DEVELOPER & BUILDING INTEGRATION BRIEF / REVISION 03

# PARCELLIFT

*Dedicated vertical parcel delivery infrastructure*




A building-integrated system concept for residential and commercial developments.

Prepared by Rethela Technology · November 2026

Concept visualisation. Final product configuration and engineering details remain subject to approved design.

# Parcel movement is becoming a building-infrastructure issue.

Everyday deliveries add repeated movement, access coordination and parcel-handling work to high-rise buildings.

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| **Passenger-lift demand** | Couriers and delivery riders may share passenger elevators with residents, adding delivery-related trips to shared vertical circulation. |
| **Lobby congestion** | When residents are unavailable, parcels may accumulate at reception or in common areas and require staff attention and temporary space. |
| **Building access** | Frequent third-party access to residential floors creates additional coordination for security and building management. |
| **A recurring operating task** | Parcel receipt, notification, handover and collection are now routine building operations—not occasional exceptions. |

*Passenger elevators move people.*
*ParcelLift is designed to move parcels.*

ParcelLift is intended to provide a dedicated parcel movement path within the building, with controlled access at the destination floor.

# A dedicated carriage. A separate vertical path. Controlled floor access.

The current V4 architecture is described at concept level. It is not represented as a certified or fabrication-ready lift system.







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| **Dedicated vertical carriage** | A single carriage moves parcels along a dedicated vertical path, separate from passenger lifts. |
| **Guide-rail arrangement** | The carriage is guided along a fixed vertical support and guide arrangement. Final rail and support design is project-specific. |
| **Landing interface** | At the destination floor, the carriage aligns with an interlocked landing access interface. |
| **Resident authentication** | The resident uses a one-time passcode (OTP) to access the parcel after the system confirms the appropriate docking and access conditions. |
| **No upper-floor parcel buffers** | The V4 concept does not rely on separate parcel storage compartments at every upper floor. |

Terminology: this brief consistently uses **carriage** for the moving parcel carrier. Visuals are illustrative and do not define final mechanical construction.

# Four steps from courier deposit to resident collection.




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| **01 Deposit** | The courier, or authorised reception staff where the operating model permits, registers the destination and places the parcel into the carriage at the designated intake. |
| **02 Vertical movement** | After the access opening is secured and the required interlocks are satisfied, the carriage travels on its dedicated vertical path. |
| **03 Floor docking** | The carriage reaches and aligns with the selected floor's landing interface. The system confirms the required docking and access conditions. |
| **04 Authenticate and collect** | The resident receives a notification where that feature is implemented, enters the OTP and retrieves the parcel through the landing interface. |

**Design principle:** the landing interface must prevent access to the moving path and must only permit collection when the system is in its defined safe access state.

# Internal building integration

For new developments or existing buildings where a suitable internal location can be identified.




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| **Location planning** | Assess the building core, service zones, lobby or other suitable internal location without compromising circulation or required access. |
| **Floor interfaces** | Coordinate each served-floor interface with the corridor, lobby, staircase and adjacent architectural finishes. |
| **Structural coordination** | Establish the opening, support and fixing strategy with the project structural engineer. |
| **Services coordination** | Coordinate power, controls, communications and service access with the electrical and MEP design. |
| **Building operations** | Agree intake access, resident collection, security responsibilities, cleaning and maintenance access. |

The image is a design visualisation of a possible landing arrangement. It is not a dimensioned architectural or structural drawing.

# External building integration

For buildings where internal space is constrained, subject to site-specific feasibility and approvals.




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| **External location** | Assess available site space, façade relationship, access points and the effect on the building's external appearance. |
| **Independent support strategy** | A structural engineer must establish the support frame, foundations or base supports, attachment points and load path. |
| **Floor access connection** | Develop safe, weather-protected access between the external system and each served floor. The interface must not obstruct escape routes or required circulation. |
| **Exposure and durability** | Review rain, wind, corrosion, drainage, waterproofing, thermal movement and maintenance access. |
| **Permissions and neighbours** | Check planning, façade, common-area, fire-safety and society/owner permissions applicable to the site. |

External integration is an architectural option, not a pre-approved retrofit solution. Its feasibility depends on the building, site, structural design and local approvals.

# Three different dimensions must not be confused.

No numeric shaft, carriage, payload or installation dimension is published in this revision because the approval audit did not identify an approved V4 dimensional schedule.

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| Clear internal shaft envelope | The usable clear space inside the shaft after accounting for the internal boundary surfaces. | Set by the approved system arrangement, carriage envelope, guide rails, brackets, running clearances and maintenance requirements. |
| Structural opening | The opening formed in the slab, wall or building structure to accommodate the shaft and its interfaces. | Set by the architect and structural engineer using the coordinated system layout, construction build-up and required tolerances. |
| Overall installation footprint | The complete space occupied by the system, including enclosure, supports, brackets, access doors, controls and service clearances. | Set from coordinated general-arrangement drawings and project-specific installation and maintenance access requirements. |

## Required engineering information before dimensions are frozen

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| **Approved V4 GA drawing** | Plan, elevation and section showing carriage, guide arrangement, landing interface, intake and all relevant clearances. |
| **Carriage schedule** | External and internal envelope, usable parcel envelope, rated payload and loading arrangement. |
| **Vertical travel data** | Served floors, travel height, pit or base arrangement, top clearance and landing alignment. |
| **Structural loads** | Carriage and system dead loads, rated load, dynamic effects, guide reactions, support reactions and anchorage design. |
| **Electrical and controls** | Supply characteristics, drive and control architecture, backup and recovery strategy, isolation and maintenance provisions. |

**Do not use old website figures as engineering approval.** The audit identifies conflicting published values for shaft size, carriage envelope, payload, electrical supply, speed, tolerances and construction. These are intentionally omitted pending signed-off V4 drawings and engineering data.

# Approvals must be established for the actual site and final system classification.

The required permissions can vary with state, municipality, building type, installation location, whether the system is internal or external, and how the equipment is classified by the competent authority.

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| Building plan and development permission | Whether the proposed shaft, landing interfaces or external structure require a revised building plan, amendment or separate permission. | Project architect; local building permission authority / municipal body. |
| Lift / vertical-transport classification | How the equipment is classified under applicable state lift legislation and rules, and whether registration, licence, inspection or operating permission applies. | Qualified lift consultant; relevant state lift/electrical inspectorate or competent authority. |
| Structural design approval | Slab openings, foundations, supports, guide rails, anchorage, loads, wind/seismic effects where relevant and building impact. | Licensed/appointed structural engineer; project structural consultant. |
| Fire and life safety | Impact on fire compartments, fire doors, smoke control, escape routes, access for fire services and any required fire NOC or revised fire strategy. | Fire and life-safety consultant; local fire authority as applicable. |
| Electrical and MEP | Power supply, protective devices, isolation, earthing, cable routing, emergency operation and coordination with building systems. | Electrical/MEP consultant; electrical inspector or DISCOM approval where applicable. |
| External façade / common areas | Façade alteration, external projection, attachment, access bridges, drainage, waterproofing and common-area rights. | Architect, structural engineer, owner/society and local authority as applicable. |

This is a project review checklist, not a definitive statutory permit list. The project team must obtain written advice from the relevant consultants and competent authorities before construction or operation.

# Build an approval register before design freeze.

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| **1. Confirm jurisdiction and classification** | Identify the state, local building authority and competent lift/vertical-transport authority. Obtain a written view on the equipment's legal classification and applicable approval pathway. |
| **2. Freeze the design basis** | Prepare the approved V4 general arrangement, technical schedule, operating description, risk assessment and interface drawings. |
| **3. Complete building coordination** | Obtain architect, structural, fire/life-safety and MEP reviews. Record design comments and close them before construction documentation. |
| **4. Submit statutory applications** | Where required, submit revised building plans, lift/equipment applications, fire submissions, electrical approvals and external/façade permissions through the appropriate channels. |
| **5. Inspection, testing and handover** | Confirm whether authority inspection, load testing, commissioning certificates, operating licence, maintenance contract or periodic inspection is required before use. |

## Documents to maintain in the project file

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| Approved GA and engineering drawings | Defines the installed arrangement and design revision. |
| Structural calculations and drawings | Records loads, supports, anchors, foundations and structural sign-off. |
| Fire and life-safety review | Records the impact on compartmentation, egress and fire systems. |
| Electrical design and test records | Records supply, protection, isolation, earthing and test results. |
| Risk assessment and safety validation | Records hazards, safeguards, interlocks, emergency recovery and validation evidence. |
| Authority submissions and decisions | Records applications, NOCs, licences, inspection reports and conditions, where applicable. |
| Operation and maintenance documents | Records operating instructions, maintenance schedule, rescue/recovery process and responsible service provider. |

# The following require engineering definition and validation.

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| **Carriage guidance and restraint** | Guide system, alignment, retention, travel limits and prevention of unintended movement. |
| **Drive, braking and holding** | Drive selection, load cases, holding/braking strategy, stopping behaviour and power-loss response. |
| **Landing and intake interlocks** | Prevent access to the shaft or carriage path unless the system is in a defined safe state. |
| **Overload and parcel envelope** | Define rated payload and parcel size from approved design; provide detection or operating controls as required by the risk assessment. |
| **Emergency recovery** | Define safe recovery after power loss, jam, misalignment or equipment fault, including authorised access and manual procedures. |
| **Inspection and maintenance** | Provide safe isolation, access, inspection points, maintenance procedures and service responsibility. |
| **Fire and building interfaces** | Confirm enclosure, penetrations, fire-stopping, smoke and escape-route impacts with the fire strategy. |

**Safety status:** this developer brief describes a concept architecture. It does not certify compliance, establish a statutory classification, or replace a qualified lift/vertical-transport design, structural calculations, fire review, risk assessment, testing or authority approval.

# Register the building. Connect with the team. Assess the site. Propose the solution.

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| Project name and location; building use; number of towers and floors; current construction stage; new build or existing building; preferred integration approach. | Site plan; ground-floor plan; typical floor plans; sections; elevations; structural grid and framing; MEP drawings; available service-space or shaft information. |

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| **01 REGISTER** | Submit the basic project details through the ParcelLift enquiry page. |
| **02 CONNECT** | The team contacts the project representative to understand the building, objectives, constraints and available information. |
| **03 ASSESS** | The available drawings and site conditions are reviewed. A site visit and specialist input are arranged where needed. |
| **04 PROPOSE** | A project-specific technical and commercial proposal is prepared, identifying the recommended integration approach, interfaces, engineering inputs, approval pathway to be confirmed and implementation scope. |

Initial project registration can begin with basic building information. Detailed drawings can be shared as the assessment progresses, subject to the parties' agreed confidentiality arrangements.

# Make parcel movement part of the building plan.




## Start a project discussion

Register your building and share the available project details. ParcelLift will connect with your team, assess the building context and prepare a project-specific proposal.

**Project registration** www.parcellift.com/rfq
**Website** www.parcellift.com
**Email** enquiry@parcellift.com

### DOCUMENT STATUS & IMPORTANT NOTICE

Developer discussion document · Revision 03 · November 2026. Architecture-level description only. Numeric technical specifications are withheld pending approval. Rendered images are illustrative concepts and are not approved engineering drawings, construction documents or evidence of an installed system. All dimensions, loads, performance, statutory classification, approvals and implementation details must be confirmed for each project.