URBAN CONNECTION
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SH45 Devon Street West Cycle Infrastructure
Transport Choices Programme

Post-Construction Design Review

Prepared for New Plymouth District Council

REVISION 1.1 - AUGUST 2025

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1 Introduction

1.1 Background

The State Highway 45 (SH45) Devon Street West and South Road corridor forms part of the New Plymouth District Council's (NPDC) Transport Choices Programme. This programme is aimed at enabling mode shift by improving access to safe, inclusive, and practical walking, cycling, and public transport infrastructure. It supports both national and local strategies for reducing transport emissions, improving public health, and providing alternative travel options for a broader range of users. The programme is co-funded through NZ Transport Agency Waka Kotahi.

The recently built infrastructure includes a mix of:

- One-way separated cycleways on both sides of the corridor
- Intersection upgrades
- Shared path sections
- Bus stop integrations, and
- Changes to on-street parking and traffic lane arrangements

The route provides a strategic connection between residential areas, schools, and employment centres, and interfaces with New Plymouth's existing active mode network, including the Coastal Walkway. The project seeks to provide for a wide demographic of potential users, with specific focus on the "interested but concerned" user group[1].

1.2 Delivery Constraints

The design and construction phases of the project were subject to several constraints, including:

- A constrained programme, with delivery deadlines aligned to national funding timeframes
- A modified delivery approach - Due to the shortened timeframes, some typical design documentation, such as formal design decision reports and documented departure approvals, were not undertaken at the time, however, the client was involved throughout the design process.
- Limited capital budgets, which reduced the extent of road widening and constrained the ability to fully deliver the preferred cross-section elements across all segments

[1] NZTA Cycle Network Guidance – People Who Cycle

- Changing design priorities as the project evolved, including revised bus stop treatments, stormwater management considerations, and network integration decisions

These constraints were acknowledged by the review team, as was the overarching intent to achieve as much alignment as possible with best practice within the practical limits of the corridor.

1.3 Scope of Review

This report presents the findings of an independent design review of the constructed infrastructure, carried out by Urban Connection Ltd. in accordance with the scope set out in the Offer of Service (dated 9 July 2025) and with reference to the Design Philosophy Statement (DPS), prepared by ViaStrada, Stantec and Bland & Jackson Surveying Ltd., and last updated 30 June 2025.

The purpose of the review is to:

- Assess the extent to which the constructed design aligns with the stated design intent and guiding principles in the DPS
- Evaluate compliance with applicable best practice guidance, including:
    - Waka Kotahi Cycle Network Guidance (CNG)
    - Pedestrian Network Guidance (PNG)
    - Public Transport Design Guidance (PTDG)
    - Relevant parts of Austroads and the Traffic Control Devices Manual (TCD Manual)
- Identify locations or elements where design departures, inconsistencies, or unintended outcomes are evident
- Provide a factual, independent record of the design performance to support Council's internal reporting and continuous improvement efforts

The review team has also been briefed on public feedback and concerns raised during and after the project's implementation. Specific feedback has not been provided, however, the following general concerns have been summarised:

- Feedback indicating that some precast separators have already been hit, possibly due to placement on curves or insufficient width and/or visibility.
- Concerns about bus stop layouts and varying treatments (in-lane vs indented) creating confusion for both cyclists and passengers.
- Community sensitivity around the removal of on-street parking, even where it has enabled cycleway improvements.

This design review considers those issues, particularly where they relate to design decisions, user experience, or the clarity and functionality of the completed works.

This review is not a safety audit or operational assessment, but a design review based on desktop assessment, site observation, and comparison with relevant guidance.

It must be noted that in all projects which seek to retrofit existing transport corridors and reallocate road space, there are a range of trade-offs, which includes the extent at which design standards can be upheld. Where we have identified design departures, trade-offs, or unintended outcomes, we have summarised these accompanied with our professional judgement as to the risk profile associated with that design element. It includes professional judgement, informed by the review team's awareness of broader strategic considerations and programme objectives, such as an emphasis on mode shift, safety and climate targets. We also consider network context, the practical constraints of delivery, the views expressed by stakeholders and the public during the project's rollout.

This design review should be read in conjunction with the recent Post-Construction Safe System Assessment (SSA) to provide a complete understanding of the corridor's performance.

2 Methodology

The review process was structured in three phases:

1. **Desktop Review**
    - Review of the Design Philosophy Statement (DPS)
    - Review of Issued for Construction (IFC) drawings and available supporting documentation
    - Comparison against relevant guidance documents
    - Identification of key departures, assumptions, and red flags for on-site validation
2. **Site Inspection**
    - Site visits conducted on 30th and 31st July 2025, including both daytime and night-time observations
    - Walk-through, drive-through, and ride-through (cycle) surveys of the corridor
    - Visual assessment of alignment, layout, surface condition, markings, signals, delineation, signage, and visibility
3. **Assessment**
    - Evaluation of the as-built infrastructure against the design intent and applicable guidance.
    - Recording of observations in a structured spreadsheet register (Appendix A) that documents the design element, relevant reference, guidance value, as-built condition, compliance status, risk rating, priority, and recommended action.
    - Categorisation of issues by theme (e.g., cross-section, intersections, bus stops, shared paths) for analysis and reporting.

3 Results

The design review found varying levels of design compliance across the corridor. While most elements aligned with the stated design intent outlined in the DPS, some areas showed partial or non-compliance with current guidance and in some cases departed from the DPS.

The detailed results presented Appendix A provides:

- Design Guidance Reference and Value – the applicable requirement(s) from relevant guidance documents, and the corresponding as-built measurement or condition.
- Compliance Rating – Yes, No, or Partial, with commentary explaining any departure or shortfall.
- Risk Rating – an assessment of the likely safety or operational impact (Low, Moderate, or High).
- Priority Rating – the suggested urgency for action (High, Medium, or Low), with a brief recommendation for intervention and/or improvement.

This structured approach ensures transparency in the review process and allows the findings to be interrogated in detail. It also provides a clear framework for decision-making, enabling the client to prioritise actions based on both risk and alignment with best practice.

3.1 Summary of Issues by Category

Below is a summary of some of the key issues identified separated by the various categories assessed.

Table 1-1: Summary of Findings

Category	Key Issues Identified
Network & Route Planning	• Corridor generally meets design intent and targets user needs, but with inconsistencies at transitions • Limited wayfinding and legibility • Some minor construction and finishing issues affecting comfort and safety
Cross-Section & Widths	• Localised non-compliance with absolute minimum widths • Pinch points created where multiple constraints coincide (e.g. medians, separators, drainage features)
Separator Placement	• Some separators misaligned, starting on curves, or placed at an angle • Inconsistent end delineation (mix of red paint, hazard markers, and safe-hit posts)

	• Minor impact damage observed.
Surface Condition	• Overall good, but isolated areas with loose chip, uneven surfacing, and service lids in cycle path; deep dish channels create hazards in narrow sections
Intersections	• Narrow cycle facilities at some crossings • Lack of clear lateral continuity or lane guidance • Some require lateral shifts without marked guidance
Bus Stops	• Inconsistent treatments (indented bays vs kerbside within cycle lane) • Lack of standardised cycle bypass provision • Some pinch points and visibility issues for both cyclists and bus passengers
Shared Paths & Footpaths	• Inconsistent signage and lack of direction for cyclists at off-ramps and shared path transitions
Wayfinding & Signage	• Minimal route confirmation signage • Limited advance wayfinding at decision points and transitions • Inconsistent application of shared path and cycleway markings

3.2 Compliance, Risk and Priority Results

Below is a summary of the compliance, risk and priority ratings from the design review. Overall, 36 design elements were summarised for review. The results show that while most elements are compliant or partially compliant, several non-compliant items remain, including some of moderate to high risk that should be prioritised for intervention.

Given the extent of the scheme, design elements are summarised rather than individually recorded. For example, the minimum traffic lane design width was 3.2m. On occasion, a width of 3m was observed at various sections through the scheme, however, the issue is only presented once at a summary level.

The brief recommendations provided in the spreadsheet outline initial steps for addressing each issue, ranging from minor low-cost adjustments to more substantive design interventions, and are not intended to be exhaustive.

Table 3.2-1: Summary of Compliance and Risk Ratings

Category	Breakdown	Count
Compliance	Compliant (Yes)	**18/36**
	Partial Compliance	**8/36**
	Non-Compliant (No)	**10/36**
Risk Rating	High	**3/36**
	Moderate	**7/36**
	Low	**8/36**
	N/A	**18/36**

4 Conclusion

The design review confirms that the SH45 corridor upgrade generally meets its stated design intent and delivers improved conditions for the target user group of “interested but concerned” cyclists. The review found several areas where treatments, widths, and other details could be refined to improve clarity, safety, and comfort. While most facilities meet or exceed applicable guidance, some localised non-compliances and inconsistencies exist, largely attributable to physical constraints, programme deadlines, and budget limitations.

This review is intended as an independent, factual assessment against current best practice. It recognises the context in which the project was delivered, including staged scope changes and a modified design process, which meant that some typical design documentation (e.g., formal departure reports) was not prepared at the time.

Many issues are minor and easily addressed through maintenance or targeted retrofit works. Others, particularly those affecting route legibility, delineation, and space allocation, will benefit from planned interventions to ensure the corridor functions effectively over its design life.

5 Recommendations

The full recommendations are provided in the Design Review Register (Appendix A). The key recurring actions are summarised below:

- Cycleway Width and Consistency
    - Reallocate space to narrow cycle lanes where possible.
    - Remove painted separators where they reduce usable width of cycle lane below guidance and revert to standard cycle lane if widening is not feasible.
    - Smooth and widen transitions on and off shared paths.
- Delineation and Separator Placement
    - Install flexible bridge end markers on all leading separators.
    - Add high-visibility markings or paint to separators that are prone to being struck.
    - Monitor separators at high risk locations such as curves, accessways, or where installed at an angle to traffic flow. Consider the removal or relocation of individual separators where deemed necessary i.e. where separators are frequently struck
    - Install raised traffic islands or physical guidance at conflict points with turning vehicles.
- Surface Quality and Drainage
    - Repair or reseal areas with loose chip, uneven surfacing, or poor ride quality.
    - Replace hazardous drainage features such as deep-dish channels and uneven lids with smooth cycle-friendly solutions.
    - Clear accumulated debris from drainage channels.
- Intersections and Lateral Continuity
    - Install edge lines or continuity lines where cycle lanes shift laterally, such as around bus stops.
    - Improve intersection guidance to maintain cyclist visibility and positioning.
    - Review turn filtering and protected movements at signalised intersections.
- Wayfinding and Network Integration
    - Provide additional route confirmation signage and advance wayfinding at decision points.
    - Include side-road ramp connections to support network integration.

- Parking and Setbacks
    - Review on-street parking locations for compliance with setback guidance at intersections and driveways.
    - Reassess parking near pedestrian crossings and refuges and remove where it reduces sightlines.
- Public Transport Interfaces
    - Review bus stop treatments to ensure consistency and clarity for all users.
    - Consider retrofitting boarding islands and cycle bypasses at high-use stops where space allows.

Appendices

Appendix A – Detailed Design Review Register

NPDC Design Review Register

CYCLEWAY DESIGN REVIEW REGISTER

Network and Route Planning

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Target User Type	Who is the cycle way designed for? Typically, the “interested but concerned” cyclists	The design is explicitly targeted at the “interested but concerned” cyclist demographic (riders who are willing to cycle if they feel safe and comfortable, but who are not confident riding in mixed traffic)	Designed for “interested but concerned” cyclists as per DPS	Y	N/A	N/A	N/A	No action required
Route Coherence & Legibility	Is the route continuous, direct, and intuitive for new users?	Route should be coherent, continuous, and direct, avoiding unnecessary detours. Legibility is to be achieved through consistent design language, alignment, and treatments so users can anticipate what is coming ahead	Continuous cycle route along SH45 Devon St West, with some inconsistencies	Partial	Route is generally continuous and direct, along the SH corridor. Some inconsistencies in cycleway width, delineation and transitions.	Low	Minor improvements to delineation and cycleway consistency (discussed below)	To be considered as part of future cycle projects.
Wayfinding Signage	Are direction signs, route names, and symbols present and clear?	Provide clear and consistent route confirmation and decision-point signage, integrated with existing local cycle network wayfinding	Minimal wayfinding	N	Lack of wayfinding and connection to wider cycling network and side roads noted	Low - Wayfinding and route legibility for users connecting to and from the wider cycling network	Consider wayfinding improvements and connection to wider cycling network (i.e. ramps for side road access)	No action required as a part of this project. To be considered as part of a wider wayfinding strategy.
On-Street Parking and Access	Has removal of on-street parking been considered and alternative provisions or access arrangements been made (i.e crossings to desired side)?	DPS states ~50% of on-street parking retained along corridor; removal targeted to sections where space required for cycleway width, separation, and safety buffers. Retention prioritised where feasible without compromising active mode and PT objectives.	On-street parking reduced or removed in sections to achieve required cycleway width and separation. Retained where practicable, with alternative provision in side streets. Removal consistent with DPS prioritisation of cycling/PT over parking. Some stakeholder concerns noted	Y	Note - parking removal significant in some sections, however additional pedestrian crossing points in locations with observed desire lines and demand, improving network permeability and safety for pedestrians	N/A	N/A	No action required.

Facility Selection & Cross-Section Design

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Cycleway Width	One-way vs two-way; forecast demand category	<150 cyclists/hr expected (DPS); 50km/h speed limit, 50km/h operating speeds, 60km/h design speed (motorists); 2.2m preferred, 1.6m absolute min; Where non-mountable kerb used, add 250mm to facility	Separated width ranges from 1.87m-2.12m, some as narrow as 1.6m for short sections; Precast semi-mountable separator used (varying widths)	Y	N/A Note - operational speeds have remained consistent with design speeds following construction	N/A	Reallocate space to cycle lane where possible	Cycle Lane widths have been maximised wherever possible to achieve minimum standards, however some sections are still narrow where space is restricted. No further action required.
Cycleway Width	On-road cycle lane width (not separated or buffered)	50km/h speed limit: Next to kerb or road edge: 1.6m min Next to parallel parking: 1.8m min Clearance from angled parking:	1.8m (parking width 2.0m) generally; Some very narrow sections of cycle lane with painted separator (e.g. CH1550 and CH3410).	N	Painted buffer/separator used in places to narrow existing cycle lane and retain full width traffic lane. This restricts actual width of cycleway and is generally not acceptable	Low - overall width still remains unchanged, however rideability is reduced and cyclists may avoid painted edge line. The two white lines do little to protect cyclists	Remove painted separator and reinstating existing cycle lane where cycle lane is under width and widening is not feasible	The painted buffer can still be cycled over if needed, so the useable width is not affected. The buffer acts as a visual guide to promote separation between vehicle traffic and cyclists. No action required.
Separator Width	Check width and placement relative to parking or traffic	Parking side: 0.8 m; Traffic side: 0.5 m; Min: 0.3 m	0.5m wide min precast separators	Y	N/A	N/A	N/A	No action required.

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Separator Height	Check height and requirements for mountable/non-mountable kerb separators	Mountable for waste collection, emergency access; High enough to deter motorists from driving over them; On roadway side >80mm; On cycleway side ideally <50mm or bevelled edge	120mm high with 45mm lip and bevel - precast design	Y	N/A	N/A	N/A	No action required.
Traffic Lane Width	Check width of lanes relative to parking, cycle lanes and bus movements	On bus routes, 3.2m min, min CL to separator width is 3.3m (incl. line marking); Typical - 3.5m desirable, 3m minimum; minimum width of parking and traffic lane combined is 5.5 m: 2 m parking and 3.5 m traffic lane (bus route) Bus route min 3.2m; Speed 50km/h High AADT >10,000	3.2m with flush median; Some widths around 3m (E.g. CH1000)	N	Narrow lane widths near other minimum cross section widths, reducing the overall width and compounding the issue	Low - Separation provided, and narrow lane width may encourage lower speeds. However, where on curves, nuisance strikes may be frequent	Additional delineation where separators are likely to be struck; Review lane widths and allocation of additional space as it becomes available	Narrow width sections to be monitored. Changes to be considered if the narrow widths become an issue. Removing the separation through narrow sections will likely promote increased speeds, whilst removing physical protection for cyclists. If the widths are an issue, then solutions should be considered on a case by case basis.
Other Lane Widths	Check width of lanes relative to parking, cycle lanes and bus movements	Auxiliary lanes/flush median RTB: desirable 3.5m, min 3m, abs min 2.5m; Flush median 1.5m-2.5m, min 2.2m to accommodate 1.8m refuge island	Aux lanes 2.5m-2.8m; Existing flush median RTB <2.5m Flush median >2m	Partial	As described, however some existing turn lane widths below specification	Low	Review auxiliary lane widths as part of ongoing maintenance and intersection improvement programmes	To be considered as part of maintenance programmes or other improvement programmes. The project scope does not cover existing widths for the median or auxiliary lanes.
Parking Widths	Check width of parking	2.5 ideal min, 1.9 abs min.	Parking width generally 1.9m-2m, some up to 2.5m (varies)	Y	N/A	N/A	Reallocate space to cycle lane where possible	where parking could be narrowed to provide extra width to the cycle lane, this has been done. No changes required.
Crossfall	Ensure slope is acceptable and does not exceed thresholds	1.5–4% desirable; >7% unacceptable	Generally acceptable; some locations at outer edge (near drainage channel) >7%	Y	N/A	N/A	Acceptable for retrofit situation. Consider widening of cycle lane where possible	No action required. Cycle lane is already widened where possible.
Surface Type	Material type and condition (smooth, no ponding or rutting)	Asphalt preferred; chipseal tolerated if smooth; High level of service	Combination of AC and chipseal	N	Loose chip, debris and poor existing seal condition in isolated locations	Moderate - Cyclists may lose traction and/or avoid the cycleway veering into the traffic lane	Repair/reseal areas with loose chip and poor surface condition, improve level of service; clear drainage channels of dirt and debris	To be considered as part of maintenance programmes.
Gradient Considerations	Steepness impacting speed/wobble; consider width adjustment on slopes	>4% may require width increase	Acceptable	Y	N/A	N/A	N/A	No action required
Drainage & Channel Detail	Ponding, grate placement, flow around separators	Dish channels discouraged; use cycle-safe grates; to match surface within 5mm	Primarily existing drainage (kerb and channel); Some improvements with cycle friendly grates	N	Drainage grates uneven in cycle lane (e.g. CH1370); Driveway crossings and culverts result in uneven surface, made worse where cycle lane is narrow (E.g. CH3065)	Moderate - Cyclists may fall and/or avoid the obstruction in the cycleway veering into the traffic lane	Repair/replace areas with hazardous drainage structures to provide smooth ridable cycleway	To be considered as part of maintenance programmes.
Line Marking	Cycleway line marking is marked and clear for all users, including edge lines, no-stopping, and cycle symbols	Edge lines; No-stopping lines (encouraged, and continuous); White cycle symbol at start and end of cycle lanes (noting 'special vehicle lane'); Green coloured surface (high risk locations)	White lines used around separators; Continuous no-stopping used with painted buffer/separators; Cycle symbols and green surfacing	Partial	Edge lines and continuity lines missing near where parking and bus stops introduce lateral shifts in the lanes	Moderate - Drivers and cycleway users may fail to notice or see separators at night or during low visibility conditions (i.e. rain)	Install edge lines and/or continuity lines where cycle lane shifts laterally around bus stops and parking	Where the cycle lane shifts laterally, edge lines to be provided, and end tratments applied to the start of separation where applicable.

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Separator Delineation	Separators to be clearly visible during the day and night and poor visibility (i.e. rain);	May include reflective paint, reflectors, or vertical elements such as flexi-posts or planter boxes; Match road marking colour where possible (i.e. white);	Separators painted white, leading separators infill painted red; bridge marker posts specified on leading end; red RRPMS on edge line	N	Inconsistent delineation of separator: some leading separators painted red; some use of safe hit posts or hazard markers, very few bridge end markers used (as specified); Red RRPMs used are clearly visible at night and effective	Moderate - Drivers and cycleway users may fail to notice or see separators at night or during low visibility conditions (i.e. rain), potentially striking the separator	Install flexible bridge end markers at all leading end separators as per design; Review areas where these are being struck frequently; Consider additional delineation on separators if they continue to be struck, such as additional high-visibility markings/paint; Install missing RRPMs where required	Agree with recommendation. Install flexible bridge end markers at all leading end separators as per design; Review areas where these are being struck frequently; Consider additional delineation on separators if they continue to be struck, such as additional high-visibility markings/paint; Install missing RRPMs where required
Separator Durability & Placement	Separators to be placed to avoid impact but strong enough for occasional impact (for expected road and vehicle use)	Separators to be securely fastened (bolted down), not adhesive; Adequately reinforced; High likelihood of impact areas (curves, accessways, start/end points) should have greater setback	Separators reinforced and bolted down; Generally placed away from traffic, however some placed on angles or near accessways	N	Separators placed on angles to approaching traffic and near accessways are likely to be struck; Abrupt start to island/separator at Morley Street	High - Although reinforced and bolted down, narrow separators likely to dislodge or break due to repetitive strikes, particularly if not clearly visible (as above)	Remove/relocate separators at high-risk locations such as on curves, near accessways and where installed at angles to traffic flow; or isolated/out of context; ensure they are clearly visible	These sections to be monitored. Changes to be considered if the separators become an issue. Removing the separation through these sections will remove physical protection for cyclists. If the separtors are an issue, then solutions should be considered on a case by case basis, such as increasing separator visibility, relocating separators, or removing separators if other options are not feasible and they become a safety issue.
Intersections, Driveways & Side Roads								
Design Element	**Checkpoints**	**Guidance Value**	**Design as Shown**	**Compliant? (Y/N)**	**Departure / Issue Description**	**Risk / Consequence**	**Recommendation**	**Client Decision**
Side Road Priority	Marked priority for cycles; STOP/give-way controls;. Kerb extensions;	Treatment dependent	Various side road controls; Traffic islands generally used on side roads for traffic calming (extensions and splitter islands); Some painted markings (flush islands); Cycleway marked with green surfacing across side road intersections;	Partial	While generally acceptable, the flush island at Kopiri Place is ineffective and traffic is entering the cycle lane to turn left	Low - low volume side road at this stage, however risk of conflict between LT vehicles and cyclists will increase following side road development	Install raised traffic island to guide left-turning traffic into Kopiri Place around cycleway separator	To confirm the left turn into Kopiri Pl is an issue and if so, physical measures to prevent vehicles using the cycle lane to turn left to be installed.
Side Road and Driveway Parking Setbacks	Ensures visibility for turning drivers and cyclists	30m approach side of side roads; 3m downstream, upstream varies (3m-8m)	Approx. 3m setback	N	Parking setback appears to not be met at various locations	Low - parking setback for downstream of driveways not met (opposing traffic flow)	Consider relocating/reviewing on-street parking locations where setbacks are not met	To be monitored and if there are issues, then these should be dealt with on a case by case basis. Removing parking without evidence will likely result in a lot of public push back against the cycle lane.
Tracking Design Vehicles	Has tracking been carried out where needed?	Use Austroads templates/auto tracking software	As shown in vehicle tracking plans	Y	N/A	N/A	Appear acceptable, but separators near critical turning locations to be monitored	separators near critical turning locations to be monitored

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Signalised Intersections								
Design Element	**Checkpoints**	**Guidance Value**	**Design as Shown**	**Compliant? (Y/N)**	**Departure / Issue Description**	**Risk / Consequence**	**Recommendation**	**Client Decision**
Left Turn Conflict Management	Protected signal phase, lateral shift, or mixing lane used appropriately?	Depends on volumes/layout	Separated cycle lane terminating before intersection, becoming typical cycle lane near intersection; LT traffic give way to cyclists signage in place; partial LT protection	Partial	Although acceptable, the partial protection means LT filtering allowed in one phase. Potential for left turn against cycle/pedestrian conflict (Morley Street).	Moderate - Although vulnerable road users involved, low speed environment and low likelihood of exposure	Review LT signal phasing and filtering. Consider providing protected movement only.	Intersection not specified. Cyclists are given time and space to merge with traffic on the approach to intersections when they do not have a priority phase, and LT filtering across a pedestrian movement is acceptable. Signalised interections to be monitored and if safety issues occur, then signal phasing an cycle protection to be investigated.
Right Turn Conflict Management	Signal phasing and filtering, lane movements,	Depends on volumes/layout	RT filtering provided (i.e. no RT signal)	Partial	RT filtering provided with limited guidance and visibility (Morley Street)	Low - Low speeds and likelihood of exposure	Review RT signal phasing and filtering, as well as visibility. Consider providing protected movement for RT, and additional line marking.	RT signal filtering to be monitored, but not currently an issue.
Hook Turn Boxes	Present, clearly marked and accessible for right-turning cyclists?	~2.5 m x 2.5 m (typical layout)	Hook turns present and of acceptable dimensions, with cycle symbols and green markings	Y	N/A	N/A	N/A	No action required
Advance Stop Boxes	Are cycle boxes used where applicable?	Refer TCD Part 5	Advance stop boxes present and of acceptable dimensions, with cycle symbols and green markings	Y	N/A	N/A	N/A	No action required
Bus Stops & Public Transport Integration								
Design Element	**Checkpoints**	**Guidance Value**	**Design as Shown**	**Compliant? (Y/N)**	**Departure / Issue Description**	**Risk / Consequence**	**Recommendation**	**Client Decision**
Bus Stop Type	Boarding island, in-lane stop, bus boarder - used appropriately?	Project prioritises in-lane bus stops and bus boarders rather than indented bays, and where the cycleway runs kerbside, the DPS specifies boarding islands with cycleway bypasses; However, some constraints mean this has not been implemented as per the DPS	Various types used, but generally kerbside within the cycle-lane, or kerbside bordered by cycle lane and indented, etc (as opposed to in-lane bus stops)	N	The project intent is island stops with cycle bypass (i.e., no stepping into the cycleway) as described in the DPS, however this is not what is shown in the IFC set or what has been constructed. It shows kerbside boarding at most locations resulting in a lower LOS for cyclists, prioritising vehicular traffic. Particular concern at CH3040 which has kerbside bus stop, and lateral shifts around putting cyclists abruptly near the through traffic lane.	High - cyclist vs through traffic and also bus stops (although infrequent)	Review bus stop design and PT usage strategy for this corridor and how it integrates with the network. Consider targeted improvements at higher risk locations, for example CH3040. Where there is enough width and frequent boardings, consider retrofitting boarding islands and cycle bypass as a staged option	Due to political pushback against in line bus stops, these are now kerbside. If budget is available and the in line stops are politically acceptable again, then these can be reviewed as potential improvements. For now, a cyclist can wait behind a bus at a bus stop, or overtake them and join general traffic for a short section.
Footpath/Island Width	Is the footpath or island wide enough for shelter/patrons and visible to cyclists?	1.5 m preferred; 1.2 m minimum	Generally 1.6–2.1m	Y	N/A	N/A	N/A	No action required
Cycleway Past Bus Stop	Is there sufficient width for bikes to pass safely behind stop?	≥1.5 m; ≥1.2 m general	Generally 1.6m, but does narrow to 1.2m in places and zero where bus stops in the cycle lane	Partial	Some very narrow cycle lanes past bus stops resulting in pinch points with passing traffic	Moderate - due to low exposure and likelihood event	As above, review and consider improvements to cycle LOS	Cycle Lane widths have been maximised wherever possible to achieve minimum standards, however some sections are still narrow where space is restricted. No further action required, however if issues arise at any location, then improvements to be considered on a case by case basis.

Design Element	Checkpoints	Guidance Value	Design as Shown	Compliant? (Y/N)	Departure / Issue Description	Risk / Consequence	Recommendation	Client Decision
Shelter Placement	Any conflict with sightlines or cycleway user visibility?	Ease of access, avoid blocking intervisibility	Some new shelters/proposed shelters and some bus stops with no shelters. Placement and visibility acceptable	Y	N/A	N/A	N/A	No action required
Pedestrian & Shared Spaces								
Design Element	**Checkpoints**	**Guidance Value**	**Design as Shown**	**Compliant? (Y/N)**	**Departure / Issue Description**	**Risk / Consequence**	**Recommendation**	**Client Decision**
Footpath Width	Unobstructed width throughout pedestrian paths	1.8 m preferred	Retained existing	Y	N/A	N/A	N/A	No action required
Pedestrian Crossings	Pedestrian/zebra crossings, legibility, location, visibility and spacing	≥2.5m wide crossing ASD of 48m-64m for 50-60km/h approach speed	Varies, but appears less than required ASD	N	ASD appears to not be met at pedestrian crossing locations due to nearby on-street parking (CH1410 and CH2970);	High - Risk of pedestrians and oncoming vehicles failing to see/stop resulting in a death or serious injury	Reassess parking near pedestrian crossing locations (including pedestrian refuges) and consider removing nearby parking	Changes to be considered to achieve required CSD or ASD at all crossing locations.
Kerb Ramps & Tactile Paving	Present, aligned with desire lines, slope compliant	<8% gradient; tactile surfaces aligned	As shown in plans	Y	N/A	N/A	N/A	No action required
Shared Path Interaction	Visual and tactile separation, user hierarchy clear	Only where volumes are low	As shown in plans	Partial	Transition to some off-road/shared path facilities is abrupt with a sharp lateral shift	Moderate - Risk of cyclist missing the transition or falling, particularly where channel crossing is uneven	Review transition details and consider extending width to provide smooth wide transition on/off shared path	Ensure transitions comply with minimum standards/requirements.
Streetscape & Operations								
Design Element	**Checkpoints**	**Guidance Value**	**Design as Shown**	**Compliant? (Y/N)**	**Departure / Issue Description**	**Risk / Consequence**	**Recommendation**	**Client Decision**
Lighting	Present at crossings, bus stops, and intersections?	Must meet AS/NZS lighting classes	As shown in plans	Y*	*A detailed lighting assessment was not carried out. However, the inspection during dark lighting conditions indicated acceptable levels of lighting along the corridor	N/A	N/A	No action required
Obstructions & Furniture	Bins, poles, landscaping clear of paths?	≥0.6 m clearance from edge	As shown in plans	Y	N/A	N/A	N/A	No action required
Rubbish Collection	Can bins be placed clear of cycleway? Are trucks safely straddling separators?	3 m clear setback suggested	As shown in plans	Y	N/A	N/A	N/A	No action required

Appendix B – Site Photos

Refer shared UCL Photos Folder

NPDC Transport Choices - SH45 Devon St W Design Review Report_Rev1.1

Document Status FINAL

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		Name	Signature	Name	Signature	Date
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