ACCESS & MOVEMENT

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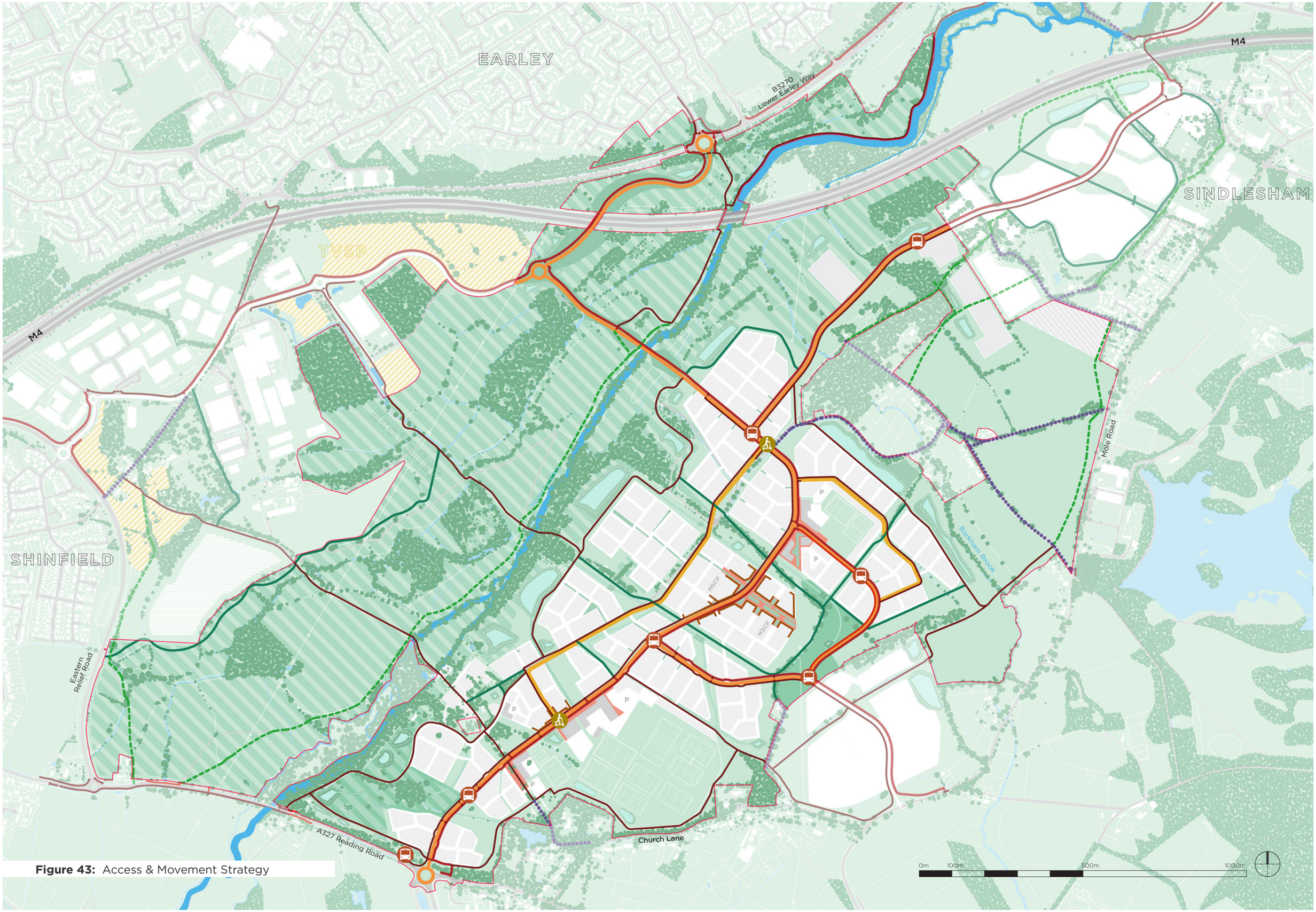


Figure 43: Access & Movement Strategy

ACCESS & MOVEMENT

Design Rationale

- Application boundary
- Proposed primary street infrastructure
- Proposed secondary street infrastructure
- Proposed unbound surface route
- Proposed mown path
- Proposed on-carriageway route
- Proposed segregated footway & cycleway (along primary street infrastructure)
- Proposed shared footway & cycleway
- Proposed footway (along primary street infrastructure)
- Gypsy and Traveller pitches
- Electrical substation
- Proposed Bus stop
- Proposed Mobility Hub
- EcoValley
- TVSP - Future employment parcels

A fundamental principle which has framed the development proposals for LGV is that the residential areas are to be **highly accessible** to the comprehensive range of land uses being promoted which includes primary and secondary schools, employment development, neighbourhood commercial and retail uses as well as recreational and leisure facilities. This philosophy helps to maximise the number of **shorter distance trips** that can occur and therefore capitalises on the potential for these journeys to be undertaken by **non-car modes** of travel. The provision of high quality active travel infrastructure along key routes then helps to ensure that the potential for maximising **walking** and **cycling trips** can be realised.

Travel by public transport then represents the preferred sustainable travel choice for longer journeys which lie beyond a reasonable walking and cycling distance. Accordingly, a comprehensive **public transport strategy** for LGV has been formulated to ensure that future residents and other users will benefit from a high level of accessibility to bus services that operate to key destinations beyond the development such as Reading and Wokingham town centres and rail stations.

The clear focus on encouraging travel by **sustainable travel modes** will help to reduce the quantum of vehicular movements that arise onto the local and strategic highway networks. Notwithstanding, whilst the proposals for LGV seek to maximise connectivity for non-car modes of travel, it is also important that a satisfactory level of **highway provision** is allowed for within the internal layout of the development which, in turn, affords satisfactory access arrangements onto the surrounding highway network.

Active travel routes

High quality cycling infrastructure

Green and healthy streets

Integrated public transport options

Active Travel Routes

Primary Street Infrastructure - illustrative section

Context

Active Travel has an essential role to play in supporting **transport decarbonisation**, enhancing accessibility and delivering improvements to people's health and well-being. Walking and cycling are the primary means of undertaking short journeys and hence accommodating such trips is an essential component of movement strategy for LGV which seeks to maximise sustainable forms of travel.

Accordingly, the Illustrative Masterplan has been developed in a manner that incorporates extensive walk and cycle facilities along key routes within LGV. Similarly, the high level of connectivity being promoted also provides direct and convenient connections into the existing and future active travel networks beyond LGV in order to **maximise sustainable travel** to local facilities and beyond.

The existing alignment of the **public rights of way** that route through the LGV are respected. Indeed, the approach taken is to enhance the existing networks which will be complimented by the new routes being created. Accordingly, the **networks of byways** that route through land to the east of the river Loddon will all be retained, meaning that the existing network of lightly trafficked surfaced links will help to supplement the extensive existing and proposed **car-free networks** being provided.

A range of provision will be promoted to reflect the differing character areas within LGV; the anticipated level of usage and also the nature of the trips that are being catered for. The following categories of provision are being allowed for:

- **Segregated and shared footway / cycleway** provision along the primary street networks.
- **Hard surfaced shared use footway / cycleways** along **key off-carriageway routes** catering for the main desire lines to the key land uses and coinciding with WBC's planned Greenway routes.
- **Hoggin surfaced shared use footway / cycleway** links through other areas of the site.
- **Mown Path** pedestrian links through the peripheral areas to deliver walking routes through the green spaces.

Footways & Cycleways along Primary Streets

High specification footway / cycleways will be provided along the primary streets throughout LGV. These segregated facilities will provide continuous walking and cycling links that will route through the heart of the residential areas to the east of the Loddon and also the employment areas at Thames Valley Science Park (TVSP) to the west.

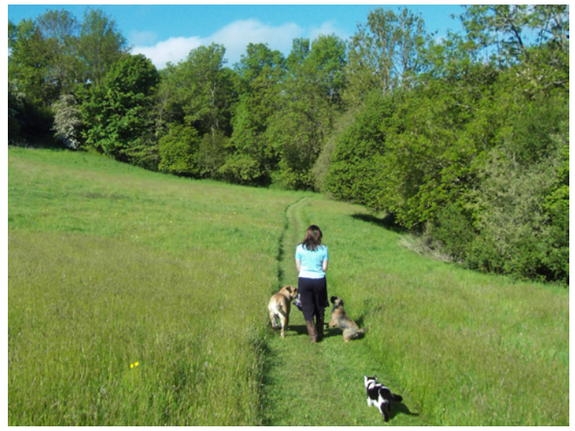
In many cases, these routes along the primary streets will be provided with a **macadam surface offset** from the carriageway by a **3m planted verge**. A **3m wide cycleway** will be provided adjacent to a **2m footway**, thereby enabling cycle and pedestrian movements to be fully segregated. Moreover, a **3m shared footway / cycleway facility** will be provided along the opposite side of the carriageway, again offset by a 3m verge accommodating street trees.

The typical configuration shown may however vary across the development in response to the different **character areas**

Shared Use Footway / Cycleway (Hard Surface)

Shared Use Paths (Unbound Hoggin Surface)

Shared Use Paths (Unbound Hoggin Surface)



Recreational Walking Routes (Mown Paths)

and **urban form**. For example, increased widths are being promoted provided in some parts of the main local centre and in the vicinity of the schools, whereas links across some of the green spaces may not necessarily include a shared use facility on the other side of the road, particularly if a parallel off-road route is being promoted nearby. Such detailed matters will be established within the Design Code and in full detail as reserved matters planning applications are progressed.

Shared Use Footway / Cycleway (Hard Surface)

These **3m wide shared use footways / cycleways** are generally being proposed along key routes that are away from the proposed street network, such as within the green space areas being provided throughout LGV.

The general expectation is for the off-road shared use links to be of macadam or similar construction, albeit it may be appropriate to dress the surface in a different material for some of the areas which route through green space. Again, the precise surface treatment may vary depending on the location and nature of the link, with such detailed matters to be established through the forthcoming Design Code and reserved matters planning application process.

Shared Use Paths (Unbound Hoggin Surface)

The next level of hierarchy for the Active Travel Links is the network of **off-road unbound surface routes** that are being promoted at the periphery of the development parcels and also for routes through the green spaces that may be more recreational in nature. These routes, which would typically be provided as **hoggin surfaces** atop a granular sub base, would be **3m in width** to allow both pedestrians and cyclists to use the facilities.

Recreational Walking Routes (Mown Paths)

The fourth tier of new routes that are being created comprise recreational walking routes that are generally formed of **2m wide mown paths** that typically follow the existing **Public Rights of Way** to the east and west of the Loddon. These routes will also be complimented by the additional ancillary walking routes provided within the areas of SANG that are also accompanying LGV.

Existing Routes to be Retained and Enhanced

The remaining route type comprises use of the existing tracks, byways and lanes which are being retained within the site. These are provided with **varying surface types** and typically comprise lanes which are very lightly trafficked and typically don't accommodate through movements. Accordingly, these existing assets will play a complimentary role in terms of catering for pedestrian and cycle movements across the site.

Other Considerations

As well as delivering a high quality and **comprehensive network** within Loddon Garden Village, the layout and treatment of junctions and crossing points throughout the development will reflect best practice guidance so that cyclists can negotiate such potential conflict points safely and conveniently without undue delay or deviation from the route.

Similarly, the provision of continuous full width segregated cycleways which facilitate **two-way movements** will help to avoid unnecessary complex transitions between the various hierarchies of cycleways and streets within the development. For the **secondary** and **tertiary streets** where some cyclists are likely to share the carriageway, use can also be made of modal filters such as **bollarded sections** to keep traffic volumes and speeds low whilst maintaining direct and convenient passage for cyclists.

The approach being taken will therefore ensure that the Active Travel networks are **coherent, direct, safe, comfortable** and **attractive** and thereby help to deliver a meaningful uplift in the prevalence of walking and cycling.

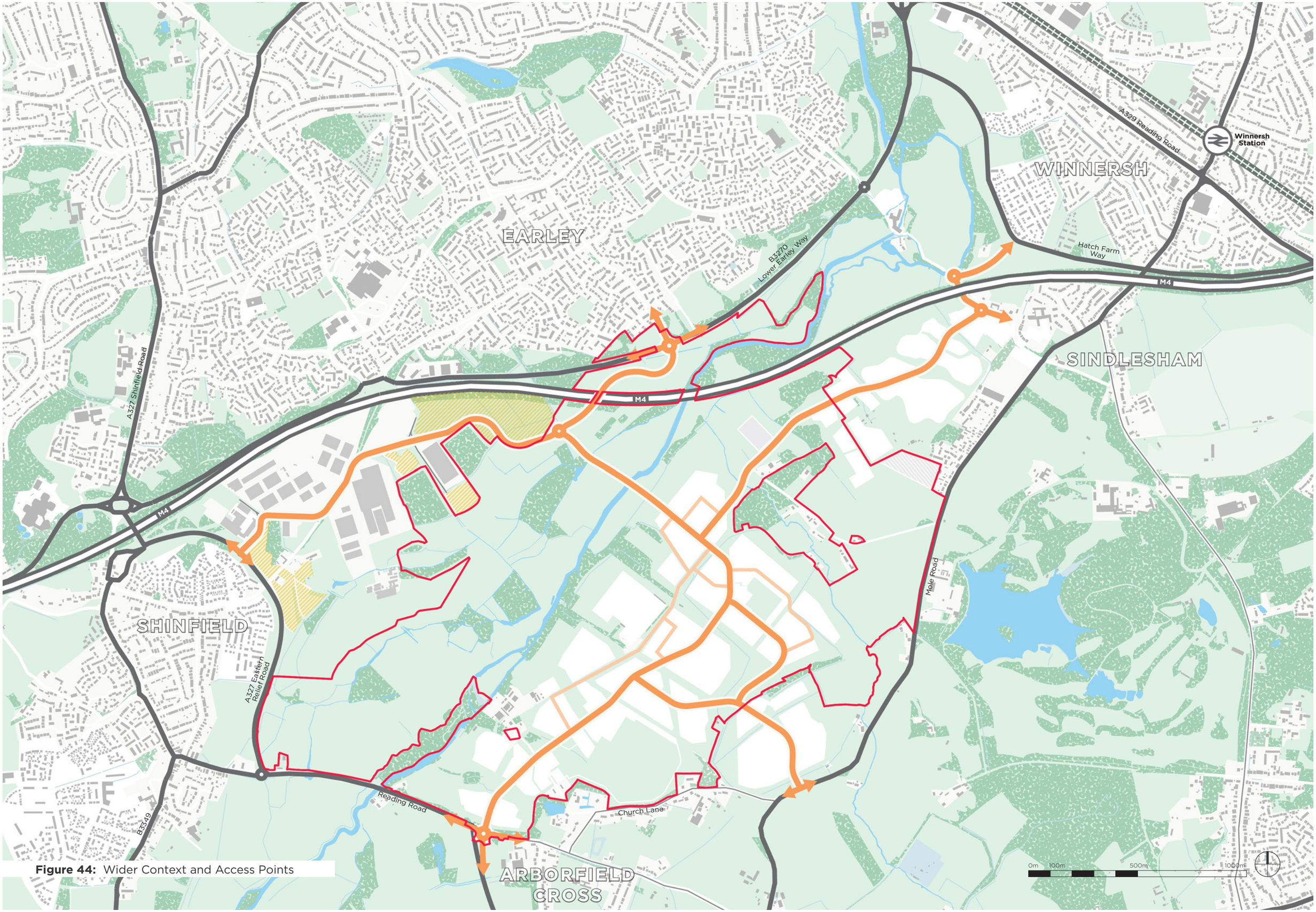


Figure 44: Wider Context and Access Points

Application boundary

Primary Access Road

Secondary Access Road

M4 motorway

Key highway route

Railway

Access Points

Context

A number of separate access points for vehicular and active travel modes are proposed which will be connected via Spine Streets along key routes as part of the key internal infrastructure within LGV.

The proposed **vehicle access arrangements** seek to make good use of the recently constructed highway infrastructure in the area, which includes the **Shinfield Eastern Relef Road, Arborfield Relief Road** and **Hatch Farm Way**, by promoting direct access onto the adjacent road corridors.

Five points of vehicular access for Loddon Garden Village are being promoted:

- Promotion of a 4th arm onto the A327 Arborfield Road / Observer Way roundabout.
- Improved Thames Valley Science Park / Shinfield Eastern Relief Road Roundabout
- New M4 motorway bridge crossing leading to reconfigured Lower Earley Way / Meldreth Way roundabout.
- New roundabout access onto Mill Lane at Sindlesham
- New priority junction onto Mole Road.

The configuration of the access points enables a high level of dispersal of development traffic to be achieved onto the adjacent corridors. Similarly, the promotion of new highway infrastructure within the site itself, such as the new river crossing of the Loddon and bridge over the M4 motorway corridor, will not only act to facilitate the broad dispersal of development traffic but also help to avoid extraneous routings that would otherwise occur along the road network.

Moreover, the creation of new connections between the B3270 Lower Earley Way, Arborfield Road and Hatch Farm Way corridors offers the opportunity for some background traffic to re-route through the development and thereby provide some relief to adjacent areas such as within and around Sindlesham and Shinfield.

Lower Earley Way / Meldreth Way roundabout

Arborfield Road / Observer Way roundabout

Northern connections to Lower Early Way and TVSP

The access proposals comprise a new connection onto Lower Early Way via a new southern arm onto the Meldreth Way roundabout. The diameter of the existing roundabout would be increased to enable the southern arm to be delivered as well as providing additional entry capacity along the eastern and western approaches in conjunction with improved pedestrian and cycle crossing provision. Further capacity improvements are proposed along Lower Earley Way as part of the package of off-site highway mitigation measures.

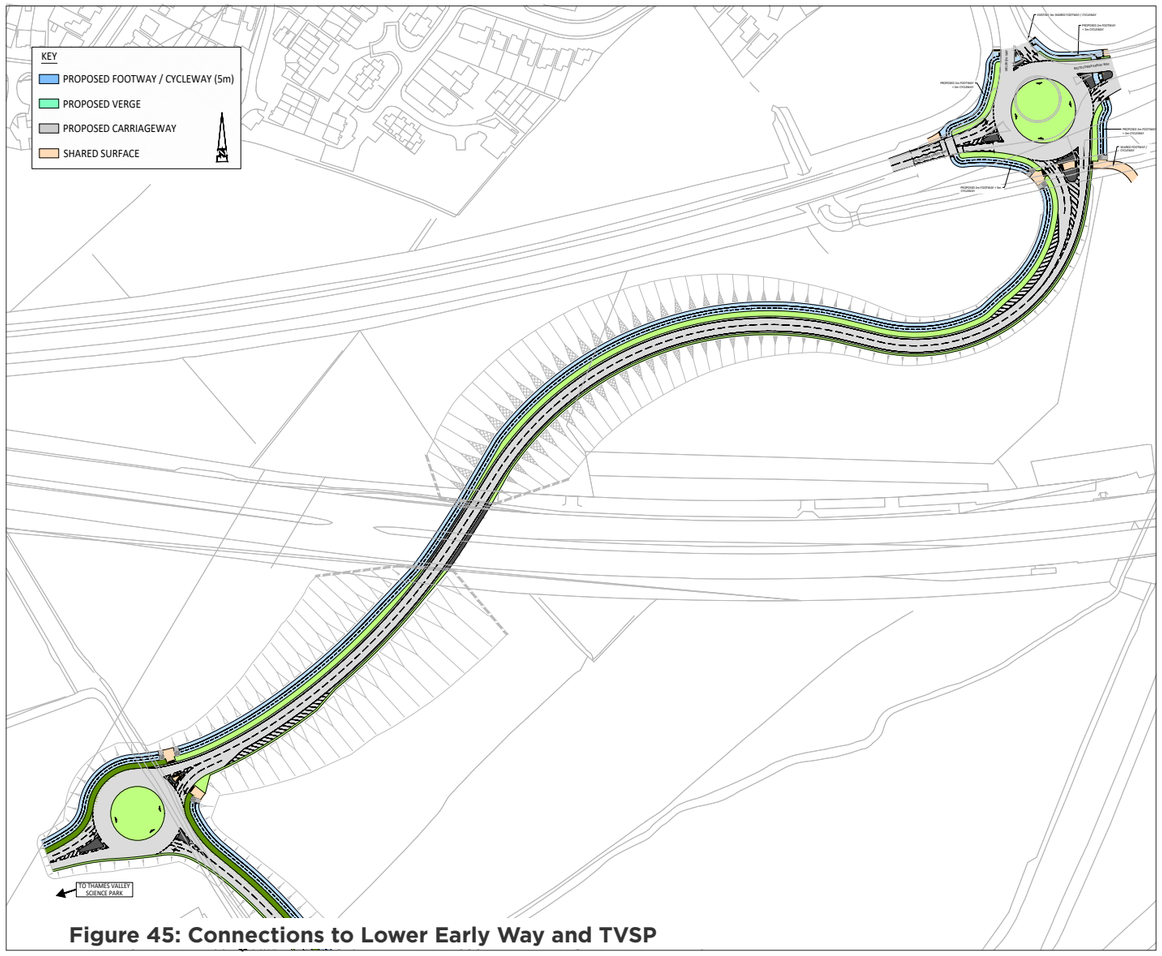
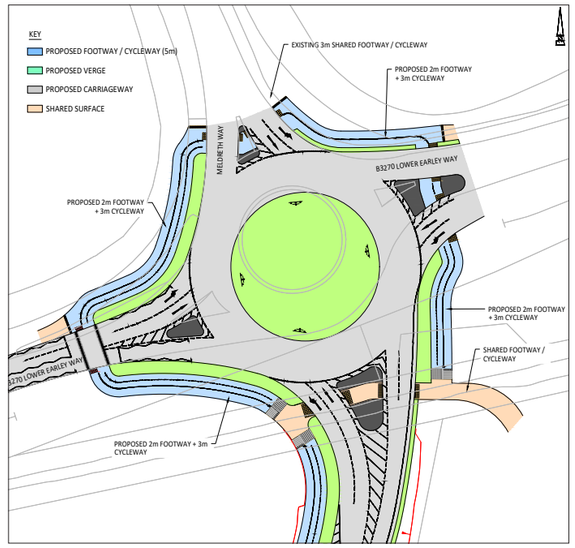


Figure 45: Connections to Lower Early Way and TVSP



Southern interface with A327 Arborfield Road

Access into the southern area of LGV will be provided by increasing the diameter of the Observer Way roundabout to enable a northern arm to be accommodated. The proposals also incorporate the promotion of pedestrian and cycle crossings along the Arborfield Road approaches to the roundabout which will provide a direct connection into the footway / cycleway link that runs alongside the Observer Way corridor.

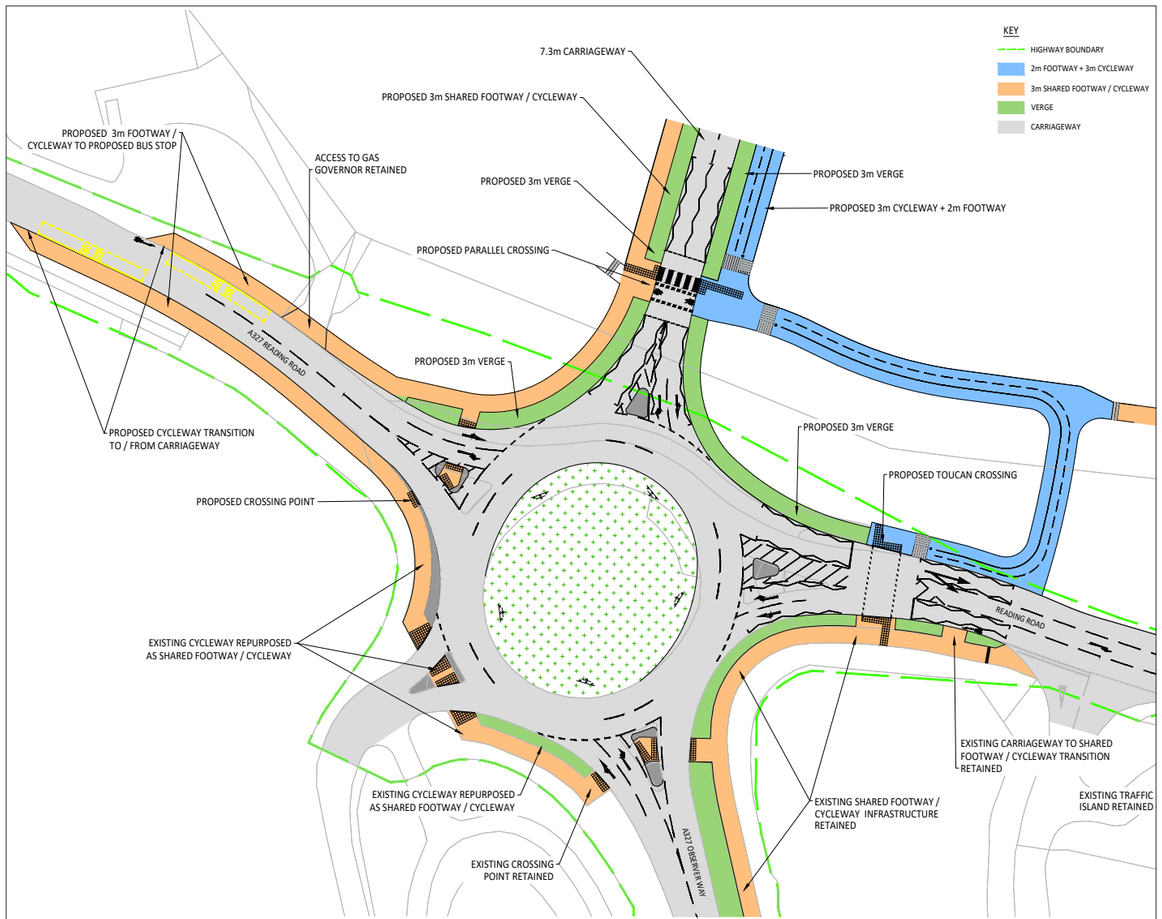


Figure 46: Observer Way Roundabout

Other Access Points

The internal road network will also facilitate onward travel to the southern eastern and north-eastern areas of LGV. Details of how these parcels then achieve access onto the wider networks at Mole Road and Mill Lane are set out in the separate planning applications being promoted by Gleeson Land and Hatch Farm Ltd.

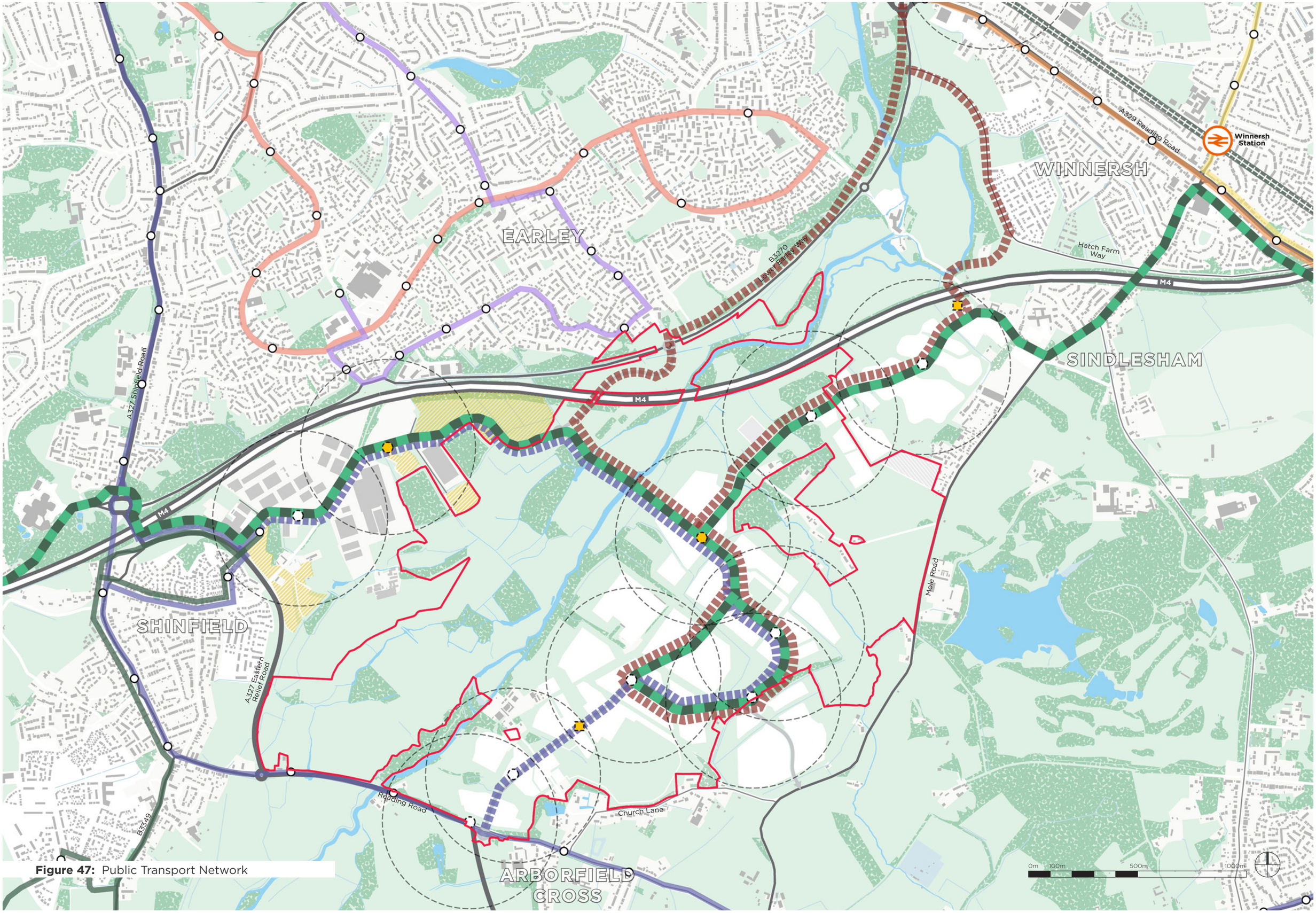


Figure 47: Public Transport Network

Public Transport

Application boundary

Bus Stop

Proposed Bus Stop

Proposed Travel Hub

Proposed Ancillary Travel Hub

400m walk catchment from bus stops

30min **Proposed Service**
Reading-LGV-Wokingham

20min **Leopard 3**
Reading-Wokingham

Leopard 3
Potential routing through site

15min **500**
Reading-Winnersh P&R (Mon-Sat only)

500
Potential routing through site

20min **21 Claret**
Reading-Rushey Way

60min **600 Park & Ride**
Reading-Spencers Wood

60min **19b**
Reading-Lower Earley

20min **4 / X4 Lion**
Reading-Bracknell via Wokingham

60min **128**
Reading-Wokingham

Travel by public transport modes represents the preferred sustainable travel choice for longer journeys which lie beyond a reasonable walking and cycling distance. Accordingly, a public transport strategy for the proposed development has been established to ensure that future residents and other users of LGV benefit from a high level of accessibility to bus services.

The key element of the public transport strategy is the introduction of new high quality bus services from the outset of development, operating to key destinations such as Reading, Wokingham and Winnersh. This will cater for trips by public transport to the significant employment, retail and leisure destinations within Reading and Wokingham town centres. Moreover, delivering good bus service connections between LGV and the rail stations at Winnersh, Reading and Wokingham will also facilitate a range of opportunities for onward travel along the national rail network. In addition, an extension of the new bus services that currently operate along the A3290 corridor between Reading and Winnersh Triangle Park & Ride is also proposed to offer greater connectivity into LGV.

The Illustrative Masterplan ensures that all areas of residential development are located within 400m of a bus stop served by the new services and that the primary street network is provided at a high standard which allows unrestricted movement for buses in both directions and safeguards alternative bus routings through LGV. A bus-only section along the internal street which routes across the greenspace to the south-east of the District Centre is proposed to help minimise bus travel times as well as providing an attractive corridor that is restricted to pedestrian, cycle and bus movements only.

The strategy proposes new services to be implemented in a phased manner in order to deliver a 30 minute frequency which increases to 20 minutes as the build-out of LGV development progresses.

A viability appraisal has been undertaken to ensure the proposals are tailored in a manner that are deliverable and financially sustainable in the longer term. Importantly, a flexible approach is proposed with the Strategy kept under review and allowed to evolve so that the phased introduction of the services can be delivered in a flexible manner that best responds to the prevailing needs at the time.

Parking Strategy

Objectives

LGV will incorporate a range of parking areas serving both the new homes and non-residential uses. The development will incorporate adequate, safe and secure parking for vehicles and bicycles in a discreet and sensitive manner to achieve the following aims:

- Minimise the visual impact of parked cars on the street scene.
- Provide residents and visitors alike with safe and convenient access to their vehicles.
- Ensure that the parked cars do not obstruct pedestrians and cyclists.
- Facilitate electric vehicle charging points at parking for all land uses and at mobility hubs.
- Provide high quality secure and sheltered parking for cycles throughout.

Residential Car Parking

The location of car parking can have a significant impact on the streetscape of a place. At LGV a careful balance will be achieved between providing safe and convenient parking, close to the dwellings they are intended to serve, alongside reducing the dominance of parked cars.

The approach to car parking is to avoid uniform solutions and instead incorporate parked cars in a number of different ways. This will help to disperse parked cars throughout the development and avoid monotony. The different parking types are likely to include:

- On-curtilage in the form of private driveways, garages and carports.
- Car parking courtyards to the side and rear of dwellings.
- On-street parking, primarily for visitors.
- Multi Storey car parking solutions for residential and mixed use areas within District Centre.

When determining the precise level and type of parking at the detailed design stage, consideration will be given to the housing types proposed. A design led approach will be adopted which seeks to provide parking that is well integrated and compliments, rather than dominates, the street scene.

The objective is to provide an adequate level of parking and, importantly, to ensure that the spaces that are designed for parking are used for parking, and that places where parking will cause problems are not going to be used for that purpose. This approach will help to prevent the problems such as cars parked indiscriminately which obstruct pavements and restrict access along a street.

Most car owners like to be able to see their vehicles and / or to know that they are securely parked. On plot parking satisfies this strong desire. Acceptance of this means that a significant element of the parking will be provided within the curtilage of dwellings through the use of on-plot spaces.

The quantum of car parking will accord fully with Wokingham Borough Council's (WBC) parking standards, which based on current guidance, typically result in the following allocated provision for new dwellings:

- 1 bedroom dwelling : 1 space per dwelling
- 2 bedroom dwelling : 1 to 2 spaces per dwelling
- 3 bedroom dwelling : 2 spaces per dwelling
- 4+bedroom dwelling : 2 to 3 spaces per dwelling

Unallocated and visitor parking will also be provided, predominantly through the use of on-street parking bays and within well designed secure parking courtyards. Again, care will be taken to ensure that the on-street parking areas are designed so that they do not impinge on the operation of the street or footways.

Non-Residential Car Parking

Given the large number of non-residential uses proposed at LGV, the design of the car parking that serves these uses will be a key element in defining the character of the development. Again, WBC's car parking requirements should be adhered to, taking the following design principles into consideration:

- Larger car parking areas, such as that serving the Leisure and Education areas, will be broken up by careful landscape design. This is likely to include trees,

On-street car parking

Cycle parking

Cycle parking

Electric vehicle charging points

other planting and varied porous surface materials to avoid an expansive, monotonous surface.
- Parking areas will be adequately lit in order to reduce opportunities for crime. The level of lighting however, should not be detrimental to the amenity of occupiers of nearby dwellings or to light-shy wildlife.
- Pedestrian movement across the parking areas will not be determined or restricted by vehicular movement requirements. Direct footways will connect with nearby buildings.
- All the parking areas serving the non-residential uses will include an appropriate number of accessible 'blue badge' parking bays located close to the building that the parking area serves.

Wherever appropriate, and particularly with the District Centre area, opportunities to deliver shared parking solutions for a range of co-located uses will be exploited. Such an approach can lead to significant reductions in the overall parking demand by realising efficiencies due to different land uses having different parking needs at different times. The reduced demand translates to more efficient use of land which frees up space to provide high quality landscaping and public open space are part of the public realm.

Cycle Parking

Cycle parking for all uses at LGV will be provided fully in accordance with WBC's parking standards. The precise level and type of parking will be determined through subsequent reserved matters applications when the mix of dwellings and other land uses is more defined. However, based on current guidance, the following cycle parking provision for new dwellings is typically:
- 1 bedroom dwelling : 1 cycle space
- 2 bedroom dwelling : 2 cycle spaces
- 3+ bedroom dwelling : 3 cycle spaces

Where dwellings are provided with a garage, the cycle parking can be provided within the garage providing that it is sufficiently sized to accommodate the storage requirements

For other dwellings, covered stores will be provided within the curtilage of the properties such as garden areas which will be accessed separately so that residents will not need to bring their bicycles through the house. Secure shared parking stores will be provided for apartment areas which will be well designed and conveniently located near entrances to the apartment blocks.

Cycle parking for the other land uses at LGV will be provided in accordance with WBC's parking standards. The quantum provided will therefore ensure that staff and visitors for all the non-residential uses will benefit from well-designed secure and sheltered cycle parking conveniently located to each. This provision will be supplemented by the ancillary cycle parking being provided at the Mobility Hubs located within the District Centre and Local Centre areas of LGV.

Electric Vehicle Charging Points

Electric Vehicle Charging Points will be provided for the residential dwellings and all other land uses throughout LGV.

All dwellings will benefit from at least one active charging point which will be located within garages or on the side of the house/garage for plots where an allocated parking space is provided within the curtilage of the property. Alternatively for houses where off-site allocated parking is proposed then active charge points will be provided in the form of a pillar for each dwelling.

Courtyard parking areas will also provide active charging points as well as passive provision in the form of ducting etc to enable further charging points to be readily implemented in response to rising demand. Parking areas of the non-residential uses will also be provided with active and passive electric charging points that will exceed the requirements of WBC's standards. Again, such provision will be complemented by additional charging points that will be located with the Mobility Hubs at the District Centre and Local Cente areas of LGV.

Mobility Hubs

A comprehensive Travel Plan will accompany LGV to actively promote sustainable travel amongst residents, employees and visitors. The process will include the implementation of a range of measures and incentives such a discounted travel on public transport and discounted vouchers for cycle purchase.

The travel planning initiatives will be complemented through the promotion of **Travel Hubs** which will be provided within LGV. Travel Hubs are centralised locations where various transportation modes and services converge to provide seamless and convenient mobility options for residents.

One of the main Travel Hubs will be located close to the District Centre area which is central to the residential parcels to the east of the Loddon, focusing on serving residents and visitors to LGV. A second main hub is to be located to the west of the Loddon within the expanded area of the TVSP and will focus on maximising sustainable forms of commuter travel to and from the employment uses.

Each of the main Travel Hubs will incorporate a range of facilities focused around a retail space with toilet facilities, a bus stop, wayfinding signage and covered seating. Cyclists would benefit from secure cycle storage facilities, maintenance equipment and scooter/cycle hire facilities whilst those travelling by car will benefit from electric charging vehicle bays, car club parking bays and drop off bays.

In addition to the two main Travel Hubs, an ancillary Travel Hub is also being promoted at the local centre which is promoted near to secondary school in the southern area of the development. This secondary hub will provide a bus stop, wayfinding signage, electric vehicle charging points and cycle parking to ensure residents within all parts of the proposed site can benefit from sustainable travel initiatives.

Lighting Strategy

As set out within Designs for Lighting's document, a Lighting Strategy has been developed to ensure compliance with British Standards, WBC Specifications and Institution of Lighting Professionals (ILP) guidelines, whilst recognising the environment surrounding the site.

The site classified primarily as an E3 environmental zone for a suburban location with moderate night time usage, leading to a P3 lighting class. An average luminance of 7.5 lux will be achieved, with a minimum luminance of 1.5 lux.

Column heights will vary across the scheme dependent upon the requirement, with 0 degree tilt to limit obtrusive light spill. Typically heights of 8m are proposed for the Primary Streets, with lower 6m heights for Secondary and Tertiary Roads. Luminaires will be positioned outside residential dwellings, prioritising placement along property boundaries and avoiding locations directly adjacent to windows and access, to preserve amenity and limit intrusive light.

Luminaire colour temperatures will be reduced to 2700K (Warm White) where appropriate to reduce glare, promote residential comfort, and importantly, to reflect environmental constraints such as ecology. Luminaires will be dimmable in accordance with WBC Street Lighting specification.

	Luminaire A	Luminaire B	Luminaire C
Supplier	Philips	Philips	Philips
Type	BGP703 DM11	BGP702 DM10 BL2	BGP703 DM11 BL1
Lamp(s)	LED-HB 5.2S 730	LED-HB 5.2S 730	LED-HB 5.2S 730
Lamp Flux (klm)	9.00	2.00	9.50
Maintenance Factor	1.00	1.00	1.00
No. in Project	7	2	2