

Water Lane Active Travel Scheme

CASE STUDY



Introduction

Citisense was commissioned by the London Borough of Newham to design and deliver an innovative active travel scheme at the high-friction intersection of Water Lane, Manbey Grove, and Louise Road. Situated between the Manbey LTN and Atherton LTN, the site sits on a crucial strategic east-west walking and cycling corridor connecting Maryland Station, central Stratford, and local schools.

The council identified that no safe, direct means existed for pedestrians and cyclists to cross Water Lane between Manbey Grove and Louise Road. To overcome tight physical constraints and complex multi-modal flows, Citisense helped engineer **Newham's first-ever diagonal parallel crossing**.

Methodology and Approach

Citisense adopted an evidence-led, highly creative approach to transform a non-standard junction layout into a safe, functioning active travel link.

Data Analysis & Visualisation

To build an undeniable evidence base and determine the necessity and positioning of the crossing, Citisense performed comprehensive technical analytics:

- **Multimodal Baseline Surveys:** Conducted Junction Turning Counts (JTCs), Automatic Traffic Counts (ATCs), and 6-zone crossing counts across Water Lane to capture pedestrian, cyclist, and motor vehicle movements.
- **Desire Line & Flow Verification:** Survey data proved that the intersection of Manbey Grove and Louise Road (Zone 4) was the primary east-west desire line, carrying up to 882 pedestrians and 96 cyclists daily.
- **7-Day Conflict Analysis:** Evaluated vehicle-pedestrian conflict zones near Sarah Bonnell School during peak hours (3 PM) to establish baseline safety requirements.
- **Physical Constraint Mapping & Iterative CAD Design:** Because a standard straight parallel crossing was unviable due to site geometry, Citisense engineered custom concept designs and sketches to present to council stakeholders and the wider public.
- **Construction Lifecycle Time-Lapse:** Deployed high-definition site cameras to monitor site setup, excavation, paving, SuDS installation, and final road lining.

Outcomes

Implementation of the preferred design delivered a landmark piece of urban active travel infrastructure:

- **Newham's First Diagonal Parallel Crossing:** Successfully introduced a unique, diagonal parallel crossing that bridges the staggered offset between Manbey Grove and Louise Road, providing direct priority for pedestrians and cyclists across Water Lane.
- **Innovative Geometric Calming:** Engineered a subtle bend into the cycle path approach that naturally reduces cyclist speeds as they enter the crossing threshold.
- **100% Rat-Run Elimination:** Modal filters placed at Manbey Grove (east) and Louise Road (west) eliminated motor vehicle rat-running across Water Lane while preserving necessary local access.
- **Public Realm Expansion & Greening:** Expanded pedestrian space and integrated Sustainable Drainage Systems (SuDS) rain gardens and tree planting. ‘
- **End-to-End Build Oversight:** Delivered complete video verification proving the build was executed safely, efficiently, and according to LTN 3 standards.

Summary

The scheme successfully balanced complex local traffic needs with uncompromising safety standards:

Cycle Safety and Infrastructure

- The diagonal parallel crossing aligns directly with cyclist desire lines, eliminating historical blind-spot risks where eastbound vehicles approached cyclists from behind.
- Continuous tactile paving and marked cycle tracks ensure intuitive navigation for all users.

Traffic Flow and Visibility

- Motor vehicle through-traffic was redirected, containing motor vehicles to essential access routes via Manbey Street.
- Extended pavements, speed-calming humps, and traffic mirrors were added at neighboring junctions to maintain sightlines and low vehicular speeds.

Crosswalks and Traffic Control

- Louise Road and Manbey Grove were closed to through-motor traffic (with exemptions maintained for refuse vehicles).
- Manbey Grove was adjusted to two-way operation internally to preserve residential access.

Conclusion

The Water Lane Active Travel Scheme exemplifies best practice in data-driven design, creative engineering, and collaborative delivery. By thinking outside standard highway conventions, Citisense and the London Borough of Newham successfully delivered a pioneering diagonal crossing that solves complex spatial constraints, protects vulnerable road users, and sets a new benchmark for innovative active travel schemes across London.



OUR CAPABILITIES INCLUDE:



Design:

Craft a visionary plan that fits your objectives



Consultation & Engagement:

Get everyone on board with open communication and inclusive workshops.



Workshops with Pupils:

Empower young voices to shape their streets.



Traffic Orders:

Navigate the legalities with our expert guidance.



Monitoring:

Track progress and celebrate success with data-driven insights.



Project Management:

Keep your project on track, on time, and on budget.

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