

BICYCLE INFRASTRUCTUR E

The Good, the Bad and the Ugly

Glennys Jones



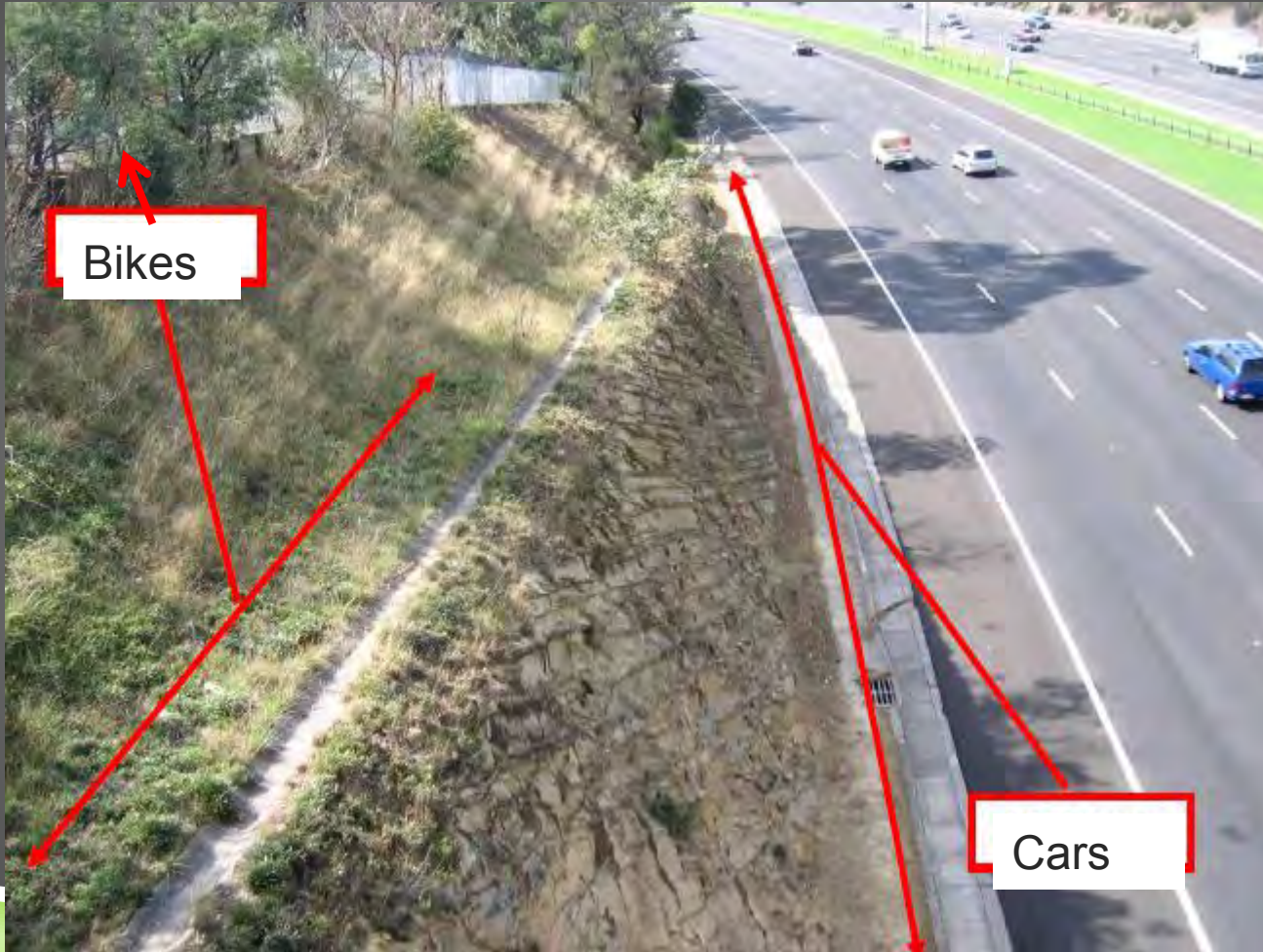
EXAMPLES OF “BAD”

- ▶ If these issues were on roads they would have been fixed years ago
- ▶ Yet cyclists and pedestrians are expected to accept poor design and poor maintenance as the norm
- ▶ Some of these photos are in the North East Link project area, Let's hope they fix them

STEEP GRADIENTS

DDA Gradients please!

→
Bikes
Climb
over
the hill



←
Cars
cruise
along
the flat

Belford Rd Hill on Yarra Trail

FLOOD PRONE PATHS

Check historic river height data before building



Yes - this is the same location!
The three people in the photo
would be totally submerged

Main Yarra Trail west of Willsmere Park

SQUEEZE POINTS

Keep paths free of hazards and obstructions



Shared path across Eastern Freeway to Chandler Hwy upgrade

SOUND WALLS ON NARROW PATHS

Provide safe lateral clearance

A narrow path is
made narrower!



Koonung Creek Trail

ENCROACHING VEGETATION

PLAN when planting

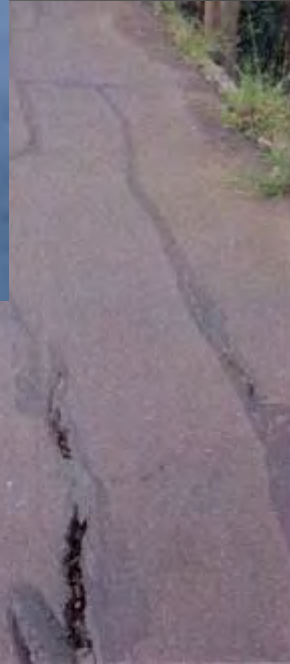
- Path narrowed
- Line of sight reduced
- Perception of personal safety reduced



Main Yarra Trail

CRACKING, HEAVING AND ROOT HUMPS

Maintain the paths



IN PATH HAZARDS

Clearance for tandems, recumbents and bike trailers



Riders need to focus on the road ahead and not be distracted by confusing in-path hazards

SWITCHBACKS & BENDS

Make bends navigable at a self-stable speed



Bikes are self-stable at ~14km/h and above.

Switchbacks require riders to slow below this speed and negotiate a tight confined point of potential conflict. **Many riders do not have the slow riding skills to navigate these.**

UNEVEN PRAM RAMPS

Smooth transitions between path and roadway please



Bluestones create uneven surfaces used at pram ramps and shared paths
Mortar disintegrates and creates wheel entrapment

Anniversary Trail

DANGEROUS SURFACES

Use secure, non-slip surfaces (timber can be slippery)



Timber boardwalks and bridges are not suitable for shared paths
– slippery when wet, timbers work loose and chicken wire ineffective

POOR DESIGN & POOR MAINTENANCE

Plan stable adjoining surfaces



Mulch migrates onto path with rain and bird activity creating an unstable walking and riding surface



Unstable embankment results in slurry and debris accumulating on path

POOR LIGHTING

Provide effective lighting on commuter trails



- Solar studs do not provide effective lighting
- Compromised by leaf litter and shading
- Vandalism - spray painting solar panel
- Mass battery failure unless maintained
- Fail if inundated

Gardiners Creek Trail Stonington

TROWELLED JOINTS

Use sawn joints for a smooth ride



- Rough ride for wheelchair users, prams, and bicycles.
- Jarring through the hands and arms of walking frame users
- Reduce the amenity of the path.

BEG BUTTONS

Ban the Button; In-path sensor technology please



In 40 years driving I have never had to push a "Beg Button"

In path sensor technology should be part of standard design to ensure high level of service to cyclists

EXAMPLES OF
GOOD INFRASTRUCTURE
THAT GETS US ON OUR BIKES

OVERPASSES

Smooth ramps, gentle climbs over multi lane highways



S

Regional Iron Horse Trail San Francisco

LIGHTING

Good lighting promotes a feeling of safety



LED lighting in DDA handrail Efficiently delivers light where it is needed without wasteful light spill. Lighting is possible in environmentally sensitive areas

Gardiners Creek Trail

TUNNELS / UNDERPASSES

Graduated lighting 24/7 feels safer



Wide, straight, well lit and mural (local pride) to avoid tagging graffiti

New Zealand

GUIDED CONNECTIONS

Provide clarity in unfamiliar situations

On road links to shared path



Berkeley University CA

SHARED PATH CROSSING ROADS

Raised pavement & reverse priority



Riders perspective

Raised pavements, speed cushions and reverse priority – clear line of sight

Laurel Street Link – Anniversary Trail

SHARED PATH CROSSING ROADS

Smooth, efficient uninterrupted riding



Drivers perspective

Raised pavement , reverse priority Drivers give way to bikes

Anniversary Trail Boroondara

RAISED PAVEMENT CROSSINGS

... for pedestrian crossings too



Raised pavement crossings provide

- traffic calming
- support walking, cycling and disabled access

Reduced Traffic speeds attract pedestrians and cyclists to Activity Centres and schools

All ages and abilities access

High Street Ashburton

PATH JUNCTIONS

Splayed junctions allow safe speed maintenance around corners

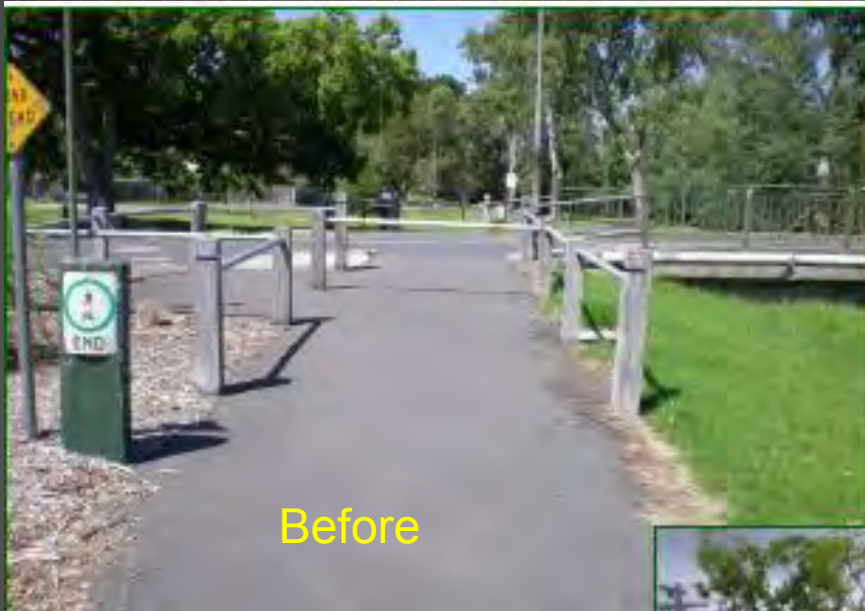


- Good for bikes, prams, wheelchairs, and pedestrians
- Reduces “desire line” drop offs that result from “Butted” junctions

Darebin Yarra Link and Main Yarra Trail

BIKE INDUCTION SENSOR LOOPS

Ban the “Beg Button”



Induction loop detects cyclist, triggers traffic signals,
Cyclist doesn't have to stop and press “Beg Button”.

Gardiners Creek Trail – Winton Road

GREENWAVE CYCLE ROUTES

Optimise Level of Service for cyclists



Traffic lights synchronised for travel at 21km/h to optimise level of service

McAllister St, San Francisco

REDUCING CONFLICT – HIGH USE

Clearly communicate areas of path use



Pedestrians on Bay side of path and bridge.
Crossing connects pedestrians to look out on left.
Formalised to encourage predictable movement patterns

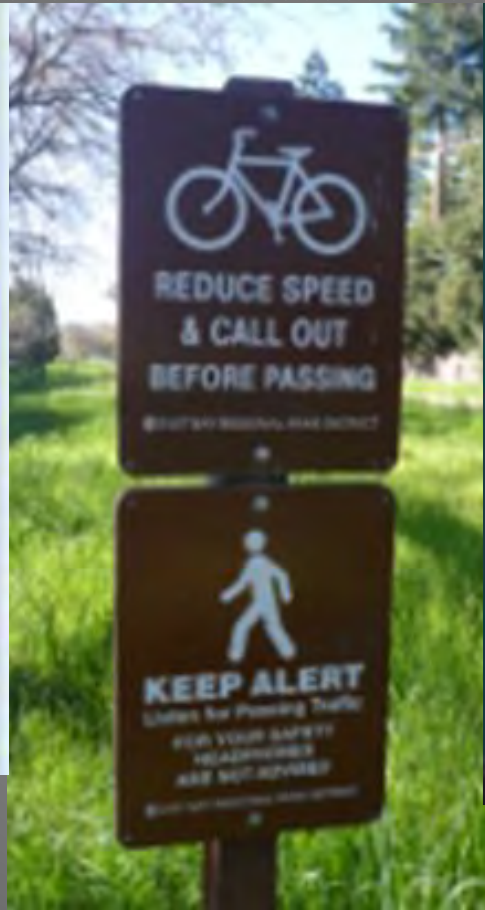


Path to Eleanor Schonell Bridge Qld

Golden Gate path, San Francisco

SHARING THE PATH

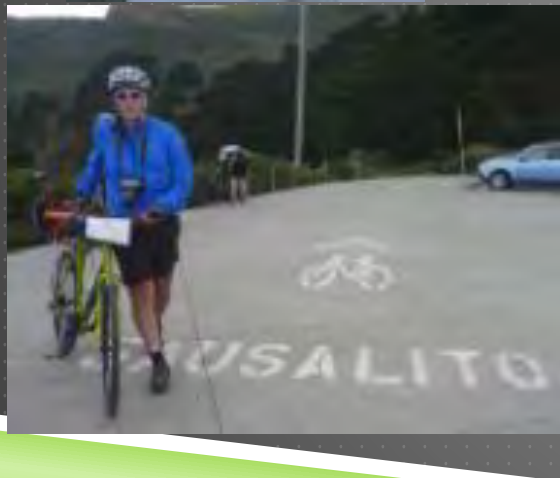
Safe behaviour is every ones responsibility



San Francisco

WAYFINDING AND COMMUNICATION

Easy to recognise at a distance



San Francisco

OFF ROAD WAYFINDING

Maps, Amenities, Connections



You are here, what do you need

Regional Iron Horse Rail Trail
– East Bay, San Francisco

ON ROAD SIGNAGE

Clear, well positioned, unambiguous



Sharrow positioned in intersection of bike lane, clearly visible from all directions by all intersection users



Route 23 (8th Avenue) San Francisco

THE POWER OF PAINT – OFF ROAD

Paint the message on the path



CONCEPT 3 | SYMBOLS WITH COLOUR



**KOONUNG
CREEK
TRAIL**



**GARDINERS
CREEK
TRAIL**



**MAIN YARRA
TRAIL**



**ANNIVERSARY
TRAIL**

Separate Cyclist and Pedestrian zones defined by paint – San Francisco

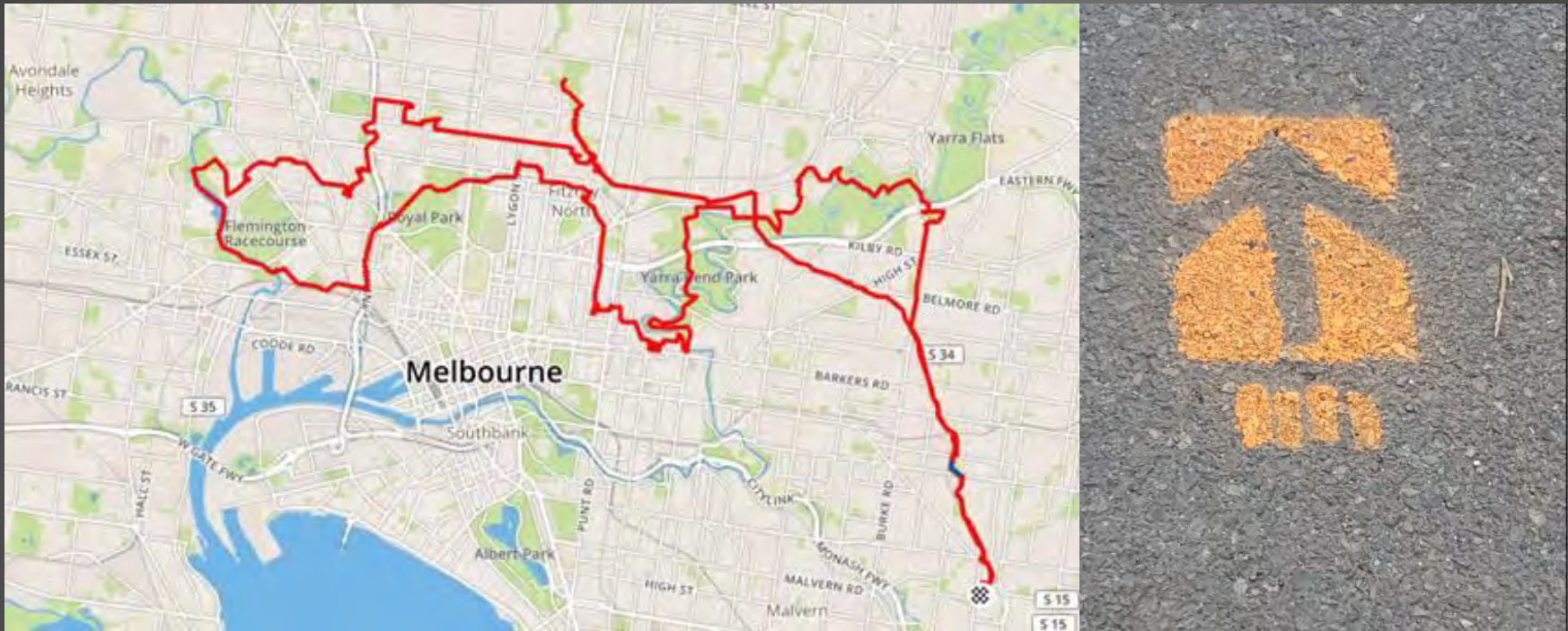


Simple wayfinding – the central bike logo
Could be replaced with the trail logo

San Francisco and Boroondara

POWER OF PAINT

The most effective wayfinding canvas is the path ahead.



A small painted stencil wayfinding allowed over 2,000 riders to complete the complex 2018 Melburn Roobaix route

Melburn Roobaix

COUNTERS

Count people, Not just bikes.

Statistics help to justify infrastructure but without counting pedestrians, we're only getting part of the big picture



Brisbane

AMENITIES

Life's little comforts can get and keep us cycling

