

TRANSFORM MANUKAU CONCEPT

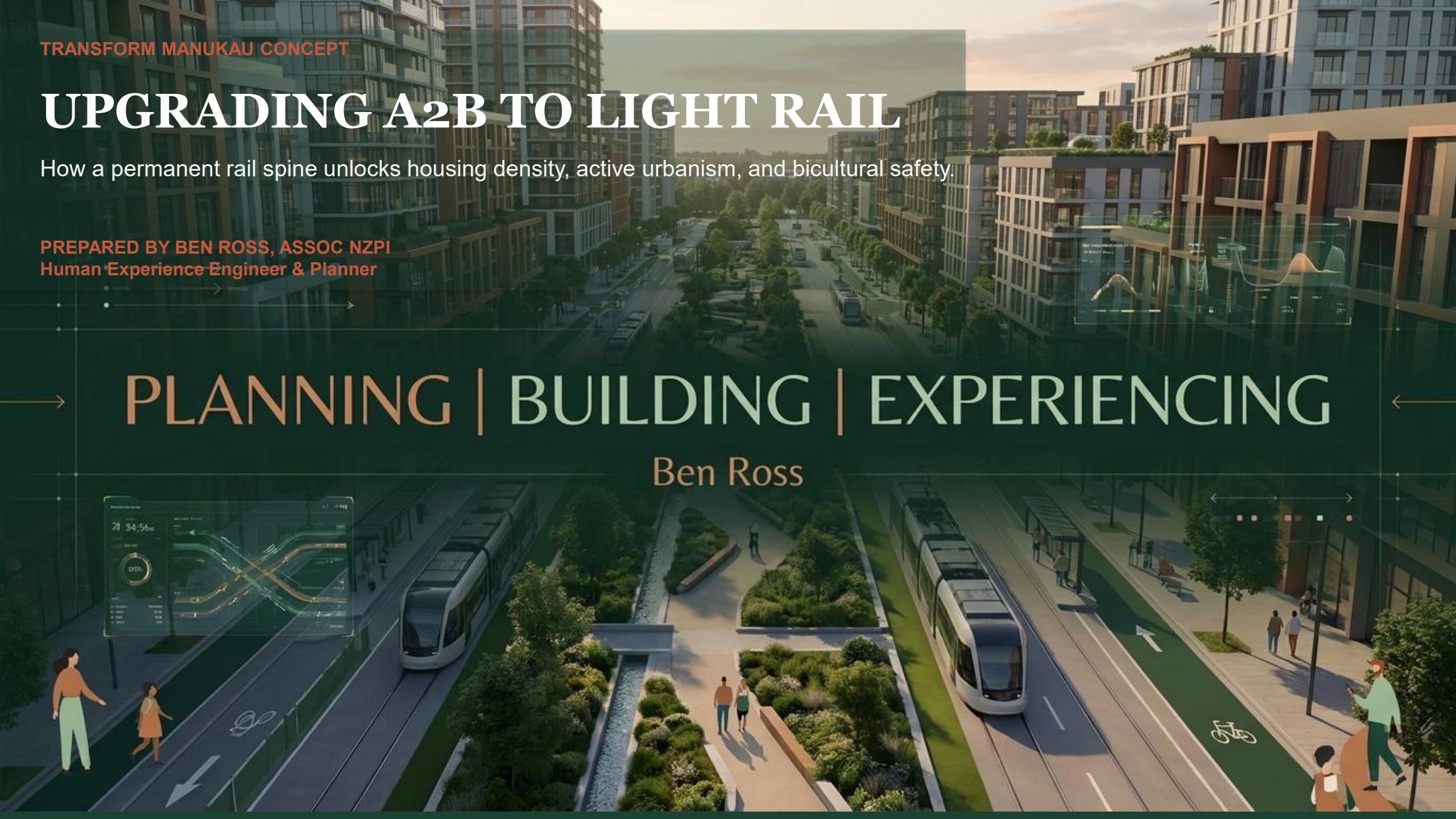
UPGRADING A2B TO LIGHT RAIL

How a permanent rail spine unlocks housing density, active urbanism, and bicultural safety.

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→ PLANNING | BUILDING | EXPERIENCING ←

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THE CORE CATALYST: LIGHT RAIL VS. BUSWAY

Why permanent rail infrastructure is essential to unlock density

LIMITATIONS OF BUS TRANSIT

- **Development Uncertainty:** Busways lack the permanent infrastructure footprint needed to justify high-density investment.
- **Capacity Ceiling:** BRT corridors face operational bottlenecks and vehicle-weaving friction under maximum commuter loads.
- **Sensory & Acoustic Clutter:** Diesel or heavy electric buses generate continuous localized tire-road noise adjacent to housing blocks.
- **Fragmented Spatial Frontage:** Curved asphalt lanes and continuous physical barriers create sterile, uninviting public spaces.

THE LIGHT RAIL ADVANTAGE

- **Permanent Investment Anchor:** Tracks in the ground signal decades of commitment, unlocking tier-1 TOD developments.
- **Unmatched Passenger Capacity:** Dual-track light rail comfortably transports up to 15,000 passengers per hour.
- **Sleek & Acoustic Harmony:** Steel-on-wheel electric trams glide silently through residential margins with zero local emissions.
- **Integrated 32.0m Spatial Corridor:** Tracks lay flat in lawns or clay, seamlessly merging transit lanes into wide green pedestrian plazas.

CONCEPT 1: RONWOOD AVENUE METROPOLITAN SUPERBLOCK

Optimizing the 32.0m spatial corridor under Metropolitan Centre zoning

SPATIAL ALLOCATION & PERFORMANCE

- AUP Zone Matching: Designed to activate high-density zoning under Auckland Unitary Plan Metropolitan Centre codes.
- Integrated WSUD Stormwater: Double 2.0m native sedge rain gardens capture 90% of surface runoff.
- Simulation Verified: High-fidelity multi-agent testing can illustrate a reduction in connection wait times during AM/PM spikes.
- Absolute Safety Segregation: Fully isolates high-speed micro-mobility from pedestrian walks and electric bus loops.



DAY PROTOTYPE: 32.0m CORRIDOR

Features a central 8.0m light rail core, 2.5m segregated blue cycle tracks, and 2.0m water-filtering green bioswales to manage street runoff.



NIGHT PROTOTYPE: CPTED SAFETY

Warm interior lighting spills from ground-floor shops and lobbies onto the active promenade, proving CPTED 'eyes on the street' safety at 10 PM.

CONCEPT 2: DAVIS AVENUE PARK-FACING TRANSIT INTERCHANGE

Bridging western green parkland with high-density eastern housing

THE GREEN-TO-URBAN BRIDGE

- The Mirror Balance: Allocates 4.5m on the western park promenade and 6.0m on the eastern TOD promenade.
- Centered Interchange Efficiency: Locates the central A2B Light Rail Station directly in the middle to minimize walking distances.
- Family-Scale Design: Prototyped to manage local multi-generational movement under warm summer peak loads.
- Integrated Micro-Mobility: High-performance blue lanes connect directly into the wider regional park cycling network.



DAY PROTOTYPE: FAMILY COEXISTENCE

Features a young family of six would be waiting comfortably on the wide eastern TOD promenade, with the central station and the western green park on the left.



NIGHT PROTOTYPE: PARK INTEGRATION

Low-glare, upward-facing LED bollards line the park margin and cycleway, ensuring absolute nighttime visibility without leaking light into the tree canopy.

MICRO-EXPERIENCE: WAYFINDING & TRANSIT GRAPHICS

Designing silent navigation pathways to streamline high-volume transfers



TYPE A: MONOLITHIC GATEWAY TOTEM (DAY & NIGHT)

Features internal LED backlighting for perfect nocturnal legibility of georeferenced maps, walking-radius rings, and Te Reo Māori macrons (Sign ID: WF-A03).



TYPE B: DIRECTIONAL FINGERPOST (DAY & NIGHT)

Brushed stainless steel post with modular blades. Uses zero-power Class 400 retroreflective vinyl lettering to ensure clear visibility along darker park margins under ambient streetlights (Sign ID: WF-B03).



Note: these AI wayfinding renderings are concepts only. These concepts would be sent to a human designer for full rendering and actual placements in the real world with their correct place name content.

BICULTURAL INTEGRITY IN A2B TOD CORRIDORS

How bicultural design and Treaty principles shape the built environment of the A2B TOD corridor

MANA WHENUA & TE ARANGA DESIGN PRINCIPLES (THE VALUES)

We utilize Te Aranga Design Principles to guide spatial massing, streetscape aesthetics, and built structures across the supporting TODs. This actively honors native relationships with the land, fostering Manaakitanga (hospitality, safety) and Kotahitanga (community unity) at key interchanges.

BILINGUAL WAYFINDING & CULTURAL LANDSCAPES (THE SYSTEM)

Our bilingual wayfinding network elevates Te Reo Māori and English to equal standing. By implementing strict orthographical audits, we safeguard regional histories and guarantee correct macrons for place names: Manukau, Ihumātao, Puhinui, Ōtara, and Tāmaki Makaurau.

KAITIAKITANGA & WATER-SENSITIVE DESIGN (THE ECOLOGY)

Supporting TODs integrate Kaitiakitanga (guardianship) directly into physical corridors. The twin 2.0m green bioswales utilize native New Zealand Sedges to filter 90% of local stormwater runoff, protecting the Mauri (life force) of our environmental resources.