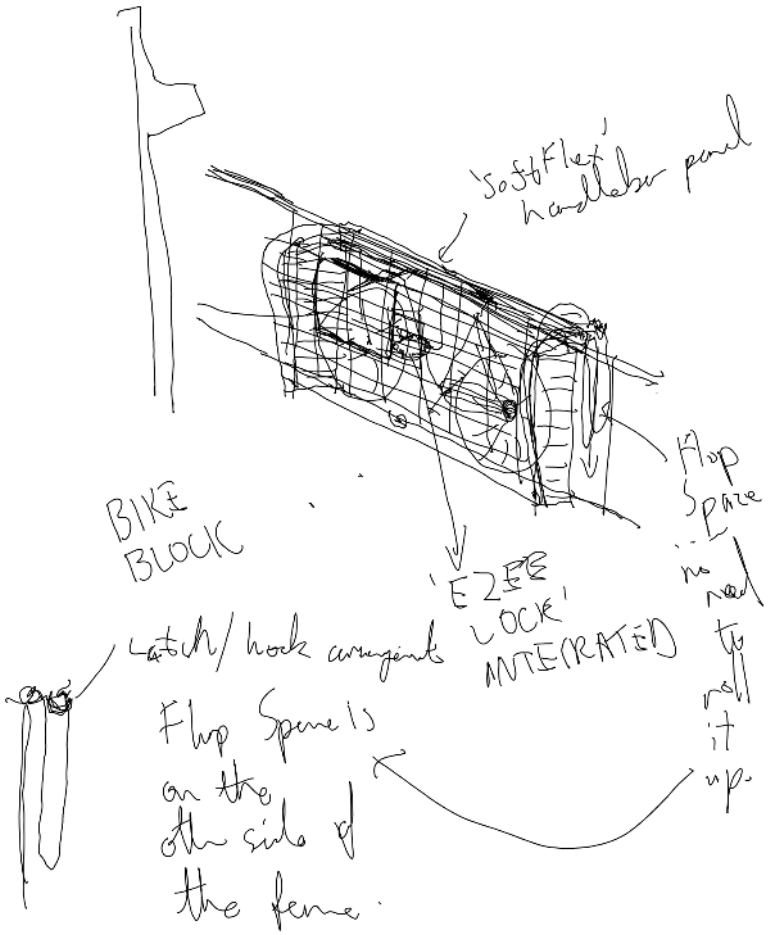
Additional materials:

- Galvanized piping - approx 6m per cover
- Paint
- Brass eyelets
- Stainless M5 nuts and bolts
- Thin PVC for handlebar cut-out sides.
- Chain, for securing to fence
- Carabiners, for temporary attachment.
- Cord (thin rope)

Tools:

- Eyelet / hole punch
- Hacksaw
- Metal drill
- Spanners etc
- Strong scissors

design



Flat layout: metal pipes cross straps in tarpaulin:

Colours: black spraypaint makes red tarpaulin more discrete

Handlebars: extra accomodation is required, accomodated by a bunny-ear type arrangement:

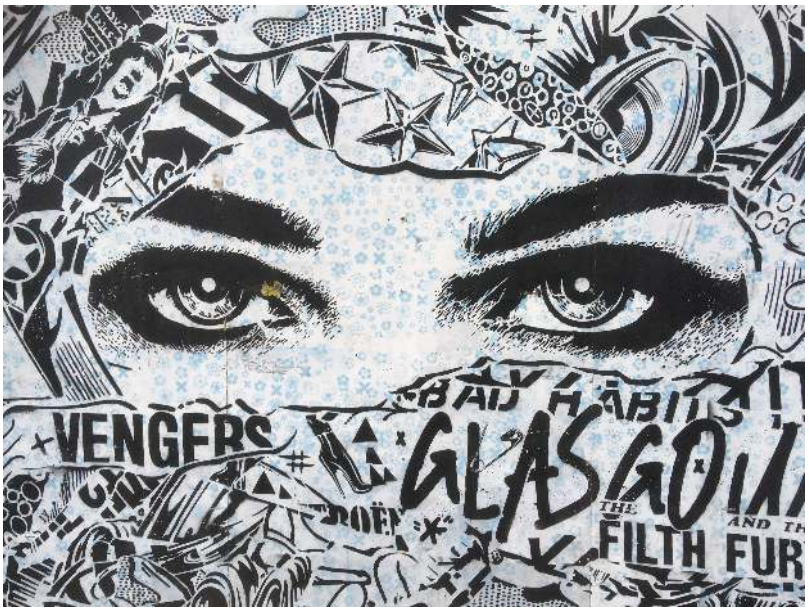
Rollup: metal bars allow cover to be rolled

Handles: made from seatbelt (here prototyped in rope - blue colour is ugly!):

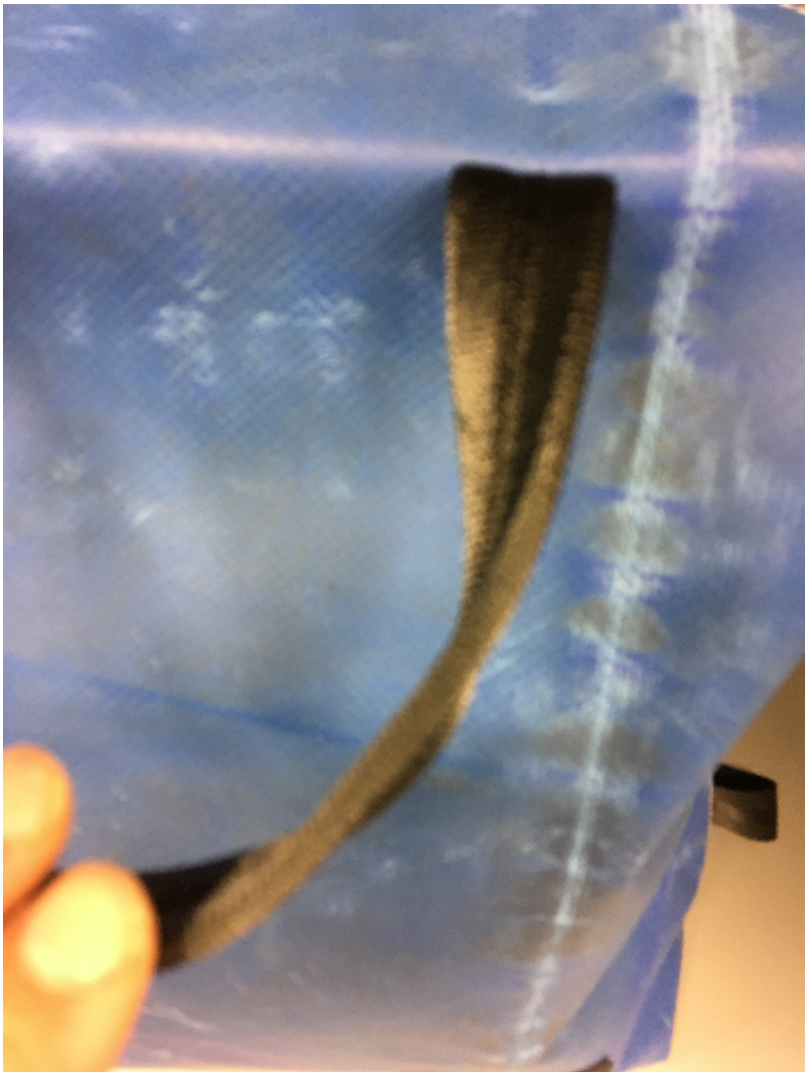
Issues

- JOINTS are best made using stainless bolts and eyelets. These are strong and rust-proof, but can be adjusted if necessary.
    - TAPE can be used to seal these if necessary, but tape is prone to becoming detached
- EYELETS and cord can be used to allow the cover to open at the top, allowing it to be fitted over (through) high fences. Possibly sealed with velcro, or not sealed
- Paint: spraypaint works, but other kinds may be more durable or economic
- Pattern: could we do a design something like these?


TIMES
Asahi


VENGERS
BAD HABITS
GLASGOW
FILTH

- ATTACHMENT: rope or chain and padlocks can attaced permanently to a fence.
- SECURITY OF COVER: cover itself is chained internally to fence, using holes in pipes.
- LOCKING OF BIKE: normal bike lock can be used under cover - possibly a large lock left in situ. Additional locks could be attaced to ends of pipes, through wheels, using holes drilled in pipes for attachment. (Also provides wind protection)
- ACCESS TO LOCK: can use a window / opeing in middle of tarpauline, through centre of bike frame, to allow closure, with optional extra lock, of the cover.
- HANDLE: a balanced strap, made from seatbelt, is used to open. Compare with Freitag bags:



- CHILD SEAT ACCOMODATION: Perhaps by allowing opening at top, similar to accomodation for high fence? Maybe use a separate cover for the child seat (joined using eyelets and bolts?)

- USE WITH SHEFFIELD STAND: Perhaps, allow loops around stand to attach the cover at the base
- WIND: weight of pipes helps prevent wind lifting cover, especially when pipes are locked in position.
- WHEN BIKE IN USE cover can sit in position on fence, and should fold flat.
- HANDLEBARS are accomodated using "bunny ears": closed loops of tarpaulin that can be adjusted for length and position using bolts & eyelets. Generally handlebars are passed through a fence when parking, so an ear is required on each side. Using such ears allows the cover to be substantially flat in design.

Objections

- Only useful in a wet climate?
- Not usable in cities like London where chaining to railings is generally not allowed, because they are generally private?
- Difficult on sheffield bicycle stands: too long? Needs to fold?
- Expense of manufacture? A basic bike cover is approx 30 GBP. Parts for this design probably come to 80 GBP.