Light Rail (UK)

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Summary

"Very Light Rail Feeder, Docklands Light Rail Terminus, Thamesmead" Prepared by Light Rail (UK) / TfL Light Rail Solutions UK (2024) Ltd.

Strategic Context

- **DLR Extension Approved**: £1.7bn extension from Gallions Reach → Beckton Riverside → Thamesmead approved in the Autumn 2025 Budget by Chancellor Rachel Reeves.
- **Delivery Timeline**:
  - 2025–2027: Procurement, design, consents
  - 2028–2032: Construction and commissioning
- **Impact**: Unlocks 25,000–30,000 homes and 10,000 jobs across Thamesmead and Beckton Riverside.

VLR Feeder Opportunities

Recommended Corridors

1. **Abbey Wood Spine**
   - North–south VLR feeder from Thamesmead estates to Abbey Wood (Elizabeth Line).
   - Reduces bus reliance and improves east–west rail access.
2. **Beckton Riverside Link**
   - Shorthaul VLR shuttle from Thamesmead Town Centre to Beckton Riverside (DLR).
   - Enables clean cross-river interchange.
3. **Internal Thamesmead Circulator**
   - Loop or linear spine connecting estates, schools, retail, and waterfront to DLR and Elizabeth Line nodes.
4. **Woolwich–Abbey Wood Corridor**
   - TfL is consulting on bus priority and active travel upgrades.
   - VLR could replace or parallel bus lanes for permanence and compliance.

Risks & Considerations

- **Funding Alignment**: DLR extension not fully funded; VLR must be staged to avoid stranded assets.
- **Integration**: Seamless interchange with DLR and Elizabeth Line is essential for ridership.
- **Policy Fit**: TfL's current focus is bus lanes and active travel; VLR requires rescoping.

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Technical & Operational Summary

Vehicles

- Hydrogen or battery-powered VLR units
- Low-floor, 18–24m length, compatible with DLR wheel profile
- Fleet sizes: 4–8 units per corridor
- Depot: Thamesmead industrial land with hydrogen refuelling or opportunity charging

Operations

- Frequencies: 6–12 min peak, 10–15 min off-peak
- Hours: 05:30–00:30, aligned with DLR and Elizabeth Line
- Integration: Coordinated timetables, unified wayfinding and fares

Health & Legal Impacts of Bus Reliance (“Option Three”)

- **Fleet churn**: 3 bus fleet cycles over 30 years → high NEE (non-exhaust emissions)
- **Legal exposure**: Risk of breaching Clean Air (Human Rights) Bill and Bus Services Act 2025
- **Health burden**: £12bn+ NHS/Morbidity care costs projected over 30 years
- **Funding misalignment**: Bus-only strategies may struggle under Just Transition and clean air funding priorities

Tram/VLR Advantage

- One continuous fleet over 30 years
- Lowest NEE per passenger-km
- Strong legal and policy compliance
- Billions saved in health and environmental costs

Scoping Study Proposal

Corridors in Scope

- Abbey Wood spine
- Beckton Riverside link
- Internal Thamesmead circulator

Study Outcomes

- Preferred alignments
- Station list
- Demand modelling
- Operational plan
- Cost and schedule ranges
- Risk and consents strategy

Infrastructure & Integration

- **Track**: Street-running with reserved lanes; modular trackwork
- **Stops**: 24–30m platforms, level boarding, RTI, accessibility
- **River Crossing**: Lightweight bridge or shared transit crossing
- **Utilities**: Early survey and trenchless methods preferred
- **Interchange Design**:
    - Abbey Wood: Weather-protected, co-located with Elizabeth Line
    - Beckton Riverside: Cosigned platforms with DLR

Approvals & Delivery

- **Planning**: Borough approvals (Greenwich/Bexley)
- **Transport Orders**: Potential Transport and Works Act Order
- **Environmental**: Screening for river works and habitat
- **Safety**: ORR acceptance for VLR operations

Funding Pathways

- **Public**: TfL/GLA, borough contributions, UK infrastructure funds
- **Private**: Developer contributions (CIL/S106), value capture, HTaaS concession models
- **Phasing**: Spine first, circulator second, cross-river link aligned with DLR extension

Final Recommendation

A **north–south VLR feeder spine** linking Thamesmead estates to Abbey Wood and Beckton Riverside offers the strongest strategic, legal, and operational case. It delivers permanent, compliant access to both east–west and north–south rail networks while reducing bus reliance and health burdens.

A. Briefing Note

Thamesmead Very Light Rail Feeder – Strategic Summary

Prepared by: Light Rail (UK) / TfL Light Rail Solutions UK (2024) Ltd. **Date:** November 2025
Audience: TfL, GLA, borough planners, transport committees, regeneration stakeholders

Context

- The **DLR extension to Thamesmead** was approved in the Autumn 2025 Budget.
- It will deliver two new stations: **Beckton Riverside** and **Thamesmead**, via a **twin-bore tunnel** under the Thames.
- Construction begins ~2028, with opening targeted for ~2032.
- Unlocks **25,000–30,000 homes** and **10,000 jobs** across Thamesmead and Beckton Riverside.

VLR Feeder Opportunity

A **Very Light Rail (VLR) feeder system** offers permanent, zero-emission connectivity between Thamesmead estates and new/existing rail nodes. It complements the DLR extension and reduces reliance on buses.

Recommended Corridors

Corridor	Purpose	Interchange
Abbey Wood Spine	North–south feeder from Thamesmead estates to Abbey Wood	Elizabeth Line
Beckton Riverside Link	Short haul cross-river shuttle to Beckton Riverside	DLR extension
Internal Circulator	Local loop connecting estates, retail, schools, waterfront	DLR + Elizabeth Line
Woolwich–Abbey Wood Corridor	TfL bus corridor under consultation; VLR could replace or parallel	Bus + active travel

Strategic Benefits

- **Compliance**: Avoids legal risk under Clean Air (Human Rights) Bill and Bus Services Act 2025
- **Health**: Reduces £12bn+ projected NHS/Morbidity costs from bus reliance over 30 years
- **Capacity**: Higher throughput than bus; permanent infrastructure
- **Policy Fit**: Aligns with TfL, GLA, and national decarbonisation and regeneration goals

Risks & Mitigations

Risk	Mitigation
DLR extension not fully funded	Stage VLR delivery to align with DLR phasing
River crossing complexity	Early engineering and consents strategy
TfL bus corridor focus	Rescope consultation to include VLR
Community disruption	Modular track, proactive engagement, phased works

Recommendation

Proceed with a **scoping study** for three VLR feeder corridors:

- Abbey Wood spine
- Beckton Riverside link
- Internal Thamesmead circulator

Include demand modelling, cost ranges, integration strategy, and legal compliance benchmarks.

Number 4. Public Consultation Leaflet

A New Tram for Thamesmead – Have Your Say

Thamesmead is growing fast — thousands of new homes, new jobs, and new public spaces. But transport links haven't kept up.

A new **Very Light Rail (VLR)** system could change that.

What is VLR?

- A small, modern, zero-emission tram-style vehicle
- Quiet, clean, and reliable
- Designed for short local journeys
- Fully accessible for wheelchairs, buggies, and mobility aids

Where Could It Go?

We're exploring three possible routes:

1. **Abbey Wood Spine** Connects Thamesmead estates to Abbey Wood station (Elizabeth Line)
2. **Beckton Riverside Link** Crosses the Thames to connect with the new DLR extension
3. **Thamesmead Circulator** Loops through estates, shops, schools, and the waterfront

Why Are We Considering It?

- Faster, easier journeys
- Cleaner air and less traffic
- Better access to jobs, schools, and services
- Supports new homes and regeneration
- Reduces reliance on buses and cars

We Want Your Views

Tell us what routes, stops, and features matter most to you.

- What areas need better transport?
- What would make the tram easy to use?
- How should it connect with the DLR and Elizabeth Line?

What Happens Next?

A feasibility study will explore routes, costs, and benefits. Local people will be involved throughout.

A **visual schematic of the three corridors** ✅ A **one-page stakeholder Q&A** ✅ A **combined flyer + briefing pack** ✅ A **slide deck for public meetings**

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Thamesmead Tram Proposal – Public Flyer

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- Better access to jobs, schools, and services
- Supports new homes and regeneration
- Reduces reliance on buses and cars

We Want Your Views

Tell us what routes, stops, and features matter most to you.

A feasibility study is called for. Local people will be involved throughout.

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Briefing Note – Strategic Summary for Decision Makers

Thamesmead VLR Feeder – Strategic Opportunity

Prepared by: Light Rail (UK) / TfL Light Rail Solutions UK (2024) Ltd. **Date:** November 2025

Context

- The £1.7bn DLR extension to Thamesmead is approved and entering procurement.
- Unlocks 25,000–30,000 homes and 10,000 jobs.
- VLR feeders offer permanent, zero-emission connectivity between Thamesmead estates and rail nodes.

Recommended Corridors

Corridor	Purpose	Interchange
Abbey Wood Spine	North–south feeder	Elizabeth Line
Beckton Riverside Link	Cross-river shuttle	DLR extension
Internal Circulator	Local loop	DLR + Elizabeth Line
Woolwich–Abbey Wood Corridor	TfL bus corridor	Bus + active travel

Strategic Benefits

- Legal compliance with Clean Air (Human Rights) Bill and Bus Services Act 2025
- Reduces £12bn+ projected NHS/Morbidity costs from bus reliance
- Higher capacity and permanence than bus
- Aligns with TfL, GLA, and national decarbonisation goals

Risks & Mitigations

Risk	Mitigation
DLR extension not fully funded	Stage VLR delivery to align
River crossing complexity	Early engineering and consents
TfL bus corridor focus	Rescope consultation
Community disruption	Modular track, phased works

Recommendation

Commission a scoping study for:

- Abbey Wood spine
- Beckton Riverside link
- Internal Thamesmead circulator

Include demand modelling, cost ranges, integration strategy, and legal compliance benchmarks.

Stakeholder Q&A – Thamesmead VLR Feeder

Q1: What is the VLR proposal?

A zero-emission tram-style system connecting Thamesmead estates to Abbey Wood and Beckton Riverside, complementing the DLR extension.

Q2: Why does Thamesmead need this?

It's one of London's largest regeneration zones but suffers from poor internal connectivity and high car dependency.

Q3: How does it relate to the DLR extension?

It feeds into the new DLR station at Beckton Riverside and connects to the Elizabeth Line at Abbey Wood, creating a multi-modal network.

Q4: What are the environmental benefits?

- Near-zero non-exhaust emissions (NEE)
- Reduced particulate pollution
- Lower NHS and morbidity care costs

Q5: Is this better than buses?

Yes. Buses have high NEE, short lifespans, and legal risks under new clean air laws. VLR offers permanence, lower health burden, and higher capacity.

Q6: How much will it cost?

Indicative capital ranges:

- Abbey Wood spine: moderate
- Beckton link: higher (due to river crossing)
- Circulator: moderate

Q7: Who pays for it?

Blend of TfL/GLA, boroughs, developer contributions, and national infrastructure funds.

Q8: What's next?

A feasibility study to assess routes, costs, NEE, benefits and soft, and delivery strategy.