AtkinsRéalis

Final Report

Warwickshire County Council

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UNIVERSITY OF WARWICK MULTI-MODAL TRANSPORT INTERCHANGE FACILITY – STRATEGIC CASE, FEASIBILITY AND DEMAND ASSESSMENT

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Executive Summary

The proposed University of Warwick Multi Modal Transport Interchange (MMTI) is a strategic infrastructure scheme designed to address existing transport challenges and support long term sustainable growth across the Coventry and Warwickshire sub region. The scheme responds to increasing travel demand driven by major housing, employment, and university expansion, alongside existing congestion and reliability issues on key corridors including the A429 and A46.

At present, the local transport network experiences significant peak period pressures, with congestion concentrated at critical junctions serving the University of Warwick and surrounding areas. Journey time variability, heavy reliance on private car travel, and limited competitiveness of public transport combine to constrain accessibility and reduce network resilience. Without intervention, these conditions are expected to deteriorate further as planned developments come forward as part of the South Warwickshire Local Plan (SWLP) process, risking both economic performance and environmental outcomes.

The MMTI provides a comprehensive, phased solution to these challenges by introducing a high quality, integrated transport hub capable of supporting multiple modes. The interchange is designed to intercept car based trips at a strategic point on the network before they reach the most congested urban approaches. This function is fundamental to reducing traffic volumes on constrained corridors, improving journey time reliability, and enabling a modal shift toward public transport and active travel.

In its initial phase, the facility is expected to operate as a bus based Park and Ride, capturing trips from the A46 and A429 corridors and providing efficient onward connections to key destinations such as Coventry city centre and the University of Warwick. Demand analysis indicates a strong underlying market for this function, with a significant number of car trips capable of being intercepted. The introduction of Very Light Rail (VLR) in a later phase is forecast to enhance this role further by improving service attractiveness, increasing intercept rates, and widening the operational catchment of the interchange.

Over the longer term, the addition of a heavy rail station will transform the interchange into a key regional and national gateway. Forecasts suggest that the rail element could generate substantial daily demand, supported by both the diversion of passengers from existing nearby stations and the creation of new trips enabled by improved connectivity. This reinforces the long term viability of the scheme and its importance within the wider transport network.

The design of the interchange reflects the need for flexibility and scalability, allowing capacity to be increased in line with demand as each phase is delivered. The site selected for the facility provides a strong strategic fit, combining proximity to major road corridors with suitable rail alignment and sufficient space to accommodate a fully integrated, multi modal hub. Its single land ownership enhances deliverability, while environmental constraints are considered manageable and can be addressed through appropriate design, mitigation, and landscaping measures. The overall approach ensures that the scheme can deliver early benefits while maintaining the ability to expand and integrate additional modes over time. Initial investment in Park and Ride infrastructure can provide immediate relief to congested routes and support improvements in bus service performance.

Subsequent enhancements, including VLR and rail integration, can be aligned with broader infrastructure programmes and evolving demand patterns, ensuring that the scheme remains responsive to changing circumstances. In the absence of such an intervention, the transport network is expected to face increasing congestion, declining reliability, and growing environmental impacts. These pressures would limit access to employment and education, particularly for those without access to a car, and would constrain the delivery of planned development. By contrast, the MMTI offers a robust and deliverable solution that enhances connectivity, supports economic growth, and contributes to a transition toward a more sustainable transport system. The MMTI represents a critical opportunity to transform connectivity within the Coventry–Kenilworth corridor. By integrating multiple transport modes, intercepting car-based demand, and supporting phased implementation, the scheme provides a

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practical and forward looking response to current and future transport challenges. Therefore it is essential that the outlined red line boundary area is safeguarded in the SWLP to ensure the opportunity to develop this MMTI is maintained.

1. Introduction

1.1 The project

Ahead of the South Warwickshire Local Plan (SWLP) examination, Warwickshire County Council (WCC) has commissioned AtkinsRéalis to develop and expand the evidence base for a new Multi-Modal Transport Interchange (MMTI) near Crackley on the Elephant & Bear railway line between Kenilworth and Coventry, close to the A429 Kenilworth Road and A46 trunk road. The MMTI is a key aspiration in both WCC's Local Transport Plan's Rail Strategy and Coventry City Council's Transport Strategy.

1.2 Project objectives and scope

The University of Warwick MMTI is a strategic transport initiative designed to support sustainable growth in the Coventry and Warwickshire sub-region. This report provides the evidence base to justify safeguarding land for the MMTI and to inform the SWLP examination. It evaluates the interchange's role in addressing current and future transport challenges, sets out phased delivery options, starting with a bus-based Park & Ride, followed by Very Light Rail (VLR) connectivity and ultimately a heavy rail station. This report also provides a high-level assessment of demand, costs, and strategic benefits. The findings will support Warwickshire County Council and partners in progressing the scheme through subsequent business case stages and securing funding for implementation.

1.3 Background

Coventry and Warwickshire are experiencing rapid economic and housing growth, driven by major developments such as the University of Warwick's campus expansion, the Coventry and Warwickshire Investment Zone, and large-scale housing allocations at King's Hill, Westwood Heath, and Kenilworth. The SWLP identifies Strategic Growth Area SG01, which alone could deliver over 4,000 new homes, alongside significant employment opportunities. These developments, combined with the region's role as a hub for advanced manufacturing and research, will substantially increase travel demand across the A46 corridor and southern Coventry.

Current transport infrastructure is under severe pressure, with congestion on key routes such as the A45, A46, A429, and Gibbet Hill Road impacting journey time reliability and limiting opportunities for sustainable travel. Forecast modelling indicates that without intervention, these issues will worsen significantly by 2041, constraining economic growth and undermining the delivery of housing and employment sites. The University of Warwick's growth plans, which anticipate up to 33,000 students by 2030, are particularly dependent on improved connectivity and mode shift away from private car use.

The MMTI proposal aligns with national, regional, and local policy objectives, including the Government's Net Zero commitments, the West Midlands Combined Authority's Movement for Growth strategy, and Warwickshire County Council's Local Transport Plan. It complements the Multi Modal Corridor (formerly known as A46 Strategic Link Road) programme and the Coventry South Transport Package, which aim to unlock development, reduce congestion, and enhance public transport and active travel network. The interchange will also integrate with future VLR routes and provide a foundation for a new heavy rail station, creating a seamless multi-modal hub.

To date, WCC has made an initial submission to Warwick District Council through the development of the SWLP process to safeguard an area of land for the future development of the MMTI facility.

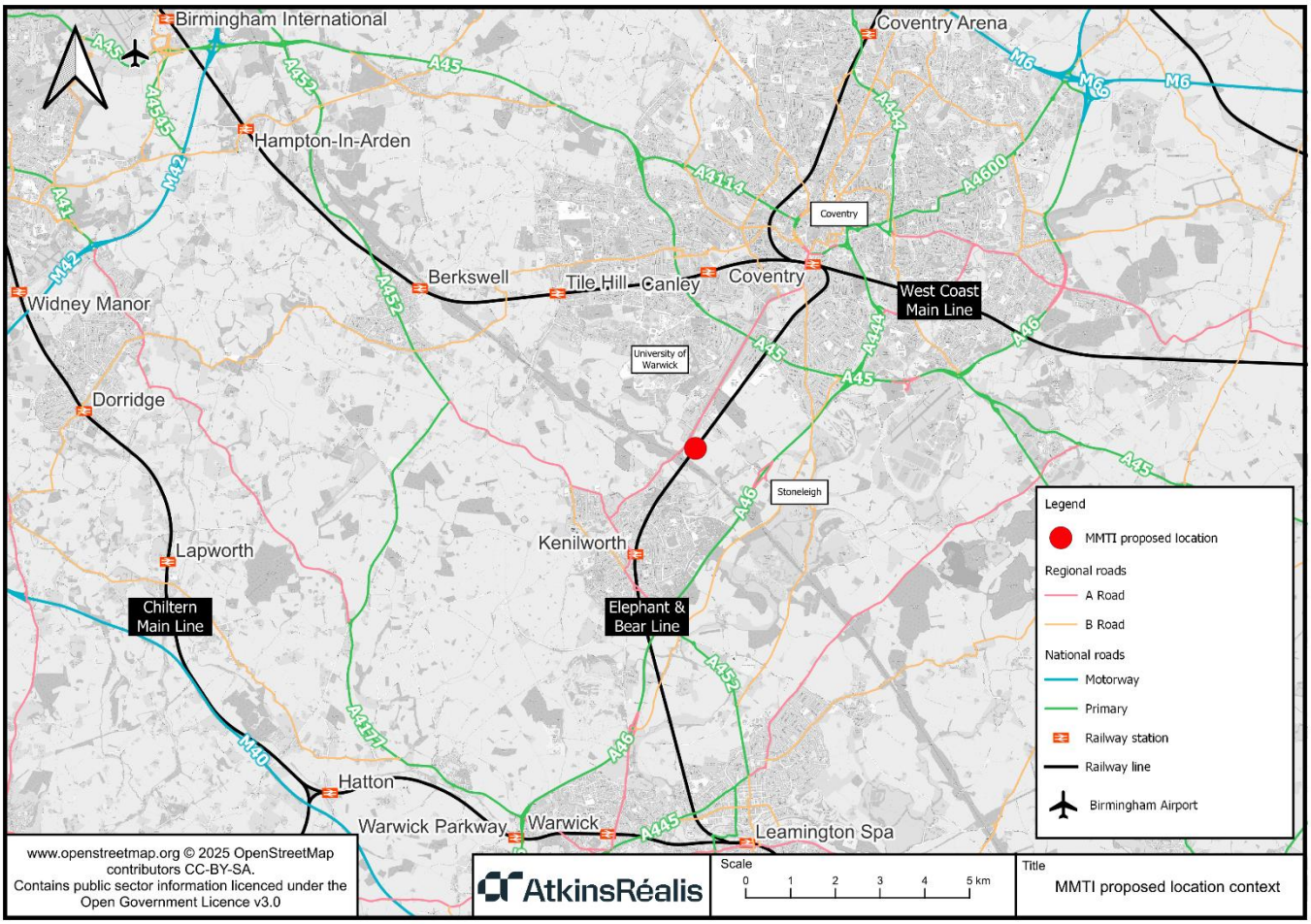
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2. Strategic Case

2.1 Setting the scheme

Strong connectivity to public transport will be critical to facilitate sustainable growth. WCC has made an initial submission to Warwick District Council through the development of the SWLP process to safeguard an area of land between Coventry and Kenilworth for the future development of the MMTI facility. This area of land is located immediately northeast of the intersection between the HS2 cutting alignment and the Elephant and Bear railway line, and approximately 1 mile southeast of the University of Warwick Central Campus. The context of the proposed location is outlined in Figure 2-1.

Figure 2-1 – MMTI proposed location context



2.2 Highway network

2.2.1 A429 Kenilworth Road

The proposed site location is bound to the west by the A429 Kenilworth Road, which runs north-south and would provide road and active travel access to the site. Kenilworth Road is a single-carriageway A-road forming a key transport link between Coventry and Kenilworth. Within the vicinity of the proposed interchange, it operates under a 50 mph speed limit and typically provides one lane in each direction, with lane widths of approximately three metres. Around the proposed MMTI location, the road does not have street lighting and only has footways on the western side of the carriageway (the side nearest to the University of Warwick campus).

The A429 corridor has recently undergone significant works associated with HS2, including bridge realignment, drainage improvements, and resurfacing, which have enhanced its structural integrity and surface quality. Strategically, the A429 serves as a critical approach route for the proposed interchange, providing capacity for multimodal connections and future enhancements to bus and active travel infrastructure.

2.2.2 A46

The A46 is a major strategic route in close proximity to the proposed University of Warwick MMTI, forming part of the strategic road network (SRN) in the West Midlands. It is a dual carriageway for most of its length in this area, typically providing two lanes in each direction, separated by a central reservation. The route is fully lit along key junctions and approaches, particularly near urban areas and major intersections.

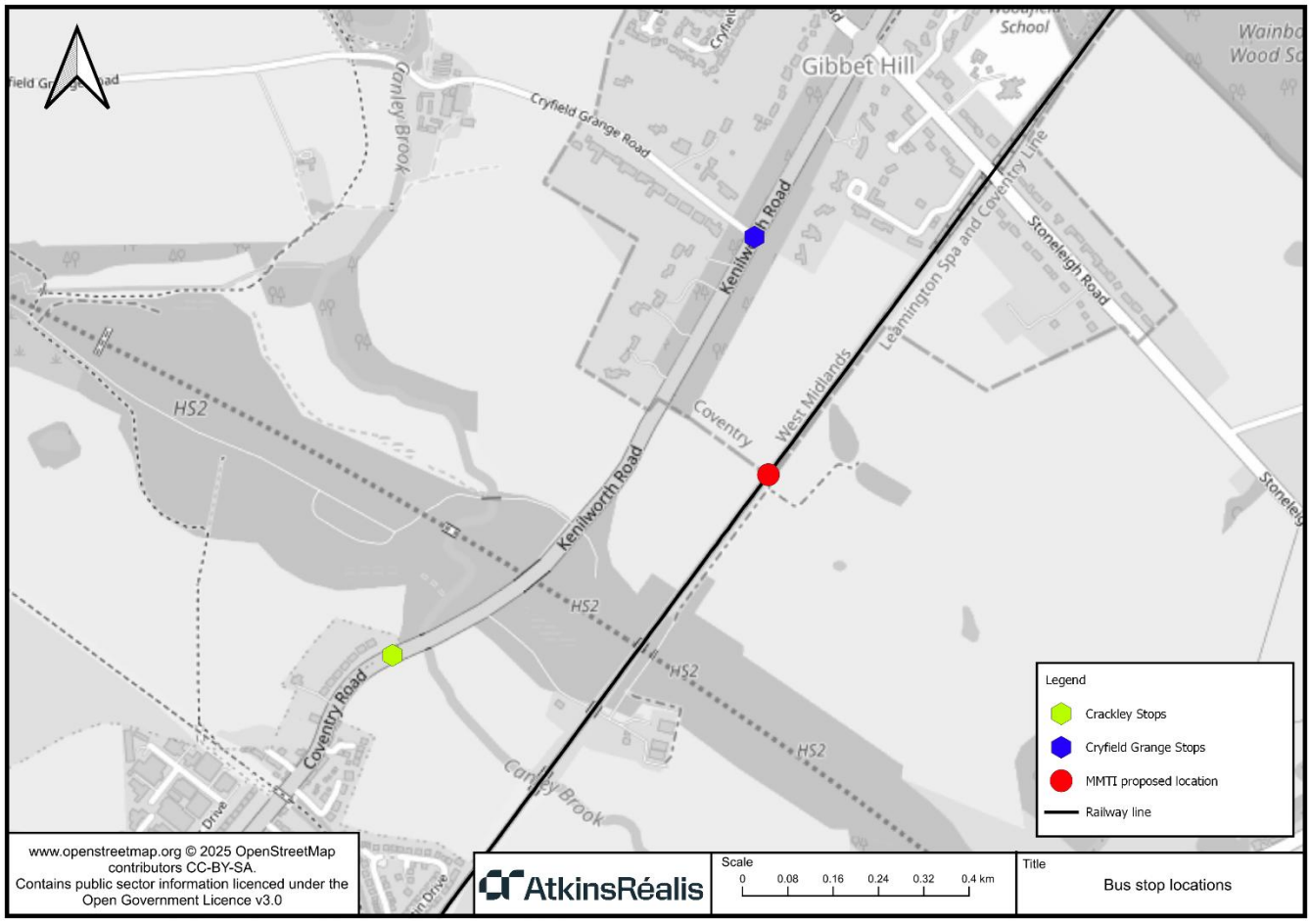
The A46 serves as a critical connector between the M40 to the south and the M6 and M69 to the north, facilitating regional and national journeys. It provides direct access to Coventry and links to Warwick, Leamington Spa, and Stratford-upon-Avon, supporting both commuter and long-distance traffic. This corridor accommodates a mix of journey purposes, and acts as a feeder route for traffic accessing the University of Warwick and surrounding employment hubs.

2.3 Bus connectivity

The MMTI development site is located along the routes of bus services 11 and X17. The development site is situated between two sets of bus stops; the Cryfield Grange Road stops to the north, and the Crackley stops to the south, all located on the Kenilworth Road. The closest are the Cryfield Grange Road stops, served by both the 11 and X17 services. The relative locations of the two sets of stops are shown in Figure 2-2.

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Figure 2-2 - Bus stop locations



Service 11 connects Leamington Spa High Street and Coventry Pool Meadow, with key calling points including Kenilworth, the University of Warwick, and Coventry Railway Station. The service calls at the Cryfield Grange Road stops three times an hour in each direction from 6:30 am to 1:00 am, Monday to Saturday, and twice per hour in each direction from 9:20am to midnight on Sundays.

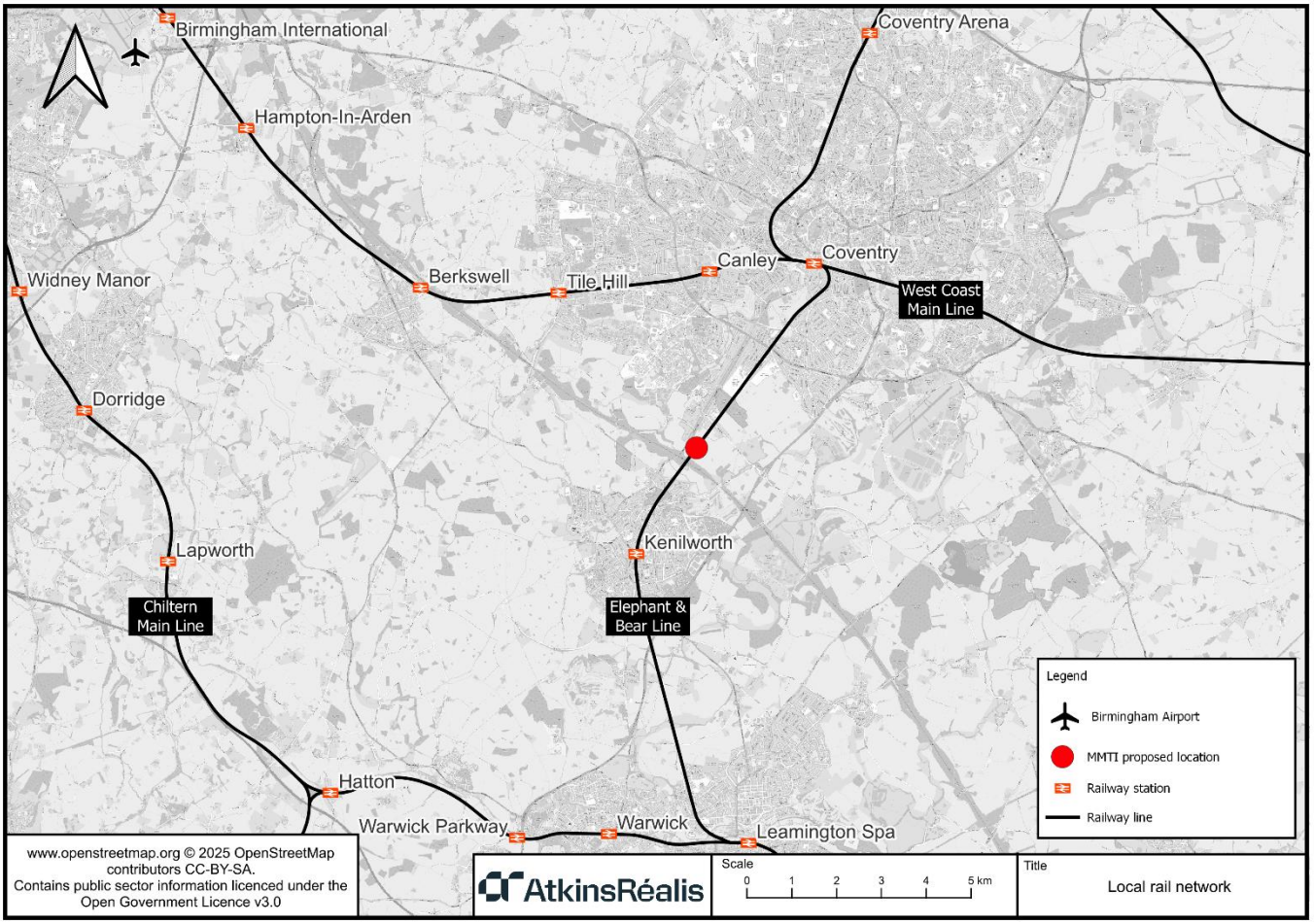
Meanwhile, the X17 connects Coventry and Warwick, and also calls at Leamington Spa, Kenilworth, and Coventry Railway Station. The X17 service calls at the Cryfield Grange Road stop twice an hour in each direction from 6:30 am to 21:00 pm, Monday to Saturday, and an hour in each direction from 8:40am to 19:30 pm on Sundays.

2.4 Rail connectivity

The station would be located on a currently single-track section of line between Kenilworth and Coventry, on the southern section of the Elephant and Bear Line. The Elephant and Bear line connects Leamington, Kenilworth, Coventry and Nuneaton, with Kenilworth being the current closest national rail station to the proposed MMTI site, situated two miles to the south. Kenilworth Railway Station is served by one train per hour in each direction, running between Nuneaton and Leamington Spa via Coventry.

Figure 2-3 shows the current rail network surrounding the proposed MMTI site.

Figure 2-3 - Rail network



The Elephant and Bear Line connects directly into the Chiltern Main Line at Leamington Spa, which offers onward rail travel to London, Birmingham, Oxford, and Warwick. The Elephant and Bear Line also connects to the West Coast Main Line (WCML) at Nuneaton and Coventry. At Coventry Station, onward rail journeys can be made to major UK commercial hubs including London, Manchester, and Birmingham. In addition, passengers can transfer from the Elephant and Bear Line service at Coventry for trains to Birmingham International Station, for Birmingham Airport, and HS2's Birmingham Interchange station in future. A new railway station at the proposed MMTI location would benefit from current and future national rail connectivity.

The southern section of the Elephant and Bear Line, between Coventry and Leamington Spa, also serves an hourly CrossCountry train in each direction, travelling between Bournemouth and Manchester Picadilly, calling at Coventry and Leamington Spa. In addition, the line serves cargo trains from national freight hubs including Southampton Docks and East Midlands Gateway. The southern section of the Elephant and Bear Line has built-in operational constraints due to the presence of single-track sections, although there are aspirations to delivery double tracking along this route to increase capacity in future.

2.5 Active travel network

2.5.1 Cycle routes

The proposed interchange lies along Coventry Cycle Route 10, a key corridor connecting Coventry city centre, Earlsdon, and Kenilworth, with direct links to the University of Warwick campus. Route 10 provides access to major destinations including Coventry Station, War Memorial Park, Central Six Retail Park, and the Kenilworth Greenway, offering potential for trips to access education and leisure. Coventry Cycle Route 10 is classified as a secondary signed cycle corridor, predominantly following on-road carriageways with wayfinding signage, but lacking continuous protected lanes or physical segregation for much of the route. Cycle Route 10 passes the proposed scheme location along Kenilworth Road, which runs north-south and is situated immediately to the west of the site boundary. Figure 2-4 is an extract of the Cycle Route 10 map produced by Coventry City Council[1], showing the route's proximity to the study area.

Figure 2-4 - Extract from map of Coventry Cycle Route 10 (Coventry City Council)



2.5.2 Pedestrian routes

Pedestrian footways along Kenilworth Road and Gibbet Hill Road connect the proposed site location to the University of Warwick central campus, situated approximately 1 mile to the northwest. The footway along Kenilworth Road is only present on the west side of the carriageway, and narrows in several locations across its length such that two wheelchair users would be unable to pass each other. There is no streetlighting, and there are no formal pedestrian crossing points on Kenilworth Road in the vicinity of the proposed interchange site. It is

[1] Other Coventry cycle routes – Coventry City Council

expected that the active travel infrastructure in the vicinity of the proposed MMTI will be significantly upgraded in conjunction with the interchange scheme, including the introduction of an eastern footway along Kenilworth Road.

2.6 Business strategy and wider strategies (policy rationale)

This section sets out the wider strategic and policy context relevant to the development of the MMTI and reviews key policy documents at national, regional/sub-regional, and local levels. It explains the strategic aims and responsibilities of WCC as the promoting authority and demonstrates how the proposed interchange aligns with these objectives.

WCC has a suite of local and regional planning and transport policies that guide decisions on infrastructure investment, ensuring schemes deliver sustainable growth, improve connectivity, and support modal shift. The MMTI must align with these policies and with broader strategies from Coventry City Council, Transport for West Midlands, and national government, particularly those focused on decarbonisation and integrated transport. Further information on planning and environmental specific policies is included in Section 3.1.2.

2.6.1 National

HM Treasury – UK Infrastructure: A 10 Year Strategy (2025)

The **UK Infrastructure: A 10-Year Strategy** is a national framework published by HM Treasury to guide long-term infrastructure investment across transport, energy, housing, and digital sectors. Its purpose is to provide stability, attract private investment, and ensure infrastructure delivery supports economic growth, environmental sustainability, and social inclusion. The strategy sets out clear priorities: driving productivity and regional growth, achieving net zero by decarbonising infrastructure systems, improving resilience to climate change, and creating a predictable pipeline of projects to encourage private sector participation.

The University of Warwick MMTI strongly supports these national objectives. By integrating heavy rail, Very Light Rail, bus, cycling, and walking, the interchange promotes modal shift away from private cars, reducing emissions and congestion in line with the strategy's clean transport and regional growth ambitions. Its phased delivery approach reflects the emphasis on scalable, place-based solutions that unlock housing and employment growth in the North of Kenilworth/South of Coventry area. The MMTI also complements national investment in rail capacity and electrification, providing a strategic hub that enhances connectivity to the A46 corridor and the wider Midlands network. In doing so, it contributes to the creation of sustainable, well-connected communities and supports the long-term vision for integrated infrastructure that underpins economic growth and net zero goals.

Department for Transport – Decarbonising Transport: A Better, Greener Britain (2021)

The DfT's "Decarbonising Transport: A Better, Greener Britain" is a Transport Decarbonisation Plan, setting out how the transport sector will achieve net zero emissions by 2050. It provides a comprehensive roadmap for reducing greenhouse gas emissions across all modes of transport, recognising transport as the largest contributor to UK domestic emissions. The plan is structured around six strategic priorities: accelerating modal shift to public transport and active modes, decarbonising road vehicles, transforming freight and logistics, embedding place-based solutions, positioning the UK as a hub for green transport technology, and reducing carbon in global transport sectors such as aviation and maritime.

Key policies include removing all diesel-only trains by 2040, delivering a net zero rail network by 2050, expanding electrification, supporting hydrogen and battery technologies, and investing in active travel and zero-emission buses. The plan also commits to reforming local transport funding, integrating decarbonisation into spatial planning,

and creating zero-emission transport cities. It emphasises co-benefits such as improved air quality, reduced congestion, and economic growth through green jobs and innovation.

The University of Warwick MMTI directly supports these goals by promoting modal shift from private cars to sustainable transport. By integrating heavy rail, very light rail, bus, cycling, and walking, the interchange reduces car dependency and emissions, aligning with priorities for active travel and public transport. It also contributes to place-based decarbonisation by embedding sustainable mobility within campus development and improving connectivity to regional rail corridors. The project is phased to deliver short-term bus-based Park and Ride, medium-term Very Light Rail, and long-term heavy rail services, ensuring scalability and resilience. Demand forecasting and strategic case development will demonstrate how the interchange can intercept car trips along the A46 corridor, support growth in the North of Kenilworth/South of Coventry area, and accommodate the University's expansion. By enabling seamless integration with local and regional networks, including future electrification and Midlands Connect ambitions, the MMTI complements national commitments to expand rail capacity, accelerate modal shift, and achieve net zero by 2050.

Department for Transport – Gear Change: A bold vision for cycling and walking (2020)

The DfT's 'Gear Change: A Bold Vision for Cycling and Walking' is a transformative plan to make active travel the natural choice for short journeys in England. It aims to tackle pressing societal challenges such as poor air quality, climate change, congestion, and physical inactivity by embedding cycling and walking at the heart of transport policy. The vision is for half of all journeys in towns and cities to be walked or cycled by 2030, supported by £2 billion of investment and a new national design standard enforced by Active Travel England. This represents a step-change in approach, moving beyond incremental improvements to deliver high-quality, continuous, and safe infrastructure that treats cycling as mass transit.

The strategy is structured around four themes: creating better streets for cycling and people, integrating active travel into transport and planning decisions, empowering local authorities, and enabling and protecting cyclists. The proposed University of Warwick MMTI strongly aligns with these themes by embedding active travel within a major regional transport hub. The interchange will provide high-quality walking and cycling connections to campus and surrounding developments, complementing bus, Very Light Rail, and heavy rail services. By reducing car dependency and facilitating first- and last-mile journeys through safe, direct routes, the MMTI supports the Gear Change ambition for healthier, greener communities.

The interchange is expected to integrate into the Coventry City Centre to University of Warwick cycle corridor, identified as a priority route for improvement in the Transport for West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP). This 4. 9 km scheme aims to deliver segregated cycle lanes, improved crossings, and wayfinding, creating a safe and continuous link between Coventry city and the campus.

Department for Environment, Food and Rural Affairs: Clean Air Strategy (2019)

The Clean Air Strategy 2019, published by the Department for Environment, Food and Rural Affairs (DEFRA), sets out a comprehensive framework to tackle air pollution across all sectors of society. It identifies air pollution as the largest environmental health risk in the UK, contributing to thousands of premature deaths and chronic illnesses annually. The strategy commits to legally binding targets to reduce emissions of five key pollutants. Objectives include protecting public health, safeguarding sensitive habitats, and driving clean growth through innovation and investment in low-emission technologies.

Key policies focus on reducing emissions from transport, domestic heating, agriculture, and industry. Measures include phasing out diesel-only trains by 2040, promoting active travel, prohibiting the sale of polluting fuels, and mandating low-emission farming techniques. The proposed University of Warwick MMTI can make a significant contribution to these goals by promoting modal shift from private cars to sustainable transport. Located on the Coventry–Leamington rail corridor, the station will act as a gateway to the university's central campus and

surrounding developments, reducing reliance on single-occupancy vehicles and alleviating congestion on the A45/A46 corridor. Integration with bus services, Very Light Rail, and proximity to defined cycle routes will encourage active travel and low-emission journeys. By supporting park-and-ride facilities and future heavy rail services, the scheme aligns with the Clean Air Strategy's objectives to cut transport emissions, improve air quality, and create healthier, well-connected communities.

Department for Transport – Bus Back Better: National bus strategy for England (2021)

The Bus Back Better: National Bus Strategy for England sets out the Government's vision to transform bus services as a central pillar of sustainable transport and economic recovery. Its overarching aim is to make buses an attractive alternative to private cars by delivering services that are more frequent, reliable, affordable, and integrated.

The strategy's objectives include reversing decades of decline in bus patronage, supporting modal shift to reduce congestion and carbon emissions, and promoting social inclusion by connecting communities to jobs, education, and essential services. Local Transport Authorities (LTAs) are required to establish Enhanced Partnerships or franchising arrangements and publish Bus Service Improvement Plans to access funding. These plans must demonstrate how services will integrate with rail, cycling, and walking networks, provide evening and weekend coverage, and deliver better connectivity for rural and suburban areas through innovations such as demand-responsive transport. The strategy also emphasises the role of buses in achieving Net Zero, improving air quality, and levelling up regional economies.

The proposed University of Warwick MMTI aligns strongly with these goals by creating a hub that integrates rail, bus, and active travel modes. Its design can facilitate seamless interchange between train services and local bus routes, supported by real-time information and unified ticketing, reducing reliance on private cars for campus and regional access. By incorporating space for bus priority measures, electric vehicle charging, and future Very Light Rail connectivity, the scheme promotes sustainable travel and supports the strategy's ambitions for decarbonisation and inclusive mobility. Furthermore, its proximity to major employment and education centres positions it as a catalyst for mode shift, helping to deliver the objectives of Bus Back Better in the West Midlands.

2.6.2 Regional

Midlands Connect – Strategic Transport Plan (2022)

The Midlands Connect Strategic Transport Plan (STP) sets out a long-term vision for transforming transport across the Midlands. The plan focuses on three overarching priorities: creating a fairer transport network that levels up opportunities, delivering greener solutions to achieve net zero, and building a stronger economy through improved connectivity. It identifies strategic corridors and hubs, promotes integrated transport solutions, and prioritises investment in both road and rail infrastructure to meet future demand and sustainability goals.

Although the STP does not explicitly reference the MMTI, the project aligns closely with its strategic objectives. The interchange supports the STP's ambition to reduce car dependency and encourage modal shift by providing seamless connections between bus services, rail links, cycling facilities, and emerging mobility options. This integrated approach reflects the STP's emphasis on multi-modal connectivity and its commitment to improving access to major economic and educational centres. By enabling sustainable travel choices for students, staff, and visitors, the interchange contributes to the STP's decarbonisation goals and its vision for a greener transport system.

The interchange also advances the STP's goal of creating a fairer network by improving accessibility for those without access to private vehicles, thereby reducing transport inequality and supporting social inclusion. Furthermore, it strengthens the regional economy by enhancing connectivity to University of Warwick, a key driver

of innovation and skills development. In doing so, the project supports the STP's ambition to link economic hubs and educational institutions through efficient, sustainable transport infrastructure.

The STP promotes several road and rail projects in the vicinity of the proposed interchange. These include improvements to the A46 Trans-Midlands Trade Corridor, which runs close to Warwick and is identified as a critical route for freight and passenger movements. Enhancements to junctions and capacity along this corridor aim to reduce congestion and improve journey reliability. On the rail side, the STP supports the Midlands Rail Hub, which will increase capacity and connectivity across the region, including service improvements along the Elephant and Bear Line, where the proposed interchange is planned. The STP's long-term ambition for this rail corridor is to reinstate double track between Coventry and Leamington to enable more frequent passenger and freight services, the case for which can be further strengthened by the forecasted demand the MMTI is expected to generate.

West Midlands Combined Authority – The West Midlands Strategic Transport Plan (2016)

The West Midlands Strategic Transport Plan sets out a ten-year vision for an integrated transport system that supports economic growth, social inclusion, and environmental sustainability. It focuses on maximising existing infrastructure, investing in rail and rapid transit, improving local bus and active travel networks, and introducing smart mobility solutions to create a resilient, low-emission network aligned with HS2.

Although the plan does not name the University of Warwick MMTI, the project strongly reflects its priorities. By combining rail, bus, cycling, and future mobility options, the interchange supports the plan's ambition for high-quality multimodal hubs and modal shift away from private cars. It advances goals for carbon reduction, improved accessibility, and economic growth by enhancing connectivity to University of Warwick, a major centre for education and innovation.

Complementary projects promoted in the plan include rail capacity improvements linked to the Midlands Rail Hub, enhanced connectivity through Coventry and Leamington, and active travel infrastructure across the metropolitan area. These initiatives provide the strategic framework within which the MMTI can deliver integrated.

Transport for West Midlands – Local Cycling and Walking Infrastructure Plan: A Common Approach to Cycling and Walking in the West Midlands (2019)

The West Midlands Local Cycling and Walking Infrastructure Plan (LCWIP) is a strategic framework developed by Transport for West Midlands and the seven local authorities to increase active travel across the region. It sets out a ten-year plan to improve cycling and walking infrastructure, identifying priority corridors and core walking zones, and integrating these into wider transport and planning policies. The LCWIP aims to tackle congestion, poor air quality, and physical inactivity by creating safe, direct, and attractive routes that connect residential areas to key destinations such as employment sites, schools, and universities.

The University of Warwick MMTI aligns strongly with LCWIP objectives. By incorporating high-quality walking and cycling facilities into its design, the interchange supports the plan's ambition to make active travel a viable option for short journeys and to integrate cycling with public transport for longer trips. This approach contributes to LCWIP goals of reducing car dependency, improving air quality, and promoting health and wellbeing. The interchange also enhances accessibility to a major educational hub, supporting LCWIP's emphasis on connecting people to employment and learning opportunities through sustainable transport.

Active travel projects promoted near the proposed interchange include the Coventry City Centre to University of Warwick corridor, identified as a priority route in the LCWIP. This 4. 9 km scheme aims to deliver segregated cycle lanes, improved crossings, and wayfinding, creating a safe and continuous link between the city centre and the campus. Additional measures such as canal towpath upgrades and local feeder routes will complement this corridor, ensuring the interchange becomes a focal point for integrated, sustainable travel in the region.

West Midlands Rail Executive – West Midlands Rail Investment Strategy (2022)

The West Midlands Rail Investment Strategy (WMRIS) sets out a 30-year vision for transforming rail services across the region to 2050. It aims to deliver faster, more frequent, and higher-capacity connections to support economic growth, reduce carbon emissions, and improve accessibility. Key priorities include contributing to net zero through electrification, delivering the Midlands Rail Hub, maximising HS2 benefits, and developing high-growth corridors. The strategy also focuses on integrating rail with other modes and improving station access to create a resilient, inclusive network.

The University of Warwick MMTI is explicitly recognised within the strategy as the proposed University of Warwick station on the Coventry Corridor, with an ambitious delivery date of 2040. This confirms that the interchange is embedded in the region's long-term rail vision. By providing a new station and integrated hub, the MMTI supports strategic objectives for modal shift, decarbonisation, and levelling up by improving access to a major educational and employment centre. It also aligns with goals for inclusive connectivity and integration with sustainable transport modes.

Several rail projects on the Coventry Corridor which are promoted in the strategy directly facilitate the rail capability of the MMTI. These include track doubling between Kenilworth and Coventry, and increased service frequencies on the Coventry–Leamington route. The timeline for these improvements was listed in the strategy as follows (and although timescales have slipped, these are still long term aspirations for WCC:

- **By 2026:** New Coventry Bay Platform – provides an increase in rail capacity at Coventry Station, allowing for service frequency improvements along connecting rail corridors, including the Elephant and Bear Line, which may serve the MMTI in future.
- **2026 – 2031:** Kenilworth-Leamington track doubling – first half of track doubling efforts contributing to greater operational flexibility and more train service paths.
- **2031 – 2040:** Kenilworth-Coventry track doubling, increased frequency between Coventry and Leamington, and a new station at University of Warwick – completion of full double tracking between Coventry and Leamington, creating the rail capacity required to deliver a well-served MMTI at University of Warwick.

2.6.3 Local

Stratford-on-Avon District Council and Warwick District Council – South Warwickshire Local Plan (2025)

The SWLP is a comprehensive spatial strategy being jointly prepared by Stratford-on-Avon District Council and Warwick District Council to guide development across the two districts up to 2050. It will replace the existing Stratford-on-Avon Core Strategy and Warwick District Local Plan, creating a unified framework for housing, employment, infrastructure, and environmental management. The plan seeks to balance economic growth with sustainability, aligning with national objectives for net-zero carbon emissions and regional priorities for inclusive development.

The SWLP sets out a vision for accommodating future housing and employment needs while protecting the historic and natural environment. It identifies strategic growth locations and potential new settlements, focusing on areas with strong transport links such as the M40 and A46 corridors and sites near the proposed MMTI location. These locations are intended to support mixed-use development, improve connectivity, and reduce reliance on private cars through integrated transport planning.

Climate change mitigation and adaptation are central to the plan, with policies promoting low-carbon construction, renewable energy, and green infrastructure. The strategy also addresses the need for improved public transport,

active travel networks, and sustainable freight solutions to support economic activity while reducing environmental impact. Alongside this, the plan emphasizes the importance of safeguarding heritage assets and enhancing biodiversity.

The SWLP is currently at the Preferred Options stage, following earlier consultations on Issues and Options and a call for sites. The latest consultation ran from January to March 2025, and feedback will inform the next draft of the plan, which is expected to be submitted for examination before adoption in 2027. Once adopted, the SWLP will provide a robust policy framework for planning decisions, ensuring that growth across South Warwickshire is managed in a way that meets the needs of communities, businesses, and the environment.

Warwickshire County Council – Local Transport Plan (2023)

The Local Transport Plan (LTP) is the strategic framework guiding transport policy and investment across Warwickshire. Its purpose is to create a modern, sustainable transport system that supports WCC's vision of vibrant communities, a strong economy, and environmental responsibility. The plan responds to critical challenges such as climate change, congestion, and social inequality, recognising that transport is the largest contributor to greenhouse gas emissions in the county. It sets out a clear ambition to achieve carbon Net Zero by 2050 through a shift away from car dependency and towards active travel, public transport, and zero-emission vehicles.

The LTP is built around four key themes: Environment, Wellbeing, Place, and Economy. These themes underpin policies that aim to reduce carbon emissions, improve accessibility, enhance public health, and support economic growth. The plan promotes a hierarchy of travel choices, prioritising walking, cycling, and public transport over private car use wherever possible. It also emphasises integrated transport solutions that allow seamless multi-stage journeys, recognising that most trips involve more than one mode of travel. While the LTP does not explicitly mention the MMTI by name, the plan includes strong references to improving public transport interchanges, enhancing connectivity between different modes, and supporting major trip generators such as universities through integrated transport solutions. These objectives align closely with what such an interchange would deliver.

The University of Warwick MMTI supports several strategic goals of the Local Transport Plan. Firstly, it advances the council's commitment to decarbonisation, helping to reduce transport-related emissions and meet Net Zero targets. Secondly, it improves accessibility and social inclusion by providing reliable alternatives for those without access to a car, thereby reducing isolation and improving access to education, employment, and services. Thirdly, it contributes to economic growth by strengthening the University of Warwick's role as an economic driver, reducing congestion-related costs, and supporting local businesses. Fourthly, it promotes wellbeing by encouraging active travel and improving air quality, which benefits physical and mental health. Finally, the project reflects the LTP's emphasis on integration and futureproofing, ensuring that Warwickshire's transport network remains resilient and adaptable to emerging technologies and changing travel patterns.

Warwickshire County Council – Warwickshire Bus Service Improvement Plan (2024)

The Warwickshire Bus Service Improvement Plan (BSIP), refreshed in June 2024, sets out WCC's vision for bus services in the county through the rest of the decade. It builds on the National Bus Strategy and Warwickshire's Local Transport Plan, aiming to make buses more frequent, reliable, integrated, and sustainable, with simpler fares and improved passenger experience. The BSIP responds to key challenges such as low bus patronage, high car dependency, and congestion, and prioritises measures that encourage modal shift from private cars to public transport. Its objectives include improving service frequency and coverage, enhancing integration with other modes, introducing multi-operator ticketing, and investing in infrastructure such as mobility hubs and interchanges.

The development of the University of Warwick MMTI strongly supports these BSIP ambitions. By creating a high-quality interchange that integrates bus services with other sustainable modes, the project addresses one of the BSIP's core priorities: better integration and connectivity. The interchange will act as a focal point for bus services serving the University and surrounding growth areas, improving reliability and journey times by reducing congestion

near the campus and on adjacent corridors. Concentrating bus access at a dedicated multi modal hub allows for more efficient scheduling and coordination, which aligns with BSIP goals for network optimisation and enhanced passenger experience.

Furthermore, the interchange encourages mode shift to sustainable transport, a central BSIP objective. By providing seamless connections between buses and other modes, supported by real-time information and integrated ticketing, the MMTI makes bus travel more attractive and convenient. This is particularly important in Warwickshire, where car ownership is high and bus use for commuting is significantly below the national average. In the Warwick District, 42. 35% of households in the district have access to 2 cars or more, compared to a national average of 33%.

Warwickshire County Council – Warwickshire Local Cycling and Walking Infrastructure Plan (2024)

The Warwickshire Local Cycling and Walking Infrastructure Plan (LCWIP) is the county's strategic framework for developing high-quality, safe and attractive walking, wheeling and cycling routes over the next decade. Its aim is "to create a safe and attractive environment for walking, wheeling and cycling, so that they become the natural choices for shorter journeys and outdoor recreation in Warwickshire". The LCWIP sets out a long-term programme of priority corridors, infrastructure improvements and network plans informed by national policy such as Gear Change and LTN 1/20, with a strong emphasis on active travel integration with public transport, improved access to major employment and education sites, and reducing reliance on private car travel across the county.

The University of Warwick MMTI directly supports the LCWIP by creating a new public transport hub that strengthens active travel connections to one of Warwickshire's most significant trip generators. The LCWIP identifies improving access to public transport hubs, connecting communities to jobs and education, and embedding high-quality active travel facilities within major developments as key objectives, all of which are advanced by the MMTI. By enabling seamless interchange between rail, walking and cycling routes, and by reducing peak-hour pressure on the A429 corridor, the MMTI contributes to LCWIP goals around safety, sustainable mobility, carbon reduction, and healthier travel behaviour.

Active travel improvements are also being promoted in the area surrounding the MMTI, consistent with LCWIP priorities. The LCWIP highlights the A429 Kenilworth Road corridor and the University of Warwick surroundings as locations where safer, more coherent cycling and walking networks are required, with opportunities for shared-use paths, new crossings, traffic-calming and improved links between Coventry, Kenilworth and the campus. These emerging schemes align strongly with the MMTI's role in supporting first- and last-mile connectivity and help ensure that the interchange will be embedded within a wider, enhanced active travel network

Coventry City Council – Transport Strategy (2022)

Coventry City Council's Transport Strategy sets out a 15-year vision (2022–2037) to create a safe, sustainable, and resilient transport system for the city that supports economic growth, improves health and wellbeing, and addresses climate change. The strategy aligns with regional and national objectives, including the West Midlands Combined Authority's Local Transport Plan and the UK's commitment to achieve net zero carbon emissions by 2050. It seeks to reduce car dependency, promote active travel such as walking and cycling, and enhance public transport provision, while embracing innovation through projects like VLR and electric vehicle charging infrastructure.

A key component of Coventry's Transport Strategy is Objective 3: Delivering a Sustainable, Low Carbon Transport System. This objective recognises that decarbonising Coventry's transport network is essential to meeting climate targets and improving air quality. It calls for a fundamental shift away from reliance on private cars, even electric ones, towards modes that are inherently more sustainable. Measures include the introduction of Coventry VLR as a cost-effective, zero-emission urban transit solution, the transition to a fully electric bus fleet, and the expansion of electric vehicle charging infrastructure. The strategy also prioritises investment in walking and cycling networks,

behavioural change initiatives, and future technologies such as autonomous vehicles and low-carbon freight solutions. These actions are designed to reduce greenhouse gas emissions, improve public health, and create a more liveable city.

The Transport Strategy does mention Coventry South as a new station (rather than the MMTI) and the proposed interchange can support Objective 3 by offering sustainable travel alternatives between the University and Coventry, Warwick, and other regional hubs. This encourages mode shift to low carbon modes for students, staff, and the wider community. By reducing car dependency and enhancing access to public transport, the project aligns closely with the city's transport strategy and its commitment to achieving net zero emissions. It also strengthens the case for rail service improvements along the Elephant and Bear rail line between Coventry and Leamington Spa.

Warwickshire County Council – Warwickshire Rail Strategy (2019)

The Warwickshire Rail Strategy 2019–2034 is a non-statutory policy document that sets out WCC's long-term vision for improving rail connectivity across the county. It supports the Local Transport Plan and aims to maximise economic, social, and environmental benefits by enhancing rail infrastructure and services. The strategy responds to significant growth pressures, including 160,000 new homes and major employment developments, by seeking to improve access to rail for commuting, reduce car dependency, and integrate rail with other sustainable modes. Its objectives include increasing rail's role in meeting travel demand from new developments, improving regional connectivity, and supporting carbon reduction targets.

Within this context, the strategy calls for the development of the University of Warwick MMTI as a key intervention to address connectivity gaps between Coventry, Kenilworth, and the University of Warwick. The proposed interchange, located north of Kenilworth close to the A429 and A46, would be delivered in phases to include park-and-ride facilities, bus links, VLR, and ultimately a heavy rail station. The Strategy intends that the facility should be incorporated into the national rail network provide strategic and local connectivity to the University and surrounding growth areas such as King's Hill, supporting sustainable travel choices and reducing congestion on local roads. In turn, the implementation of the MMTI is also positioned to strengthen the case for regional rail infrastructure schemes, including Midlands Connect's ambitions to increase rail capacity between Leamington Spa and Coventry and Coventry City Council's VLR initiative.

The project supports the county rail strategy in several ways. First, it directly contributes to the objective of maximising opportunities for journeys within Warwickshire and beyond to be undertaken by rail, particularly for access to jobs and education. By creating a new strategic hub, the interchange will enable modal shift from private cars to public transport, aligning with the sustainable transport hierarchy and the county's carbon net zero ambitions. Secondly, it strengthens regional connectivity by linking the University with key destinations across the West Midlands and national rail network. Thirdly, it integrates multiple modes of transport such as VLR, reflecting the strategy's emphasis on innovation and future mobility solutions. In doing so, the MMTI not only addresses current capacity and accessibility challenges but also futureproofs the transport network to accommodate planned housing and employment growth, ensuring that rail remains central to Warwickshire's transport and economic development agenda.

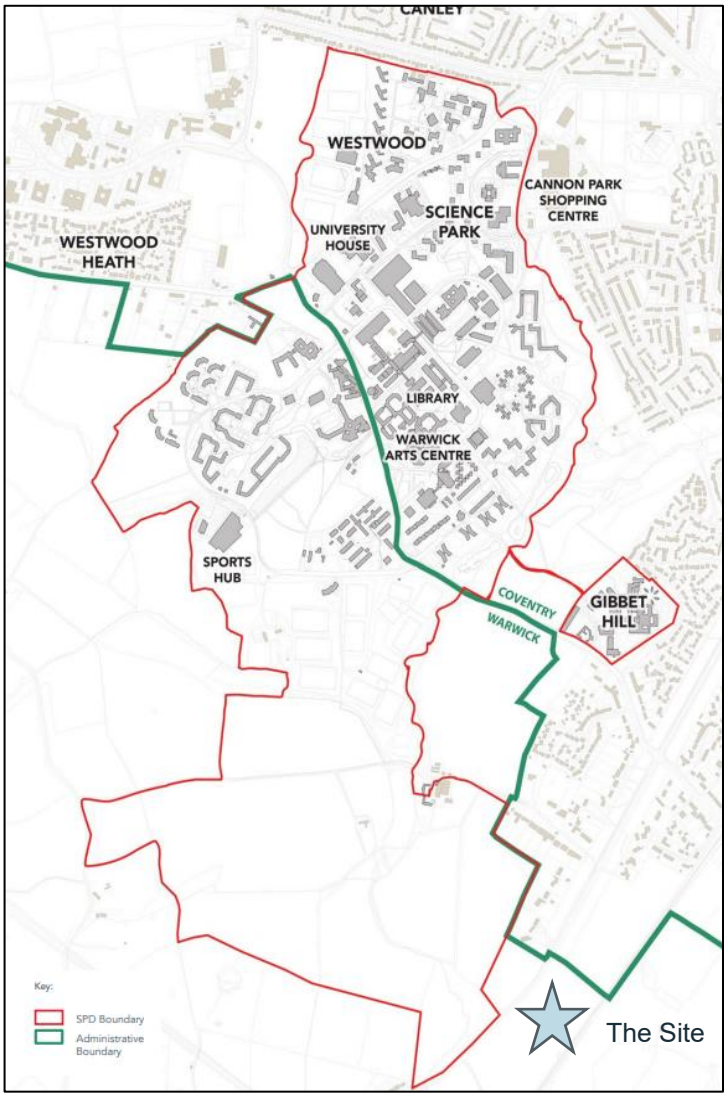
University of Warwick – Campus Framework Masterplan SPD (2024)

The University of Warwick Campus Framework Masterplan SPD sets out a comprehensive vision for the development of the campus to 2033, underpinned by a longer-term ambition to 2050. It sets out a plan for campus development, focusing on consolidation within existing boundaries, improved sustainability, and better transport and movement across the site. The document is rooted in six strategic principles: improving regional connectivity, fostering innovation, creating a vibrant and inclusive community, prioritising accessibility and safety, shaping a distinctive identity, and delivering a smart, low-energy campus. These principles are translated into design guidelines that concentrate academic development in the campus core, establish clear movement axes and hubs,

create pedestrian-focused environments, activate public spaces, integrate nature, and use landmark architecture to reinforce legibility and sense of place.

The University of Warwick MMTI project directly advances Strategic Priority 1 of the Campus Masterplan, 'to transform regional connectivity to campus', by acting as a central hub that integrates multiple transport modes and strengthens links between the University and the wider region. The Masterplan identifies regional connectivity as a critical enabler for innovation and growth, particularly given the campus's semi-rural location and the congestion challenges on surrounding roads. The MMTI responds to this by creating a consolidated interchange that accommodates buses, demand-responsive transit, and future VLR and heavy rail connections, ensuring seamless transfers between local and regional networks. Figure 2-5 shows the proposed MMTI location relative to the University of Warwick campus.

Figure 2-5 - Proposed MMTI location relative to the University of Warwick Campus



By improving the efficiency and attractiveness of public transport, the interchange reduces reliance on single-occupancy car trips, which aligns with the Masterplan's transport hierarchy and sustainability objectives. It also complements planned strategic investments such as HS2 and West Coast Main Line upgrades by providing a gateway that links these developments to the campus via a future dedicated national rail connection. Furthermore, the MMTI supports the Masterplan's ambition to offer choice and variety in travel modes, enabling staff, students, and visitors to access the campus through integrated, low-carbon options. In doing so, it not only addresses current

congestion and capacity issues but also futureproofs the campus to anticipated growth, reinforcing Warwick's role as a regional leader and innovation hub.

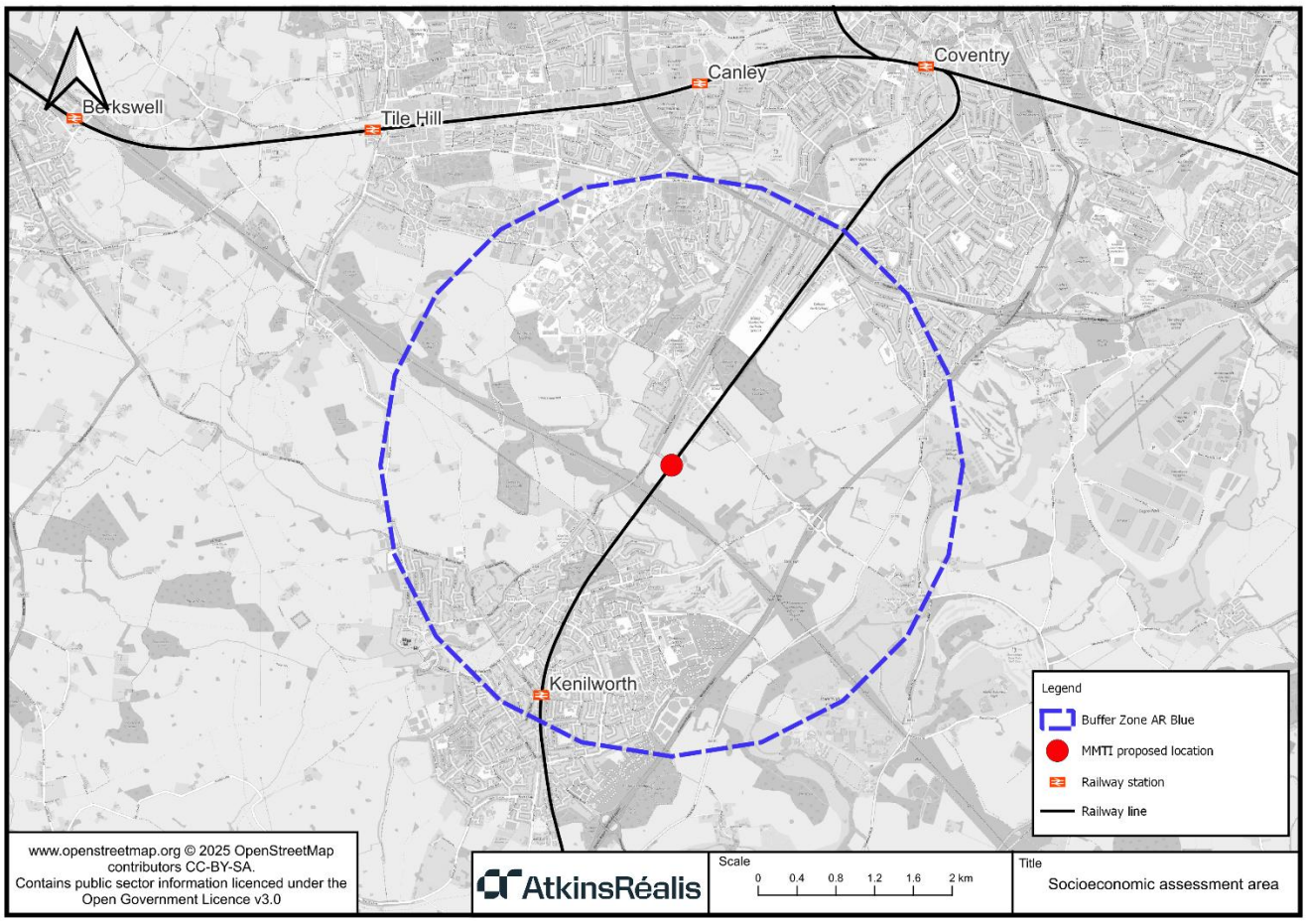
2.7 Socioeconomic context

In order to assess the socioeconomic characteristics of the population within the immediate vicinity of the proposed University of Warwick MMTI scheme, a buffer zone surrounding the development site has been utilised to capture 2021 ONS Census data around the following categories:

- Age structure;
- Car ownership;
- Method of travel to work; and
- Distance travelled to work.

A buffer zone with a radius of 3 kilometres from the development site has been utilised to identify which output areas to assess. This area encompasses the University of Warwick campus to the west, Stoneleigh to the east, Cannon Park to the north and Kenilworth town centre to the south. The socioeconomic assessment area is defined in Figure 2-6.

Figure 2-6 – Socioeconomic assessment area



At the time of the 2021 Census, the population of this area was 38,476. This is expected to increase in line with planned future developments.

2.7.1 Age structure

2021 ONS Census data has been used to estimate the demographic profile within the socioeconomic assessment area defined in Figure 2-6. The percentage of residents aged between 5 and 19, 20 to 69, and 70+ years old have been calculated for the assessment area as well as nationally for England and Wales. A summary can be found in Table 2-1 below.

Table 2-1 - Age structure

	Aged 5 to 19 years	Aged 20 to 69 years	Aged 70+ years
Assessment area	24. 6%	56. 7%	15. 2%
England and Wales	17. 6%	63. 3%	13. 6%

The age structure of the socioeconomic assessment area shows a noticeably younger profile than England and Wales overall. Residents aged 5 to 19 make up 24. 6% of the area population, significantly higher than the national figure of 17. 6%. This reflects the presence of the University of Warwick within the assessment area, which should show a higher concentration of young adults given its large student population. The high proportion of residents aged 5 to 19 may also indicate a strong presence of families and school-age children, with clear implications for travel demand associated with school movements and local active-travel routes. In contrast, the working-age population (20-69 years) is underrepresented at 56. 7% compared with 63. 3% nationally, suggesting a more limited local labour market and potentially higher dependency ratios.

The share of residents aged 70 and over stands at 15. 2%, slightly above the national average of 13. 6%. Although the difference is modest, it highlights the need to consider accessible transport and mobility options for older people, particularly around healthcare and community-based travel. Overall, the population profile combines a high proportion of young people with a slightly elevated older population.

2.7.2 Car ownership

2021 Census car ownership data has been examined to understand the potential level of car dependency within the socioeconomic assessment area. The proportion of households with no car or van, 1 car or van and 2 or more cars or vans for the study area and for England and Wales are shown in Table 2-2.

Table 2-2 - Car ownership

	No car or van	1 car or van	2+ cars or vans
Assessment area	38. 6%	34. 4%	12. 4%
England and Wales	23. 3%	41. 3%	35. 4%

The assessment area has a significantly higher proportion of households with no access to a car or van (38. 6%) compared with the England and Wales average of 23. 3%. This indicates notably lower levels of private vehicle availability and is consistent with areas characterised by a student population, and a larger share of rented or

shared accommodation. The proportion of households with one car is lower than the national average (34. 4% compared with 41. 3%), showing a pattern of reduced private vehicle dependence. Furthermore, households with two or more cars represent only 12. 4% of the assessment area, a substantial difference from the 35. 4% seen nationally.

2.7.3 Method of travel to work

The method of travel to work data provided within 2021 Census has been reviewed, and the modal split for the assessment area and England and Wales is presented in Table 2-3. The modal split calculation considers all usual residents aged 16 years and over in employment the week before the census for the respective assessment area.

Seven different mode choices were considered:

- Train;
- Bus (including minibuses and coaches);
- Taxi;
- Car or van (including both drivers and passengers);
- Cycling;
- Walking; and
- Working mainly from home.

Table 2-3 - Method of travel to work

	Train	Bus	Taxi	Car or van	Cycling	Walking	Working mainly from home
Assessment area	0. 8%	2. 0%	0. 4%	44. 1%	1. 5%	5. 2%	44. 9%
England and Wales	1. 9%	4. 2%	0. 7%	49. 0%	2. 0%	24. 4%	31. 2%

The method of travel-to-work pattern in the assessment area is dominated by working mainly from home, which accounts for 44. 9% of workers compared with 31. 2% nationally. This reflects the growth and influence of flexible occupations. As a result, all physical travel modes appear proportionally lower than the England and Wales average. Car or van use is the largest commuting mode at 44. 1%, but still below the national figure of 49. 0%, consistent with the area's comparatively low levels of car ownership. Public transport modes – train (0. 8%) and bus (2. 0%) – are used far less than the national averages of 1. 9% and 4. 2% respectively, indicating limited reliance on scheduled services among local workers who do travel. These trends may also be symptomatic of a lower level of current public transport provision within the assessment area.

Active travel also sits well below national levels. Walking accounts for 5. 2% of commuting trips within the Assessment Area, significantly lower than the England and Wales average of 24. 4%, largely because the high proportion of home-workers removes many of the shortest walking trips from the dataset. This may also be reflective of the current low density of the assessment area, meaning that many destinations may exceed walking distance for residents. The presence of high-volume, high-speed roads and a lack of connected pedestrian infrastructure within the study area may further discourage residents from walking to work. Cycling is slightly below national levels (1. 5% compared with 2. 0%), suggesting modest cycle uptake and potentially limited dedicated or connected cycling infrastructure. Taxi use is minor in both geographies. Overall, the area's profile is shaped by high home-working, moderate car use, and low participation in public and active travel modes, reflecting the demographic and employment structure of the local population.

It should be noted that the figures presented in Table 2-3 exclude individuals in full-time education, including the substantial student population associated with the University of Warwick, who typically exhibit distinctly different and often more sustainable mode-choice behaviours. Their absence means the travel patterns shown here may not fully represent the area's overall mobility profile.

2.7.4 Distance travelled to work

It is generally recognised that those living within 2km of their workplace could walk to work, and those within 5km could cycle. 2021 Census Data has therefore been analysed for those living within 2km of their workplace, between 2-5km and more than 5km within the assessment area and England and Wales. the results can be found in Table 2-4. This assessment considers all usual residents aged 16 years and over in employment the week before the census for the respective assessment area, including those who work from home.

Table 2-4 - Distance travelled to work

	Within 2km	Between 2 and 5km	More than 5km
Assessment area	6. 9%	8. 3%	30. 8%
England and Wales	11. 0%	12. 6%	30. 7%

The assessment area records significantly fewer short-distance commutes than England and Wales overall. Only 6. 9% of workers travel less than 2 km to work, compared with 11. 0% nationally. Likewise, the share travelling between 2 and 5 km (8. 3%) is well below the national figure (12. 6%). This pattern reflects the large proportion of homeworking residents of the assessment area, as well as the low density of employment centres. It also implies reduced potential for very short walking and cycling commutes.

Despite this, the proportion commuting more than 5 km (30. 8%) is almost identical to the national level (30. 7%). This suggests that while long-distance commuting behaviour is broadly typical, there is a relative absence of short and medium-distance work trips, resulting in a more polarised commuting pattern. Overall, the data points to a labour market where workers are travelling further to access employment, with fewer opportunities for nearby jobs and consequently greater reliance on motorised modes.

2.8 Problem identification

The ambitious economic growth proposals within the local area, especially within SG01, south Coventry (Kings Hill and the Coventry and Warwickshire Investment Zone (including the Gigafactory), and University of Warwick expansion, necessitates improving the existing transport infrastructure. Congestion and transport network capacity issues will need to be addressed to ensure that they do not become constraints to economic growth.

A range of current transport problems exist within the study area. This section identifies the problem areas, as well as how they could be solved by the University of Warwick MMTI scheme.

2.8.1 Traffic hotspots

To support the identification of current transport challenges within the study area, this section will draw upon evidence of typical traffic conditions within the vicinity of the proposed scheme location. A series of Google Maps-based snapshots will be used to illustrate typical levels of congestion and network stress during the AM peak, inter-peak, and PM peak periods at known hotspots across the study area. These snapshots will provide a visual indication of recurring delays, queue formation, and bottleneck behaviour on key corridors, including the A429, which serve the University of Warwick and surrounding development zones.

Google Maps' live-traffic visualisation offers a consistent and publicly accessible dataset, enabling a clear depiction of how the existing highway network operates under different demand conditions. Such evidence will complement quantitative analysis from local transport models and survey data, helping to contextualise the severity, frequency, and predictability of the transport problems identified.

Definitions for the different observed periods are listed in Table 2-5. To best capture the extent of traffic flow issues within the study area during typical midweek conditions, snapshots from Google Maps were taken using data from a Tuesday.

Table 2-5 - Observed peak periods

Period	Duration
AM Peak	0800-0900 hours
Inter-peak	1000-1600 hours
PM Peak	1700-1800 hours

Gibbet Hill Roundabout

Gibbet Hill Roundabout is located at the junction of Kenilworth Road (A429), Stoneleigh Road, and Gibbet Hill Road; one of the main access routes into the University of Warwick campus, forming a key node between Coventry, Kenilworth, and the university estate. The roundabout is situated around 800 metres north of the proposed MMTI location.



Figure 2-7 - Gibbet Hill Roundabout, AM Peak traffic flow

At 08:45 am on a typical Tuesday, three out of four entrances to Gibbet Hill Roundabout experience a moderate level of congestion, with traffic from the south arriving from the south via the A429 experiencing more severe delays.



Figure 2-8 - Gibbet Hill Roundabout, inter-peak traffic flow

Free flow conditions are exhibited at 13:00 pm on all arms of Gibbet Hill Roundabout.

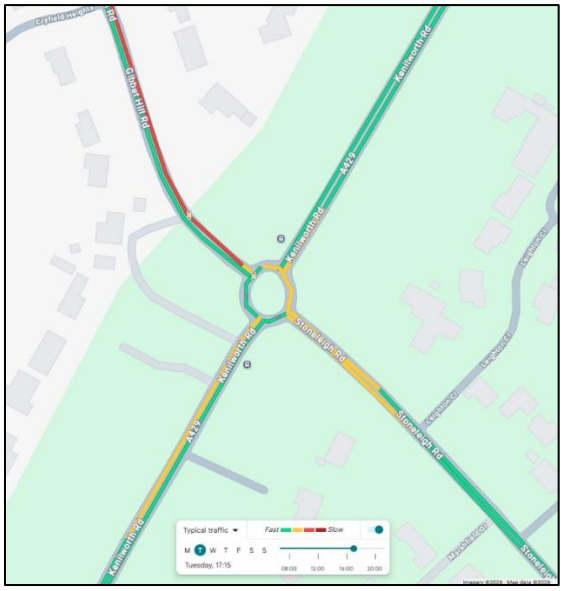


Figure 2-9 - Gibbet Hill Roundabout, PM Peak traffic flow

At 17:15 pm on a typical Tuesday, all four entrances to Gibbet Hill Roundabout experience a moderate level of congestion, with traffic from Gibbet Hill Road experiencing more severe delays.

A429 / Cannon Hill Road

The A429 / Cannon Hill Road junction is a priority-controlled junction on the Kenilworth Road, situated ½ mile north of the proposed MMTI location.



Figure 2-10 - A429 / Cannon Hill Road, AM Peak Traffic Flow

Free flow conditions are exhibited at 08:30 am on all arms of the A429 / Cannon Hill Road junction.



Figure 2-11 - A429 / Cannon Hill Road, Inter-peak Traffic Flow

Free flow conditions are exhibited at 13:00 pm on all arms of the A429 / Cannon Hill Road junction.



Figure 2-12 - A429 / Cannon Hill Road, PM Peak Traffic Flow

At 17:45 pm on a typical Tuesday, two arms of the junction experience moderate level of congestion, with traffic from Cannon Hill Road experiencing more severe delays, likely caused by the requirement to wait for the main line to be clear before turning out. Delays to traffic heading north on the Kenilworth Road at this junction are likely a secondary effect of congestion at the signal-controlled junction between the A429, Fletchamstead Highway and the Kenpas Highway, about a ⅓ mile to the north.

Gibbet Hill Road / Leighfield Road

The Gibbet Hill Road / Leighfield Road roundabout sits on the southern edge of the University of Warwick campus, providing access between local residential areas and the main Warwickshire north-south travel corridor, and often experiences turning-movement conflicts due to its proximity to key campus entrances and peak-time traffic flows. The roundabout is located around 1 mile north of the proposed MMTI location.

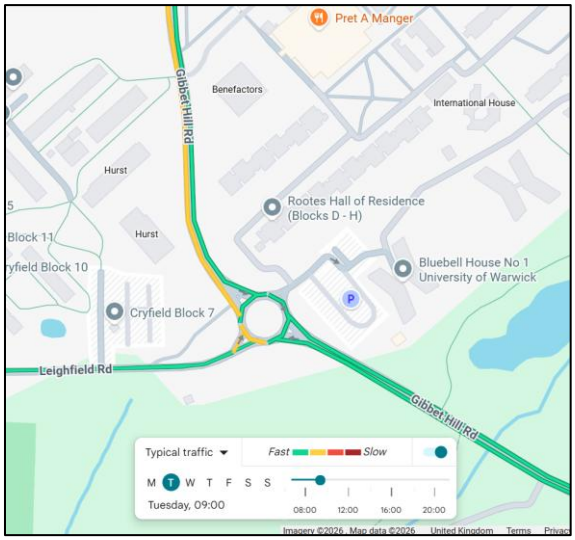


Figure 2-13 - Gibbet Hill Road / Leighfield Road, AM Peak Traffic Flow

At 09:00 am on a typical Tuesday, traffic arriving via the Leighfield Road experiences some delays on the approach arm to the roundabout. This is likely a secondary effect of congestion on Gibbet Hill Road resulting from vehicles heading into the University campus.

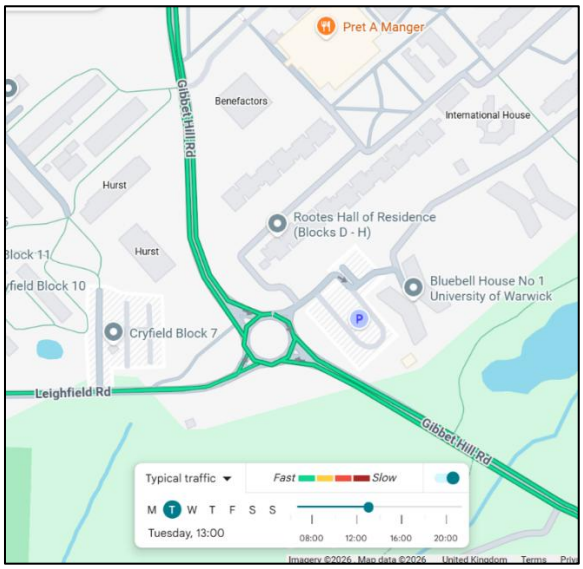


Figure 2-14 - Gibbet Hill Road / Leighfield Road, Inter-peak Traffic Flow

Free flow conditions are exhibited at 13:00 pm on all arms of the roundabout.

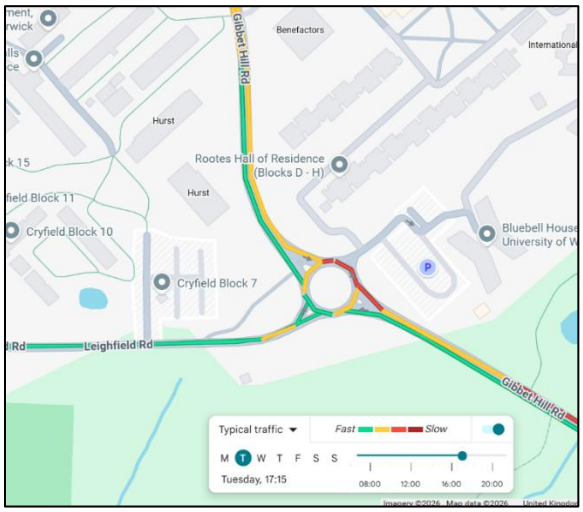


Figure 2-15 - Gibbet Hill Road / Leighfield Road, PM Peak Traffic Flow

At 17:15, the roundabout experiences more severe congestion, mainly from traffic flows leaving the University campus, heading to the A429 via Gibbet Hill Road. At this time, the most severe traffic can be found on the circulatory carriageway of the roundabout rather than on the approaches.

2.8.2 Local journey time analysis

To further evidence the transport challenges experienced within the study area, a series of current journey time assessments were undertaken between key local origins and destinations. These journey times were recorded across the AM peak, inter-peak, and PM peak periods to illustrate how travel conditions vary throughout the day and to highlight the extent of delay, unreliability, and congestion affecting different routes. This analysis will provide a clear comparison of typical journey durations under contrasting demand levels, demonstrating where significant performance issues emerge and how consistently they occur.

Including these journey time snapshots will help to quantify the user experience of the existing network and will complement the spatial congestion evidence obtained from Google Maps. Together, these datasets will offer a robust picture of the operational pressures on the highway network, revealing the cumulative impact of increased demand, limited modal alternatives, and constraints on key corridors serving the University of Warwick and surrounding growth areas.

In consistency with the traffic hotspot analysis, journey times taken from Google Maps used data from a Tuesday, observing the same defined peak periods as stated in Table 2-5.

University of Warwick to Coventry City Centre

Journey times from the University of Warwick to Coventry City Centre were compared for the AM, Inter-peak and PM Peak. The University of Warwick Student's Union on Gibbet Hill Road was selected as the origin, while Broadgate in Coventry City Centre was selected as the destination. Journey times for private car, public transport and cycling modes are listed for each peak period in Table 2-6 below.

Table 2-6 - Journey times from University of Warwick to Coventry City Centre

Period	Private car	Public transport	Cycling
AM Peak (0800 start)	18-30 minutes	27 minutes	21 minutes
Inter-peak (1300 start)	16-28 minutes	24 minutes	21 minutes
PM Peak (1700 start)	16-30 minutes	25 minutes	21 minutes

Table 2-6 highlights the variability in journey times between the University of Warwick and Coventry City Centre across the three peak periods and illustrates the relative performance of private car, public transport, and cycling. Private car journey times show the greatest fluctuation, ranging from 16 to 30 minutes depending on traffic conditions, with the PM peak producing the longest and most unpredictable travel times. This variability reflects the congestion pressures on key corridors such as the A429 and Gibbet Hill Road, where delays are most pronounced during commuter periods.

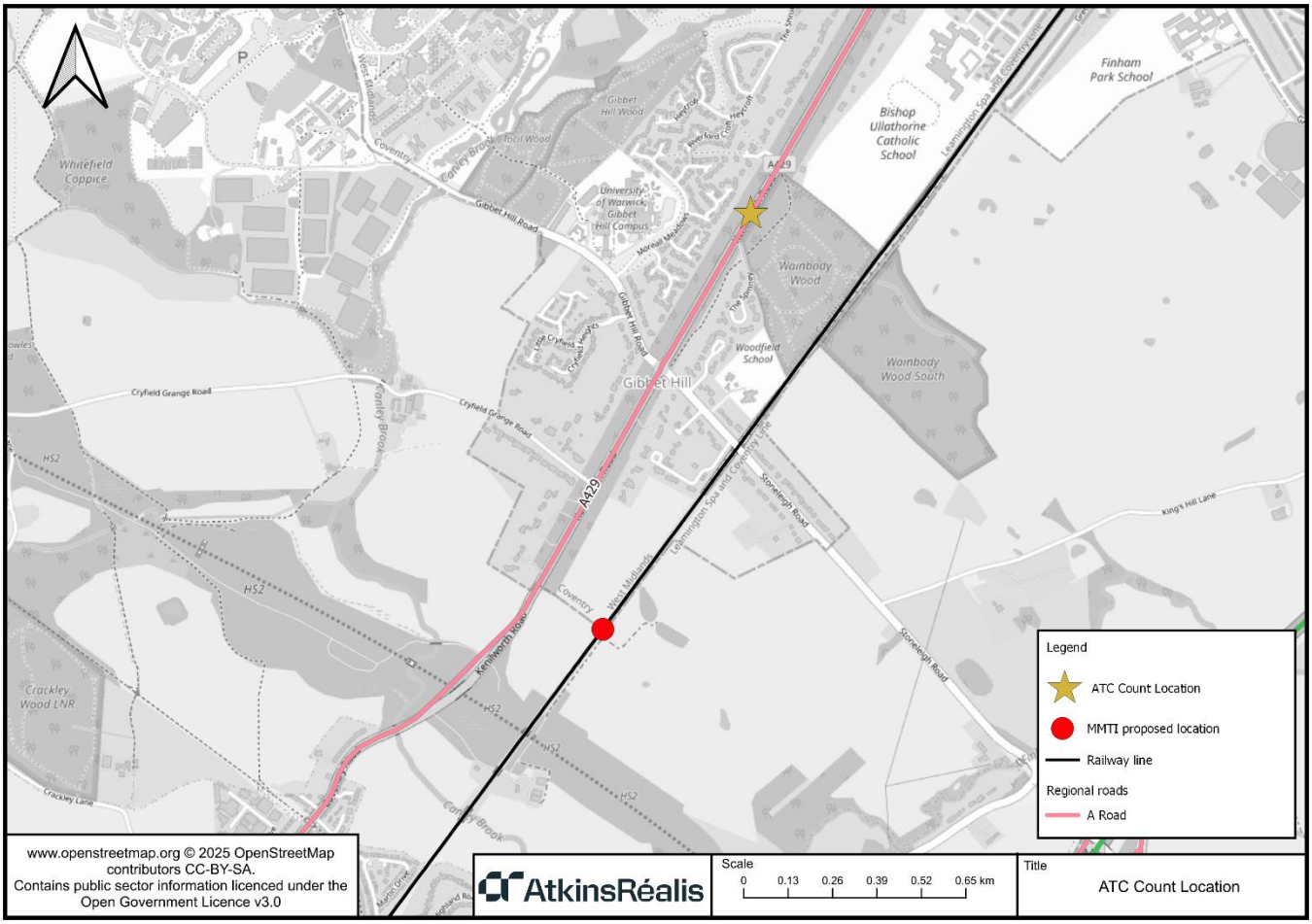
By contrast, public transport journey times are more stable, remaining between 24 and 27 minutes throughout the day. While this indicates moderate reliability, it also suggests competitiveness challenges: public transport is consistently slower than the lower end of car travel times and offers little advantage in peak periods. This reflects dwell times and limited priority measures on the bus network serving the campus.

Cycling offers the most consistent journey time at 21 minutes across all periods, demonstrating resilience to congestion and reinforcing the potential for active travel as a viable alternative for short- to medium-distance movements. The contrast between cycling's stability and the variability of car travel evidences the structural problems within the local highway network and the current limited availability of high-quality public transport options.

2.8.3 Traffic flows

Automatic Traffic Count (ATC) data was collected on behalf of WCC as part of the Kenilworth Model Update. Positioned on the A429 Kenilworth Road between The Spinney and Abberton Way, continuous data was gathered in both north and south directions over a multi-day period between 19 May and 30 May 2023 to produce hourly traffic counts, peak-period profiles, speed distributions, and HGV percentages. The ATCs recorded vehicle flows, speeds, and classifications using pneumatic tubes laid across the carriageway. The minimum speed threshold for vehicles to be recorded by the equipment was 5mph, and unclassified vehicles were excluded from the reporting. The ATC location is shown in Figure 2-16.

Figure 2-16 - ATC Location



The A429 forms one of the principal corridors feeding the university campus and the wider study area. Understanding prevailing traffic volumes and speeds on this section of the network provides essential baseline evidence on current demand, peak-time pressures, and the performance of key approach routes. This information supports the identification of existing transport problems, informs multimodal demand forecasting, and helps demonstrate the extent to which the proposed MMTI could relieve pressure on strategic corridors, reduce peak-hour road traffic, and support a shift towards more sustainable travel behaviour.

Using the ATC data, hourly traffic counts are presented below for northbound and southbound flows in Figure 2-17 and Figure 2-18 respectively.

Figure 2-17- A429 Northbound Hourly flows

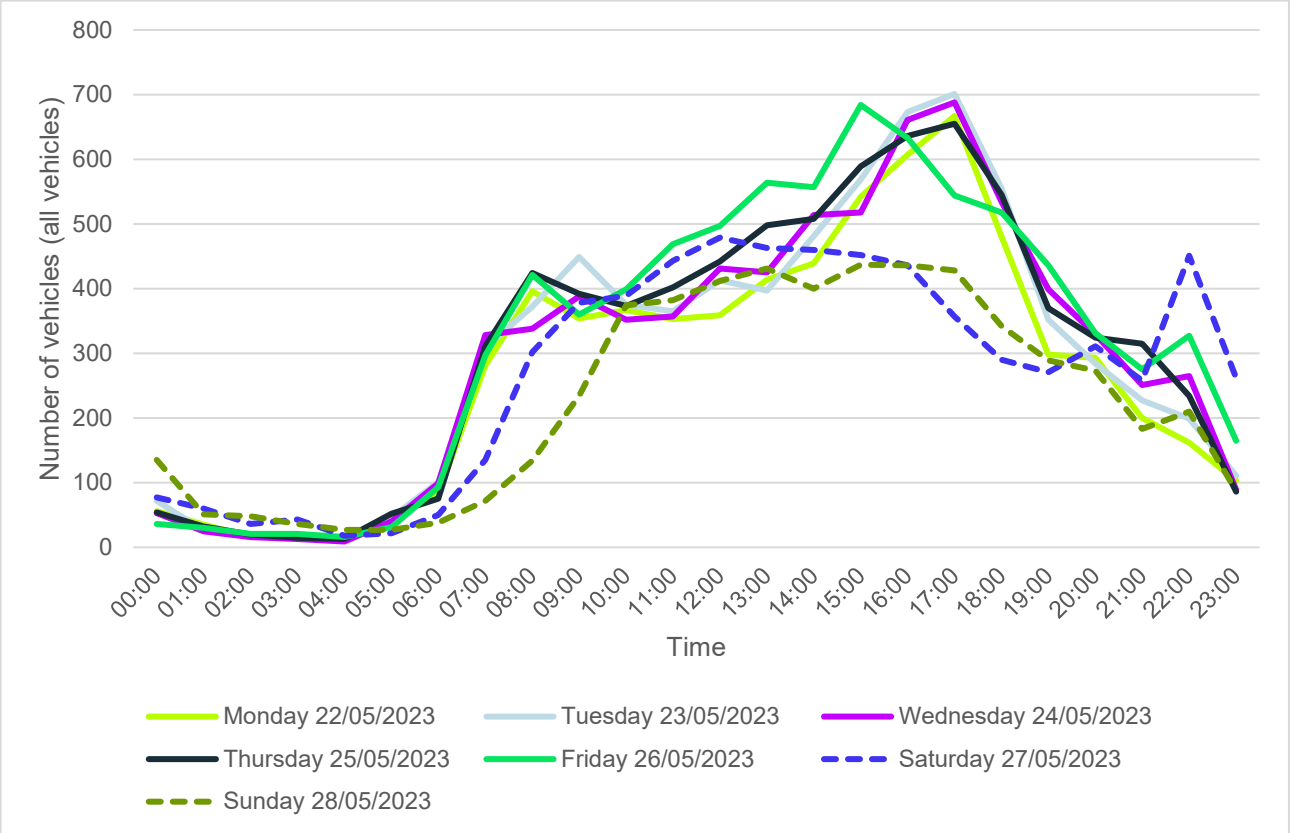


Figure 2-17 illustrates the hourly profile of northbound automatic travel movements on the A429 across the full commencing 22nd May 2023. All days exhibit a broadly similar diurnal pattern, with a sharp increase in flows from around 06:00, culminating in a pronounced AM peak between 08:00 and 09:00. The morning peak is consistently observed across weekdays and the weekend, although weekday peaks are generally higher and more sharply defined. After the AM peak, volumes stabilise at a moderately high level through the late morning and early afternoon, reflecting steady daytime travel demand.

A second, more substantial PM peak occurs between 15:00 and 18:00, with several days, particularly Tuesday and Wednesday, showing counts rising to maximum levels at between 650 and 750 movements per hour. This strong afternoon surge suggests a combination of commuter return trips, egress from the University, and school related travel along the A429 corridor, and is consistent with travel patterns identified in Sections 2.8.1 and 2.8.2. Evening volumes then decline steadily after 18:00, returning to low levels by approximately 20:00. Weekend days, especially Saturday, follow the same pattern but with slightly lower AM peaks and a flatter, more extended PM peak, indicative of more discretionary weekend travel.

Figure 2-18 - A429 Southbound Hourly flows

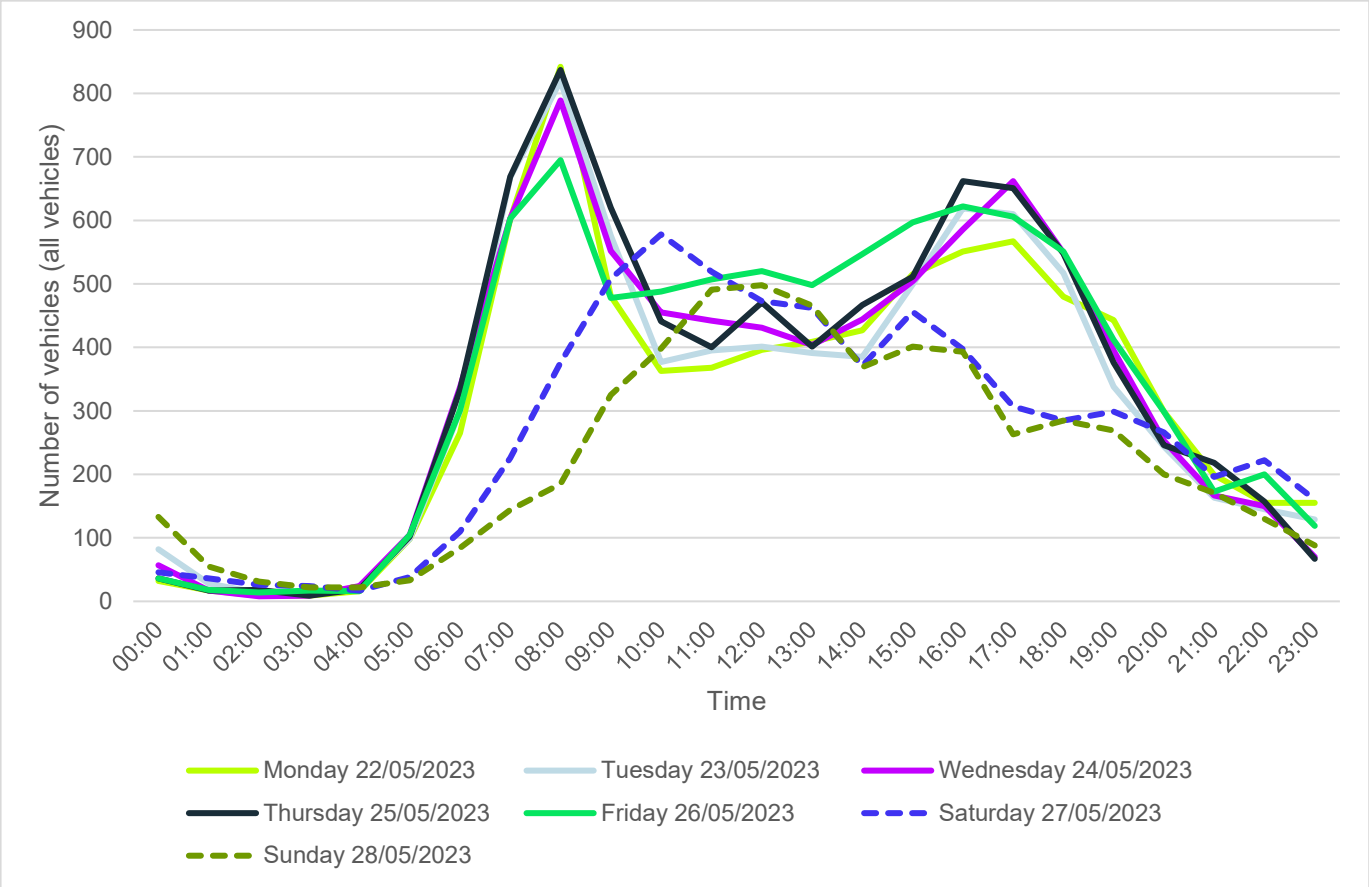


Figure 2-18 shows the hourly southbound traffic profile on the A429 over the same week, revealing a highly consistent weekday pattern dominated by commuter movements. Across all weekdays, traffic volumes begin to rise sharply from around 05:00, leading to a pronounced AM peak between 07:30 and 08:30, where flows reach 800-850 vehicles per hour. This makes the southbound AM peak notably stronger than the PM peak and strongly indicates significant morning inbound demand in the Kenilworth direction, and towards the University of Warwick.

Following the morning peak, flows reduce but remain relatively elevated throughout the late morning and early afternoon, stabilising between 400 and 550 vehicles per hour depending on the day. A secondary PM peak occurs between 15:00 and 17:00, but it is consistently lower and more dispersed than the AM peak. Volumes then decline steadily after 18:00, returning to low levels by around 21:00–22:00. Peak spreading and slight profile variations are evident on Friday and Saturday, with Saturday showing a smoother rise and fall, reflecting more flexible, non-work-related travel patterns.

Overall, the graph demonstrates that southbound demand on the A429 is heavily morning-biased, with the strongest and most concentrated flows occurring during the AM commuter period. This directional pattern reflects the corridor's strategic role in channelling movements from Coventry and surrounding communities towards the University of Warwick and Kenilworth. These trends reinforce the need for high-quality, multi-modal alternatives to help manage peak-hour pressures and provide resilient, sustainable travel options along a corridor experiencing significant directional peak loading.

2.8.4 Summary of problem area

The combined evidence from congestion mapping, local journey time analysis and Automatic Traffic Counts highlights a series of persistent transport challenges within the study area. Peak-time congestion is a consistent feature across multiple junctions serving the study area, particularly at Gibbet Hill Roundabout, Gibbet Hill Road / Leighfield Road, and, to a lesser extent, the A429 / Cannon Hill Road junction. These locations exhibit recurring queuing, turning-movement conflict, and delay during peak periods, particularly during the PM Peak, reflecting the high volume of commuter, university and school-related traffic converging on a limited number of access points. In contrast, inter-peak conditions are generally free-flowing, demonstrating that the network's problems are not structural but highly time-dependent and concentrated around predictable periods of demand.

Journey time evidence further reinforces these pressures, with car travel times fluctuating significantly between peak periods and reaching up to 30 minutes for short intra-urban trips, signalling vulnerability to congestion on the A429 corridor and the wider campus approach roads. Public transport, although more stable, does not offer journey time competitiveness, and cycling, while consistently reliable, suffers from limited high-quality infrastructure and must navigate corridors that experience significant peak-hour traffic volumes. This modal imbalance results in heavy reliance on private car travel during commuter periods, exacerbating congestion at already constrained junctions and reducing the resilience of the local network.

ATC data on the A429 confirms that the corridor functions as a major strategic approach to the University of Warwick, carrying substantial directional flows, particularly southbound in the AM peak and northbound in the PM peak, in accordance with university traffic flows. Flows consistently reach between 700–850 vehicles per hour in peak periods, with limited modal alternatives, indicating both demand pressure and potential safety concerns. Collectively, this evidence demonstrates a network operating close to capacity at peak times, with limited scope for accommodating future growth in housing, employment, and student numbers without intervention. These issues underline the need for a high-quality, multi-modal interchange such as the proposed University of Warwick MMTI, which would provide a credible alternative to car travel, relieve pressure on the A429 and surrounding junctions, and support a more sustainable, resilient transport network across the study area.

2.9 Development

The development of a sustainable multi-modal transport interchange between the A46 Stoneleigh Junction and the Westwood Heath area is key to helping resolve existing significant local transport issues and facilitating the delivery of Strategic Growth Area SG01 for major housing development (potentially in excess of 4,000 dwellings), as proposed in the emerging South Warwickshire Local Plan (SWLP) for Stratford-upon-Avon and Warwick Districts.

This is in addition to the housing allocations already committed in the existing Warwick District Local Plan, which include up to 4,000 dwellings at King's Hill, 425 dwellings off Westwood Heath Road (which could rise to 545 subject to securing planning permission) and multiple sites around Kenilworth which collectively total around 2,100 dwellings. Employment development around Coventry Airport in the form of the Coventry and Warwickshire Investment Zone (which includes the consented Gigafactory site), the potential for more employment development on the Royal Showground at Stoneleigh and on land nearby as well as in the Ryton-on-Dunsmore area of Rugby Borough are all relevant to this scheme and the wider transport strategy for the area given their scale and proximity.

Proposed housing growth around Balsall Common within Solihull Borough will also be a consideration in that without the proposed Multi-Modal Corridor scheme, interchange proposal and wider mitigation package for SG01, there could be significant traffic impacts in Kenilworth town centre and on the A452 corridor.

AtkinsRéalis - Sensitive / Sensible [FR]

Multimodal corridor/link road

The multimodal corridor is a proposed strategic highway improvement designed to enhance connectivity between the A46 and the southern approaches to Coventry, including the University of Warwick. The scheme forms part of a multi-phase programme led by WCC and partner authorities to address congestion, improve journey reliability, and support planned housing and employment growth in the region. Phase 1 of the project focuses on upgrading the Stoneleigh Interchange, introducing a new gyratory layout and bridge to improve traffic flow and safety at the junction of Stoneleigh Road and Dalehouse Lane. Subsequent phases aim to deliver a continuous link between the A46 and the local road network, reducing pressure on existing corridors such as the A45 and A452. The new link will intersect the Kenilworth Road immediately to the north of the proposed MMTI site.

The MMTI will enable sustainable park-and-ride trips for users arriving, providing a convenient transfer point to public transport for onward travel into nearby urban centres such as Coventry, Kenilworth, and Leamington Spa. This improved linkage is expected to support sustainable travel patterns by enabling modal shift for longer-distance trips, reducing congestion on local roads, and complementing active travel infrastructure within the interchange. In doing so, the link road will play a critical role in ensuring that the MMTI delivers its ambition of reducing car dependency while maintaining accessibility for regional and inter-urban journeys.

2.10 Future Problems – Impact of not Changing

If no intervention is delivered, planned growth in the corridor (including SG01 and University-related growth) will add demand to a network that already experiences peak-period congestion and reliability problems on key approach routes (A429/Kenilworth Road, Gibbet Hill Road and associated junctions). Without a step-change in sustainable transport capacity and interchange quality, additional trips are likely to be accommodated disproportionately by private car, worsening delay, reducing bus reliability, and increasing environmental impacts. This would conflict with the direction of local transport policy, which prioritises sustainable choices and net zero outcomes.

Taking into account the current opportunities and issues in the area (without further investment), the following impacts shown in Table 2-7 are likely:

Table 2-7 - Impacts

Impact Area	Effect
Operational	▪ Peak-period congestion and queuing worsen at existing hotspot junctions, increasing journey time variability and undermining network resilience. ▪ Bus services remain exposed to highway delay, reducing their competitiveness and reliability and weakening the ability to grow patronage. ▪ Lack of attractive interchange options increases the pressure for additional on-campus and city-centre parking provision.
Social	▪ Opportunities for access to education and employment remain constrained for people without access to a car, which is particularly relevant locally given the high proportion of households with no car/van within the assessment area. ▪ Car dependence reduces equality of opportunity and limits access to jobs, services and higher education, contrary to local policy ambitions for inclusive mobility. ▪ Limited high-quality walking/cycling links to major destinations reduces opportunities for physical activity and active travel.
Environmental	▪ Increased congestion and vehicle kilometres lead to higher transport emissions and worsen local air quality and noise impacts. ▪ Failure to enable modal shift undermines local and regional decarbonisation objectives.

Economic	▪ Congestion and poor reliability increase costs to businesses and reduce attractiveness for inward investment in the growth corridor. ▪ Transport constraints risk suppressing delivery of planned housing and employment growth that relies on sustainable access and supporting infrastructure

2.11 Drivers for change

Delivery of a high-quality multi-modal interchange in this corridor is driven by a combination of policy, growth, network performance, equity, and decarbonisation requirements.

- **Policy driver – enabling sustainable growth and modal shift -** Local policy requires development to be supported by sustainable transport options, reducing reliance on private vehicles and aligning transport planning with the Local Transport Plan.
- **Policy driver – bus improvement and integration -** Warwickshire's BSIP emphasises integrated networks, multi-operator and multi-modal ticketing, bus priority, better passenger information and patronage growth; an interchange provides a practical platform to deliver these outcomes in the corridor.
- **Policy driver – Coventry's low carbon, equitable system and innovation -** Coventry's Transport Strategy is built around four objectives including economic growth, a low carbon transport system, equality of opportunity and health and wellbeing; improving interchange and mass-transit connectivity to key destinations supports these aims.
- **Growth driver – strategic housing/employment and University-related demand -** Growth proposals in the NoKSoC corridor increase travel demand and intensify pressure on already constrained approaches to the University and Coventry.
- **Network performance driver – congestion and reliability constraints -** Existing peak congestion at key junctions and corridors affects journey time reliability and undermines bus service performance; without intervention this will worsen.
- **Equity Driver – access for non-car households -** The local assessment area has a markedly higher proportion of households without access to a car/van than the national average, reinforcing the importance of high-quality public transport and interchange provision.
- **Deliverability driver – coordinated approach with the University and local authorities -** The adopted University of Warwick Campus Framework Masterplan SPD provides a framework for growth and an agreed approach to assessing and managing transport impacts, reinforcing the need for corridor-scale interventions that can be delivered and monitored over time.

2.12 Objectives of the scheme

The proposed scheme objectives are structured around Warwickshire LTP's four themes (Environment, Wellbeing, Place and Economy) and the complementary aims of the other key strategies and policies covered in Section 2.6.

- **Environment**
  - **Enable material mode shift** from private car to public transport and active travel for trips to the University, Coventry and key growth areas, supporting net zero outcomes.

    - **Support bus decarbonisation and cleaner journeys** by enabling efficient, reliable bus operations and interchange facilities consistent with BSIP outcomes.
- **Wellbeing**
    - **Improve access to education, jobs and services for people without a car,** reflecting local car ownership patterns and equality ambitions in local policy.
    - **Increase safe and attractive active travel access** between the interchange, the University and surrounding communities, supporting health and wellbeing and the transport hierarchy.
- **Place**
    - **Deliver a high-quality interchange** ("mobility hub") that integrates bus, rail (future), and active travel with clear information, safe access and legible wayfinding
    - **Support a 'monitor and manage' approach to growth impacts** alongside the University and local authorities, enabling phased mitigation as development comes forward.
- **Economy**
    - **Support delivery of strategic growth** by providing sustainable access capacity for the NoKSoC/SG01 corridor and reducing the risk that transport constraints delay development.
    - **Improve corridor reliability and resilience** by intercepting car trips before constrained urban approaches and supporting more reliable bus journey times.
- **Phase-specific objectives**
    - **Phase 1 (Bus-based Park & Ride):** Provide an early, scalable intercept and interchange solution aligned to BSIP outcomes for integration, information and patronage growth.
    - **Phase 2 (VLR):** Safeguard and enable the interchange role within any future mass-transit/VLR proposals to key employment and growth areas, consistent with Coventry's strategic direction.
    - **Phase 3 (Heavy rail station):** Safeguard land and define a deliverable future station concept that can be enabled alongside rail capacity enhancements and regional rail strategy priorities.

2.13 Measures of success

Success will be monitored though a small set of measurable indicators aligned to the objectives above and to local policy outcomes for mode shift, integration, patronage and decarbonisation.

Recommended measures (can be refined at SOBC stage)

- **Demand/mode shift:** daily P&R users; bus/VLR boardings (phase1/2); rail entries/exits (phase 3); changes in mode share to key destinations.
- **Network performance:** peak journey time reliability on A429/Gibbet Hill approaches; bus journey time and punctuality on corridor services serving the interchange.
- **Environment:** estimated CO_2e reduction from intercepted trips; proxy air quality improvements (e.g. reduced veh. kms on key approaches).
- **Inclusion and accessibility:** step-free access and inclusive design compliance, improved accessibility for non-car households; affordability/ticket integration availability.
- **Active Travel:** counts on key walking/cycling links; perceived and actual safety improvements

2.14 Interdependencies

Delivery and performance of the MMTI will be influenced by several connected schemes and policy decisions. These interdependencies will be tracked through future option development and business case stages, with assumptions tested where possible.

2.14.1 Multimodal corridor

Importance: provides a new east west link adjacent to the proposed MMTI site and will deliver linkages to the A46 as well as the new developments at Kings Hill and SG01 in South Coventry. This provides access and routing options, potentially enabling efficient bus routing through the site and strengthened active travel connections.

2.14.2 University of Warwick growth

Importance: The university has plans to increase the number of students, but does not have plans to increase the level of parking available in line with its travel plan. This increase could provide demand for parking at the MMTI site, and increase demand for travel via public transport. In addition, plans to create active travel links from the multimodal corridor to the university campus could affect demand for inbound trips via rail. The associated SPD provides a framework for assessing and managing impacts over time.

2.14.3 SG01 development

Importance: The large scale housing development plans will increase the local population within 2km of the proposed MMTI and increase pressure on existing infrastructure. The build-out rates, internal layout and early provision of bus/active travel infrastructure as well community infrastructure e.g. schools, will affect demand and timing of MMTI phases

2.14.4 Parking Supply and Pricing

Importance: The availability of car parking (both in terms of number of spaces and associated charges) at the university of Warwick and in Coventry City Centre will be a key determinant of intercept rates and public transport competitiveness. An understanding of likely future charging changes would enable sensitivity testing to be carried out in future appraisal processes.

It is understood that the university of Warwick has plans to redevelop some of their car parks. If this provision is not replaced elsewhere on campus then the park and ride facility would offer an alternative for those travelling longer distances by car.

2.14.5 Bus network, Enhanced Partnership and BSIP delivery

Importance: The effectiveness of the Phase 1 Park & Ride will be strongly shaped by the bus service offer and supporting measures. In particular, the frequency and span of service (including evenings and weekends), simple integrated ticketing, real-time passenger information, and bus priority to protect journey times will determine whether the P&R is competitive with the private car and therefore able to achieve sustained patronage growth. These factors are central to Warwickshire's BSIP outcomes and should be treated as a key interdependency for both initial performance and longer-term scalability as subsequent phases come forward.

2.14.6 Rail capacity enhancements/service patterns

Importance: Phase 3 viability is dependent on the availability of rail capacity and deliverable service paths on the Coventry–Leamington corridor, because a new station can only be justified and operated effectively if the timetable can accommodate additional stops without undermining performance. This dependency links directly to wider rail investment priorities, including any required infrastructure enhancements (e.g., capacity improvements and corridor interventions) that enable higher frequencies and operational flexibility, so the station proposal should be progressed in step with the regional rail strategy and network planning assumptions.

2.15 Wider Stakeholder Support

Warwickshire County Council has engaged with a range of stakeholders in order to provide an overview of the proposal for the MMTI, the potential benefits of the scheme and highlight additional work that would be needed to develop the scheme proposals further in line with transport industry requirements.

Engagement to date indicates broad strategic support for the concept, particularly where the MMTI is positioned as a phased solution that supports sustainable growth, bus integration and a future rail station.

Table 2-8 below provides an overview of the key stakeholders that WCC has engaged with to date and a summary of their views on the proposal.

Table 2-8 – Stakeholder Engagement

Organisation	View of Organisation
West Midlands Rail Executive	Supportive of the indicative scheme, especially regarding the Phase 3 delivery of a heavy rail station. The station is identified in the WMRE Rail Investment Strategy with a planned delivery timeframe post-2031.
Midlands Connect	WCC has been fully engaged with the Midlands Connect led 'Birmingham Airport Connectivity' scheme and has lent its support to the case for the full doubling of the rail line between Leamington Spa and Coventry in order to help secure a second local rail service. Midlands Connect understand the wider aspirations and are supportive of the concept of a MMTI. In conjunction with Network Rail, they are requesting a separate safeguarding through the South Warwickshire Local Plan for the land which is required to deliver the double-tracking.
Warwick District Council	Engagement with Warwick District Council officers has been positive and they have offered initial support for the concept of a MMTI facility in this broad location in helping meet existing and future trip-making in the NoKSoC area.
Coventry City Council	Coventry City Council is supportive of an MMTI facility in this location and anticipate the site being served by their VLR scheme during Phase 2 of delivery. They are also supportive of the work which Midlands Connect has been progressing in relation to the Birmingham Airport Connectivity scheme.
University of Warwick	The University of Warwick is strongly supportive of a rail station to serve its education and research facility. This would allow students, employees and visitors to access the existing and future expanded Campus via sustainable transport means – thereby contributing positively towards its stated aims of encouraging and facilitating access by low carbon transport.
Network Rail	Engagement will be required with Network Rail regarding the siting of a heavy rail station at this location and the wider double-tracking works within the corridor. This will be sought as further feasibility and business case development is undertaken
National Highways	Engagement will be required with National Highways regarding the traffic impacts of the MMTI facility at each of the three stages of its phased delivery particularly in terms of the A46 Stoneleigh junction and wider A45/A46 corridor.

2.16 Connectivity potential

The MMTI will act as a corridor mobility hub that complements (rather than duplicates) the wider programme of highway, bus, mass transit and active travel schemes in the NoKSoC/SG01 area set out below. Its connectivity value is threefold:

- **Local:** providing safe, high-quality access to the University and nearby communities via bus and active travel, consistent with the transport hierarchy.
- **Regional**: enabling reliable access to Coventry and onward connections to the wider West Midlands rail network through Coventry station, supporting an integrated system.
- **National:** improving access to national rail services and (in future) HS2 via interchange at key hubs.

The wider Transport Strategy for the Strategic Growth Area SG01 area includes the following schemes:

- A46 Stoneleigh junction improvements;
- Very Light Rail route to serve the Coventry and Warwickshire Investment Zone, King's Hill and University of Warwick (route alignment tbc);
- Bus networks (current and planned);
- Active Travel networks (current and planned);
- Kenilworth North-Western Bypass;
- Kenilworth Town Centre improvements; and
- Stoneleigh Business Park Strategic Access Improvements/Stoneleigh Bypass.

The Multi-Modal Corridor scheme will provide a new link between the A46 Stoneleigh junction (currently being upgraded), the University of Warwick and the Westwood Heath/Kirby Corner area of South Coventry, which will provide much-needed relief to existing traffic congestion which occurs on Gibbet Hill Road/Stoneleigh Road, Cromwell Lane (Burton Green) and the rural routes towards Kenilworth (Bockendon Road/Crackley Lane), South West Coventry (B4101, Tile Hill/Station Avenue/Charter Avenue) and the A45.

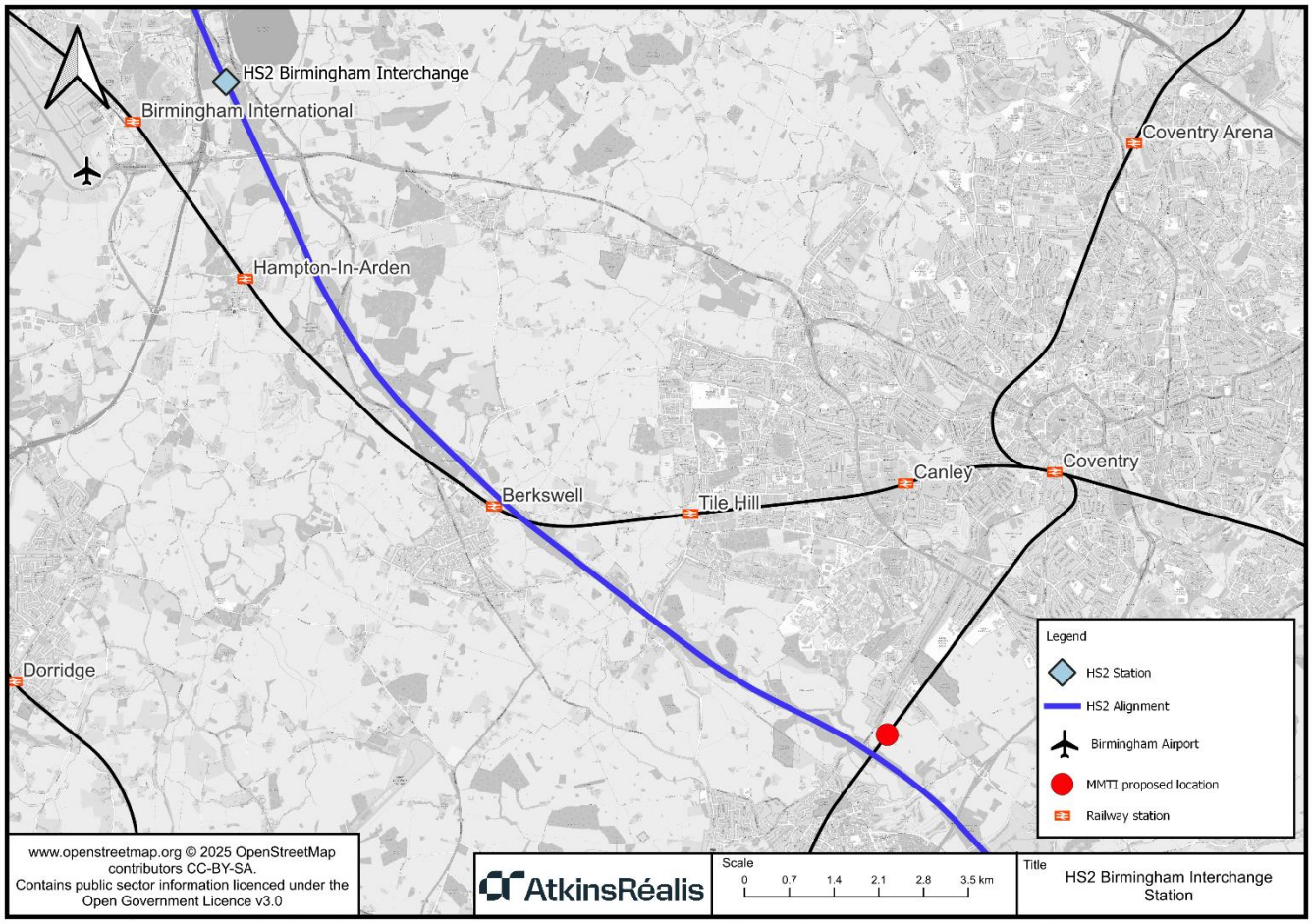
2.16.1 High Speed 2

High Speed 2 (HS2) is the UK's new high-speed railway under development, designed to provide faster, higher-capacity rail connections between major cities and to relieve congestion on the existing network.

In the context of the University of Warwick MMTI, HS2 enhances the scheme's long-distance and national connectivity potential. The MMTI will lie on the Elephant and Bear Line, enabling passengers to travel directly to Coventry Station, where they can interchange for fast services to Birmingham International, providing access to Birmingham Airport, and, in future, HS2's Birmingham Interchange station. This integration ensures that trips starting at the MMTI can connect seamlessly into the wider national rail network, significantly improving regional accessibility for students, staff, visitors, and local residents.

HS2 Birmingham Interchange is currently under construction approximately 9 miles northwest of the proposed MMTI location. Once operational, HS2 services calling at Birmingham Interchange will offer journey times of around 38 minutes to London Euston and 9 minutes to Birmingham Curzon Street. Figure 2-19 shows the location of HS2 Birmingham Interchange relative to the proposed MMTI site.

Figure 2-19 - HS2 Birmingham Interchange Station



3. Identification of required land take and safeguarding

3.1 Planning policy and decision review

This section provides a comprehensive review of the national, regional and local planning policy framework relevant to the identification and safeguarding of land for the proposed Multi-Modal Transport Interchange (MMTI). It establishes the policy basis for protecting land required to deliver strategic transport infrastructure and explains how the planning context guides both the assessment of environmental effects and future planning decisions associated with the Project.

The policy framework supports safeguarding where it enables:

- delivery of strategic infrastructure needed to accommodate planned growth,
- improvements to sustainable movement and connectivity,
- protection and enhancement of the natural, historic and built environment,
- resilience to climate change and avoidance of flood risk, and
- good design and efficient use of land.

This review demonstrates that safeguarding land for the MMTI aligns strongly with national and local policy objectives.

3.1.1 National Planning Policy

National Planning Policy Framework (2024, updated Feb 2025)[2]

The National Planning Policy Framework (NPPF) sets out the Government's planning policies for England and their application. It must be taken into account in preparing development plans and is a material consideration in decision-making. Planning law requires that planning decisions be taken in accordance with the adopted Development Plan unless material considerations indicate otherwise.

Several NPPF chapters are directly relevant to the MMTI:

- **Chapter 2** – Achieving Sustainable Development: emphasises coordinated planning of homes, jobs and infrastructure.
- **Chapter 4** – Decision Making: requires early, substantive engagement to ensure infrastructure needs are planned for.
- **Chapter 8** – Promoting Healthy and Safe Communities: encourages places that support social interaction and access to services.
- **Chapter 9** – Promoting Sustainable Transport: highly relevant to this Project.
    - *Paragraph 109* requires transport issues to be addressed from the earliest stage using a vision-led approach.
    - *Paragraph 110* states that significant development should be directed to sustainable locations, providing genuine mode choice to reduce congestion, emissions and improve air quality.
- **Chapter 11** – Making effective use of land: encourages efficient, well-planned development patterns.
- **Chapter 12** – Achieving well-designed places: requires development to be functional, safe, inclusive and reflective of place identity.
- **Chapter 14** – Climate change and flood risk: sets expectations for climate resilience and flood-risk-sensitive design.
- **Chapter 15** – Natural environment: requires protection and enhancement of biodiversity and green infrastructure.
- **Chapter 16** – Historic environment: requires assessment and avoidance of harm to heritage assets and their setting.

Planning Practice Guidance (first issued 2014, regularly updated)[3]

The Planning Practice Guidance (PPG) is a web-based resource that supports the implementation of the NPPF. These documents provide detailed guidance on interpretating and applying national planning policy.

The following categories of guidance are particularly relevant to the Project: Air quality (November 2019), Biodiversity Net Gain (May 2024), Climate change (March 2019), Design: process and tools (October 2019), Effective use of land (February 2025), Environmental Impact Assessment (May 2020), Healthy and safe communities (August 2022), Historic environment (July 2019), Natural environment (June 2025), Noise (July 2019), Plan-making (June 2025), Transport evidence bases in plan making and decision taking (March 2015), Travel Plans, and Transport Assessments and Statements (March 2014)

[2] https://www.gov. uk/government/publications/national-planning-policy-framework--2
[3] https://www.gov. uk/government/collections/planning-practice-guidance

The combined NPPF/PPG framework emphasises that where development depends on major transport infrastructure, local plans should safeguard land needed to deliver it.

3.1.2 Local Policy

The area is covered by a combination of District, City and County planning policy documents. Each includes policies directly relevant to the need for safeguarding land for major transport infrastructure such as the MMTI

Warwick District Local Plan 2011-2029[4]

The Local Plan was adopted in September 2017. It is the overarching local policy document for the district and guides the area's development until 2029. The Local Plan sets the development framework for the district. It sets out a series of strategic polices, allocates sites for development, and includes polices to guide the form of development.

Applicable policy and their objectives are detailed below.

TR1- Access and Choice, states that the Council will only permit development where it provides safe, suitable and attractive access routes for pedestrians, cyclists, public transport users, emergency vehicles, delivery vehicles, refuse vehicles and other users of motor vehicles.

TR2- Traffic Generation, sets out development Council's expectation that all large-scale development that will result in significant traffic movements will be supported by a Transport Assessment and Travel Plan where relevant.

TR3- Parking, aims to control and manage the expectations of parking provision of proposed developments.

TR4- Safeguarding for Transport Infrastructure, sets out land within the District safeguarded from development. These include the land required for High Speed Rail 2 and areas of search for park and ride.

CC1 Planning for Climate Change Adaption, states development proposals will need to be designed to be resilient and adaptive to the future impacts of climate change.

CC1 Planning for Climate Change Adaption, states that all development is required to be designed to be resilient to, and adapt to the future impacts of climate change. This will include optimising the use of multi-functional GI for urban cooling.

DS18 Green Belt, The Site is within the Green Belt. The Council will apply national planning policy to proposals within the green belt, however, this is subject to review as part of the emerging Local Plan.

NE1 Green Infrastructure, aims to protect, enhance and restore the district's GI assets on a sub-regional to a local and neighbourhood scale.

NE2 Protecting designated biodiversity and geodiversity assets, confirms that the Council will protect designated areas and species of national and local importance for biodiversity and geodiversity. The policy goes on to states that all proposals likely to impact these sites/ species will be subject to an ecological assessment

[4] Local Plan - Warwick District Council.

NE3 Biodiversity, sets out the Council's expectation that development proposals will protect, enhance and/or restore habitat biodiversity.

CC1 Planning for Climate Change Adaption, states that all development is required to be designed to be resilient to and adapt to the future impacts of climate change. This will include optimising the use of multi-functional Green Infrastructure for local flood risk management and minimising the vulnerability to flood risk by locating development in areas of low flood risk.

FW1 Reducing Flood Risk, aims to ensure development is located in areas of low flood risk, and ensuring all new development is resilient to surface water, fluvial and pluvial flooding.

FW2 Sustainable Drainage, states that all major developments must incorporate SuDS that provide biodiversity, water quality and amenity benefits. The policy also states that all new development sites will discharge at QBAR greenfield run-off rate, including an allowance for climate change.

HE1 Designated Heritage Assets and their setting, details that in considering applications relating to listed buildings or conservation areas, the Council will require that proposals do not have a detrimental effect upon the integrity and character of the building or its setting or the conservation area.

These policies collectively require that land for strategic, sustainable transport infrastructure must be protected in plan making, and that environmental considerations inform design.

Adopted Coventry Local Plan (2011-2031[5])

The Coventry Local Plan was formally adopted by Council on 6 December 2017 following receipt of the Planning Inspectors Report. The Local Plan is the statutory document used by the Council to determine planning applications.

Relevant policies and their objectives

AC1- Accessible Transport Network, states that development proposals which generate additional trips on the transport network should promote a choice of transport moves, consider the accessibility needs of all residents and visitors, support the delivery of new and improved high quality public transport, and actively support the integration of future intelligent mobility infrastructure.

AC2- Road Network, aims to mitigate and manage any traffic growth generated by proposed development. The primary focus of the policy is on demand management measures including promoting sustainable moves of transport, and secondly on the delivery of appropriate highway capacity interventions.

AC3- Demand Management, sets out the Council's expectations for assessments, reports and parking standards for the validation of proposed development applications.

AC4- Walking and Cycling, states that development proposals should incorporate safe and convenient access to walking and cycling routes.

AC5- Bus and Rapid Transit, sets out the expectation for major development proposals to incorporate safe and convenient access to the existing bus network.

[5] https://www. coventry.gov. uk/downloads/download/4881/adoption_statements

EM1 Planning for Climate Change Adaption, states that the Council will require all development to be designed to be resilient to, and adapt to the future impact of climate change. Adaptation measures include mitigation against rising temperatures, maximising water efficiency, and minimising risk to flooding.

EM3 Renewable Energy Generation, supports development proposals for renewable and low carbon energy generation technologies, and their incorporation within development proposals.

GE1 Green Infrastructure, states that existing GI will be protected and used as a way of adapting to climate change. New development would be expected to make provision of GI and maintain the quality and quantity of existing GI.

GE3 Biodiversity, Geological, Landscape and Archaeological Conservation, aims to protect and enhance SSSIs, LNRs, ancient woodlands and local wildlife and geological sites. This includes the expectation that development proposals will lead to a net BNG, protect or enhance biodiversity assets and secure long term management, avoid negative impacts on existing biodiversity and preserve species that are legally protected.

EM1 Planning for Climate Change Adaption, states that all development will be required to be designed to be resilient to climate change through adaptation measures. For ecology these include optimising the use of multi-functional GI and where appropriate BI.

EM1 Planning for climate change adaption, states that all development will be required to be designed to be resilient to climate change through adaptation measures. For flood risk and drainage, this means optimising the use of multi-functional GI for local flood risk management, minimising vulnerability to flood risk by location of development in low flood risk areas and including mitigation measures.

EM4 Flood Risk Management, states that all development proposals will be assessed in respect of the level of flood risk form all sources. Development will need to provide a minimum standard to flood defence and resilience and not increase flood risk on site or elsewhere to reduce overall flood risk.

EM5 Sustainable Drainage Systems, aims to ensure all development apply SuDS to ensure surface water runoff is managed as close to its source as possible.

These policies strongly support the provision of public transport infrastructure to reduce car dependency and improve connectivity between Coventry and key employment and education destinations.

3.1.2.1 Applicable Supplementary Planning Documents, relevant to the site and surrounding area

Coventry City Council, The Energy SPD[6] aims to support the implementation of Policy EM2 Building Standards which states that development should be designed and constructed to the relevant building standards and meet the carbon reduction targets.

Coventry City Council, Biodiversity Net Gain SPD[7] provides additional guidance on the objectives of Policy GE3, which include facilitating a net BNG, protection and enhancement of biodiversity assets and their long term management, and preserving species which are legally protected, in decline or rare within Coventry.

[6] https://www.coventry.gov.uk/downloads/download/7119/energy-spd
[7] https://www.coventry.gov.uk/downloads/download/7393/biodiversity-net-gain-spd

Warwick District Council Parking Standards[8] sets out the expected amount of vehicle and cycle parking to be provided for all types of development, and guidance and design principles for its integration into development proposals.

Air Quality SPD[9]

The Air Quality SPD adopted by Coventry City Council in 2019, provides guidance for development proposals. Warwick District Council also adopted an air quality SPD which is broadly similar to the Coventry Air Quality SPD. SPD states that consideration must be given to the air quality impacts associated with proposed development and that mitigation should be incorporated from an early design stage. The SPD provides technical guidance to support Local Plan Policy EM7[10], ensuring air quality is a consistent material consideration in planning decisions. It aids developers and planners in identifying when air quality assessments and mitigation are required across Coventry.

Warwick Net Zero Carbon DPD[11]

Warwick District Council declared a climate emergency in 2019. The Warwick Net Zero Carbon DPD aims to minimising carbon emissions from existing and new buildings within the District to support the achievement of national and local carbon reduction targets

University of Warwick Campus Framework Masterplan Supplementary Planning Document (SPD)[12]

The SPD covers an area of land which comes near to the western border of the site. The SPD provides a framework for guiding the level and broad location of growth on the main University of Warwick campus as well as design principles to be considered when assessing planning applications on the campus. The SPD provides supplementary guidance to Policy JE1 (Overall Economy and Employment Strategy)[13] and CO1 (New or Improved Social, Community and Leisure Premises)[14] - of the adopted Coventry Local Plan and is intended to assist with the determination of future planning applications. It supports infrastructure that improves regional connectivity and sustainable access. It is directly relevant as the MMTI would provide a key gateway serving the University.

Warwickshire County Council

Warwickshire Country Council has several adopted planning documents. These County-level minerals and waste policy documents form part of the statutory Development Plan and must be considered alongside district Local Plans and Neighbourhood Plans during a planning application determination.

Waste Core Strategy[15]

Warwickshire Waste Core Strategy adopted Local Plan 2013-2028 (adopted 2013). The Core Strategy aims to deliver sufficient waste management capacity, including recycling, and disposal facilities during the plan period.

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[8] https://www.warwickdc.gov.uk/downloads/file/4783/parking_standards_spd
[9] https://www.coventry.gov.uk/downloads/file/30877/air-quality-supplementary-planning-document-spd-
[10] https://www.coventry.gov.uk/downloads/download/6303/section-11-environmental-management
[11] https://www.warwickdc.gov.uk/downloads/file/8504/net_zero_carbon_dpd-adopted_may_2024
[12] https://www.warwickdc.gov.uk/info/20794/supplementary_planning_documents_and_other_guidance/1962/university_of_warwick_supplementary_planning_document
[13] https://www.coventry.gov.uk/downloads/file/33729/policy-je1-overall-economy-and-employment-strategy
[14] https://www.coventry.gov.uk/downloads/file/33754/policy-co1-new-or-improved-social-community-and-leisure-premises
[15] https://www.warwickshire.gov.uk/wdf

The document sets out the Spatial Strategy, Vision, Objectives and Policies for managing waste for a 15 year plan period up to 2028. Management of waste particularly construction waste will need to be considered as part of any future development.

Minerals Local Plan[16]

The Warwickshire Minerals Local Plan 2018 – 2032 (adopted 22 July 2022) sets out the council's planning policies for mineral development. The Minerals Local Plan sets a strategic framework for mineral extraction, processing, and restoration until 2032. It operates alongside district-level Local Plans and adopted Neighbourhood Plans, guiding decisions on mineral applications and ensuring boroughs don't sterilise critical mineral resources or infrastructure. 'The Site' is part of a minerals safeguarding area, which will need to be considered in consultation with the County Planning Authority.

Neighbourhood Development Plans

Neighbourhood Development Plans (NDPs), become part of the local development framework when they are 'made' and policies carry the weight of those in the Local Plan. There are no neighbourhood plans covering the Site. The nearest NDP from the site is the Kenilworth NDP[17] which is approximately 600metres south of the Site.

The NDP is supportive of schemes that would improve public transport links that would reflect the needs of both Kenilworth town and the University of Warwick.

Policy KP9, cycle routes, details that cycle routes that would be supported in connecting Kenilworth to the university to the north with the aim to create safe cycling routes between the centre of Kenilworth and the external cycle paths to the University of Warwick.

Status of the site in the South Warwickshire Local Plan (SWLP)

The South Warwickshire Local Plan (under examination as of 2025)[18]

The Draft South Warwickshire Local Plan (SWLP) is currently emerging and being prepared by the Stratford-Upon-Avon and Warwick District Councils to replace the adopted Core Strategy. The Preferred Options consultation ended on 7th March 2025 and the summaries of the representations following this have now been published.

The SWLP will set out the long-term spatial strategy and development principles for the area, including homes, jobs and infrastructure to 2050 and is expected to be adopted by March 2028.

At the present time the document is focusing on big picture decisions about *where* growth will go and *what kind* of growth is prioritised across South Warwickshire up to around 2050. The South Warwickshire Local Plan Preferred Options consultation report[19] identities strategic areas for future growth. Whilst within the Green Belt, 'The Site' has been identified as a 'Priority Area 2' and a 'Strategic Growth Location, SG01'.

Priority Area

[16] https://www.warwickshire.gov.uk/mineralslocalplan

[17] https://www.warwickdc.gov.uk/downloads/file/5143/kenilworth_neighbourhood_plan

[18] https://www.stratford.gov.uk/planning-building/the-south-warwickshire-local-plan.cfm

[19] https://www.southwarwickshire.org.uk/doc/213277/name/Preferred%20Options%202025%20WEB.pdf

The SWLP preferred options consultation document details that South Warwickshire's housing and employment needs will be distributed using the "Sustainable Travel and Economy" Spatial Growth Strategy.

South Warwickshire's existing urban areas fall within Priority 1, and full use will be made of suitable urban brownfield land before development is considered elsewhere, however, there is insufficient urban brownfield land to accommodate South Warwickshire's housing and employment land needs. The majority of the SWLP's strategic growth needs will be met within priority areas 1-3[20].

The proposed MMTI is within priority area 2. Therefore, identified within a geographic zone where the Council view the principle of strategic growth is most sustainable and therefore has potential for future development.

Strategic Growth Location

A Spatial Growth Strategy sets out in broad terms the locations to which large scale and strategic growth should be directed; and conversely, those areas in which growth should be more controlled. The chosen Spatial Growth Strategy will help deliver the SWLP's five overarching principles, determine where land is allocated for homes and employment uses, and the infrastructure and open space that supports this growth[21].

The proposed MMTI is part of Strategic Growth Location SG01 – South of Coventry Group. The site therefore has significant potential for future development.

The emerging plan is presently looking positively at the location in terms of potential and suitability for future development. The emerging plan is supported by several technical documents which provide more detail in all areas, of keynote are the 'Infrastructure Delivery Plan[22]' and the 'South Warwickshire Housing and Economic Land Availability Assessment (HELAA) Methodology[23] '.

The Infrastructure Delivery Plan identifies a shortage or railway stations within Warwick District and also that developer contributions associated with new development are unlikely to be sufficient to fully fund infrastructure requirements, with additional funding coming from external sources to deliver infrastructure.

The HELAA results and site outcomes document identifies 'The Site' and other sites which have been identified and assessed, whilst these are not site allocations, they provide an indication of future employment and housing growth in the locality.

3.1.3 Summary of Policy Implications for Safeguarding

Across all tiers of policy, there is a consistent message:

- Strategic growth must be supported by sustainable, multi-modal transport infrastructure.
- Local Plans should safeguard land required for infrastructure of strategic importance.
- Development should reduce reliance on private car use and support healthy, low-carbon travel.

[20] https://www. southwarwickshire. org. uk/doc/213277/name/Preferred%20Options%202025%20WEB. pdf
[21] https://southwarwickshire. oc2. uk/document/148/4584#d4586
[22] https://www. southwarwickshire. org. uk/doc/213176/name/SWLP%20IDP%20Jan%202025. pdf
[23] https://www. southwarwickshire. org. uk/doc/213179/name/HELAA%20methodology%20and%20results%20as%20at%20Preferred%20Options. pdf

- Environmental constraints, flood risk, climate adaptation and heritage impacts must be integrated into design, requiring adequate land take and flexibility.

- The University of Warwick is a regionally significant destination, and infrastructure serving it aligns with Local Plan and SPD objectives.

- The Site's Green Belt location does not preclude safeguarding; rather, national policy recognises safeguarding as a legitimate tool for future infrastructure planning.

Together, these policies reinforce the need to identify and protect the land required to deliver the MMTI through the SWLP.

3.1.4 Planning History

A review of planning applications within approximately 1 km of the Site was undertaken using Warwick District Council and Warwickshire County Council's online planning search tools, supplemented by LandInsight records, covering the period December 2015 – December 2025. The purpose of this review is to understand the development context of the area, the likelihood of competing or conflicting land uses emerging, and the degree of development pressure surrounding the Site. This, in turn, helps inform the need for proactive safeguarding of the land required for the MMTI.

Planning history within the site boundary is limited, indicating that the land has not been the subject of significant development proposals or incremental land fragmentation that could compromise future strategic use. This relative absence of development reinforces the opportunity for the land to be safeguarded for a strategic transport function.

The primary recorded activity relates to works associated with the High-Speed Rail (London – West Midlands) Act 2017, particularly in the area immediately south of the Site. These include Schedule 17 submissions for HS2 infrastructure, such as:

- Reference W/23/0435/HS2 – Schedule 17 Plans and Specifications submission for construction of a new railway overbridge carrying the Coventry–Leamington Line over the HS2 alignment, including associated ancillary works.

These HS2 works have a direct bearing on future land-use planning because they have already altered the landscape, environmental baseline, and infrastructure context near the Site. The presence of HS2 infrastructure to the south reinforces the role of this corridor as a major transport zone and reduces the likelihood of the Site being suitable for non-transport forms of development.

Localised planning history in immediate proximity

Other planning history close to the Site includes:

- **Residential development to the south:** In 2014, permission was granted (Ref W/14/1340) for 94 dwellings, which have since been constructed. While built development is present, it remains relatively low in density and does not impede the deliverability of the interchange.

- **Hedgerow removal (2015):** An application to remove hedgerow within the Site was initially refused but was later removed as part of HS2 enabling works. This demonstrates how HS2 activity has already reconfigured parts of the landscape and confirms that land within or near the Site has been subject to transport-led change rather than piecemeal local development.

Major development to the north (strategic relevance)

To the north of the Site, a significant planning permission was granted in 2021:

- **Outline planning permission (Ref W/18/0643)** for:
  - Up to 2,500 dwellings (C3),
  - 4,000 sqm of mixed-use floorspace (various A, B, C, and D-class uses),
  - Primary and secondary schools,
  - Open space and associated infrastructure, located partly within the Warwick District Local Plan allocation H43 – King's Hill.

This large-scale consent is highly relevant to the MMTI because:

- It confirms major housing and population growth immediately north of the Site.
- It intensifies the need for additional sustainable transport capacity, particularly for trips between King's Hill, Coventry, and the University of Warwick.
- It demonstrates that while land north of the Site is committed for significant development, the Site itself remains free of conflicting proposals, strengthening the case for securing it now for strategic transport purposes.

Relevant planning application are listed in Table **3-1** below.

Table 3-1 Planning application history

APPLICATION	ADDRESS/LOCATION	PROPOSAL	DECISION
W/25/1608/AG	Millburn Grange, Coventry Road, Kenilworth, CV8 2FE	Application to determine if prior approval is required under Schedule 2, Part 6, Class A of the GPDO for the proposed erection of an agricultural building for the storage of straw and machinery.	Not determined as yet. Registered on 18th November
W/15/2132/HR	Hedge at Millburn Grange, Coventry Road, Kenilworth CV8 2FE	Amalgamation of field so more suited to modern farming practices	Refused 22 Jan 2016
W/17/1552	Land On The North Side Of, Common Lane (Crackley Triangle), Kenilworth	Application for approval of reserved matters (details of appearance, landscaping, layout and scale) pursuant to condition 1 of planning permission ref: W/14/1340 for the erection of 93 dwellings	Granted Tue 13 Mar 2018

W/18/0643	Land at Kings Hill Lane, Stoneleigh	Outline application with access: Development of up to 2,500 dwellings (C3); 4,000 sq. m. of mixed use floorspace (A1, A2, A3, A4, A5, B1, C2, D1 and D2); Primary School; Secondary School, Open Space and Associated Infrastructure This is on land partly allocated under the Warwick District Local Plan, site allocation reference H43	Granted (24th December 2021)
W/23/0435/HS2	Land at the existing Coventry to Leamington Spa railway approximately 300m south east of the A429 Kenilworth Road.	Plans and Specifications submission under Schedule 17 to the High Speed Rail (London-West Midlands) Act 2017 for the work works comprising: A railway overbridge which will carry the existing Coventry to Leamington Railway over the HS2 track and ancillary works.	Granted 27 07 2023
	Land at Coventry to Leamington Spa Railway, south of A429 Kenilworth Road, Stoneleigh		
	Grange Road, Coventry	Erection of 107 dwellings and associated access road (Consultation from Coventry City Council)	No Objections (1st April 2016)

3.1.5 Relevance of the planning history to safeguarding

The review demonstrates three important points that support safeguarding the MMTI land:

- The Site is largely undeveloped and uncommitted, meaning safeguarding now can prevent incompatible uses emerging and ensure the delivery of strategic transport infrastructure is not compromised by ad-hoc development.

- The landscape context is already shaped by major infrastructure (HS2). The southern part of the surrounding area has been significantly altered by HS2 works, reducing its suitability for other forms of development and reinforcing the suitability of this corridor for transport-related infrastructure.

- There is significant committed growth immediately to the north (King's Hill). This creates a demonstrable future transport demand and highlights the importance of securing land that will be required to deliver long-term sustainable movement in the corridor.

Taken together, the planning history supports the view that the Site remains available, unconstrained by competing uses, and increasingly valuable as a strategic transport location. Safeguarding is therefore both necessary and timely to preserve this unique opportunity within an intensifying development context.

3.2 Land use and ownership base

'The Site' is located within the administrative boundaries of Warwick District and Warwickshire County Council, with Coventry City Council lying immediately to the north. It sits within the remaining green gap between Kenilworth to the south and Coventry to the north, forming part of the transitional rural landscape between the two settlements. The A429 Kenilworth Road runs north–south along the western edge of the Site, while the Elephant & Bear railway line also runs broadly north–south through its eastern extent.

The Site is predominantly rural and greenfield in nature, characterised by longstanding agricultural uses, open fields, hedgerows and a small number of working farms and agricultural dwellings. The surrounding area reflects a dispersed rural settlement pattern with limited built development and a sparse local road network. This rural character contributes to the current absence of intensive land uses within the Site, supporting its potential suitability for strategic, masterplanned development of a transport interchange.

To the south of the Site, the High Speed 2 (HS2) Phase One route passes close by and has significantly influenced local land use and the planning context. HS2-related works, including new overbridge structures and realignment activities, have already altered parts of the immediate landscape. As a result, the wider area has taken on a stronger infrastructure-led character, reducing the likelihood that the land would be appropriate for other forms of conventional built development and reinforcing the logic of accommodating strategic transport infrastructure within this corridor.

The Site itself is under single ownership, which is a key factor in deliverability. Single ownership reduces the risk of fragmented land assembly, facilitates coordinated planning, and enables the safeguarding of a coherent land parcel. The Warwick District Council Housing and Economic Land Availability Assessment (HELAA) identifies the Site as land where the owner has expressed an interest in disposal, or where control appears already to be held by a developer/promoter. This confirms that the land is both available and potentially deliverable, an important consideration for safeguarding and future planning.

In summary, the Site's rural nature, absence of incompatible development, proximity to existing and emerging transport infrastructure, and favourable land control position all support its suitability for safeguarding as the location for the proposed MMTI.

3.3 Environmental constraints and opportunities assessment

A high-level assessment of key environmental considerations was undertaken to assist in informing the orientation and recommended location of the facility within the red line boundary. An in-house PANGEA and RID software has been utilised to identify environmental constraints within the site and surrounding area.

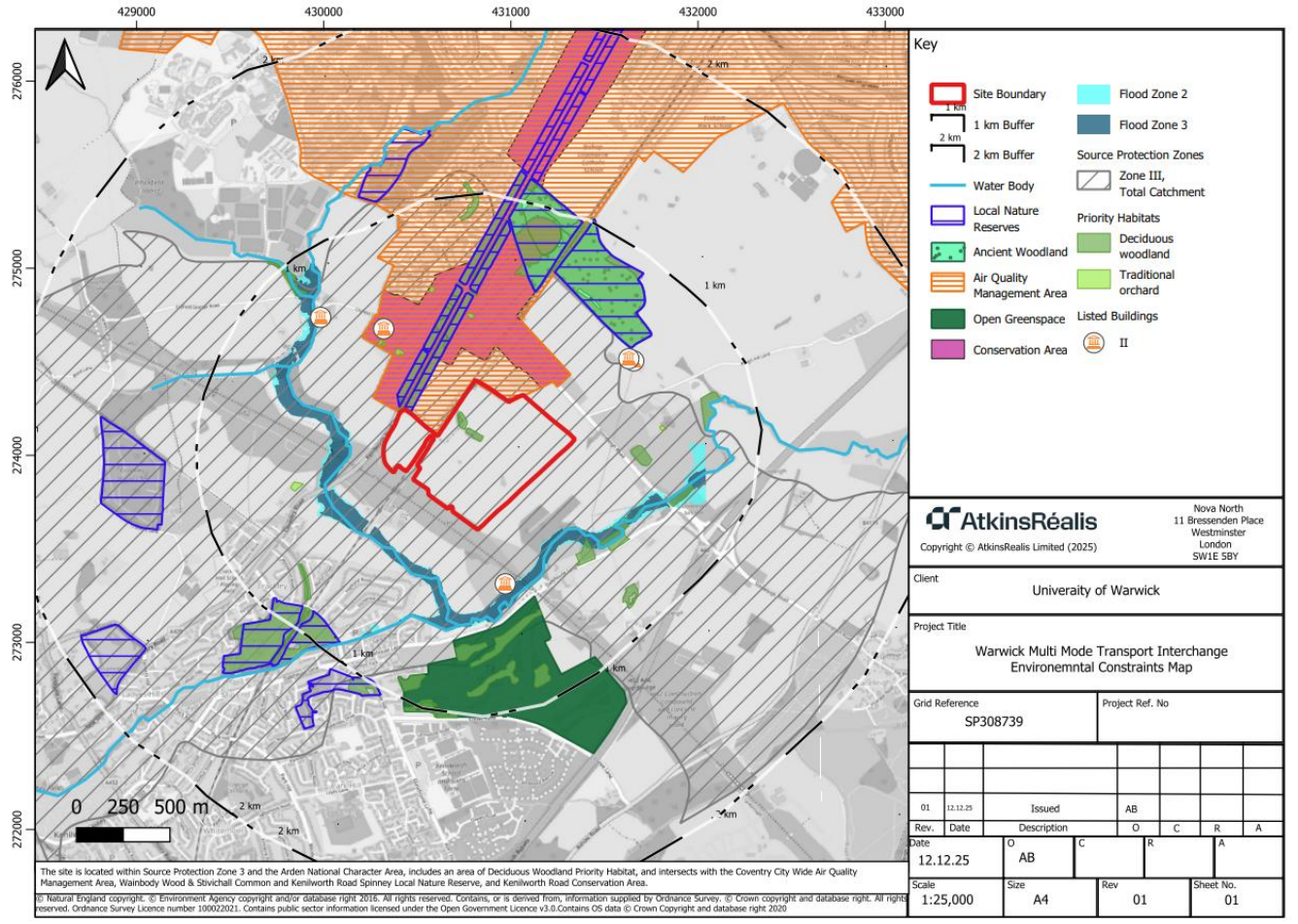
Figure 3-1 indicates high level constraints within the site and locality. The site is within the Green Belt and therefore will be constrained by Green Belt planning policy (although green belt land can accommodate transport infrastructure without reclassification), however, this is presently under review and subject to amendments as part of the revised local plan being prepared.

There are no major restrictions on the site itself. The sites current use as intensively farmed agricultural land indicates it likely of low ecological value, however its proximity to local nature reserves means careful consideration

will need to be undertaken in terms of ecology mitigation into a potential scheme, Biodiversity Net Gain and any required buffer zones, if there are certain protected species e.g. badgers. The site adjoins a conservation area to the north, development will need to ensure there isn't a detrimental impact upon the conservation area.

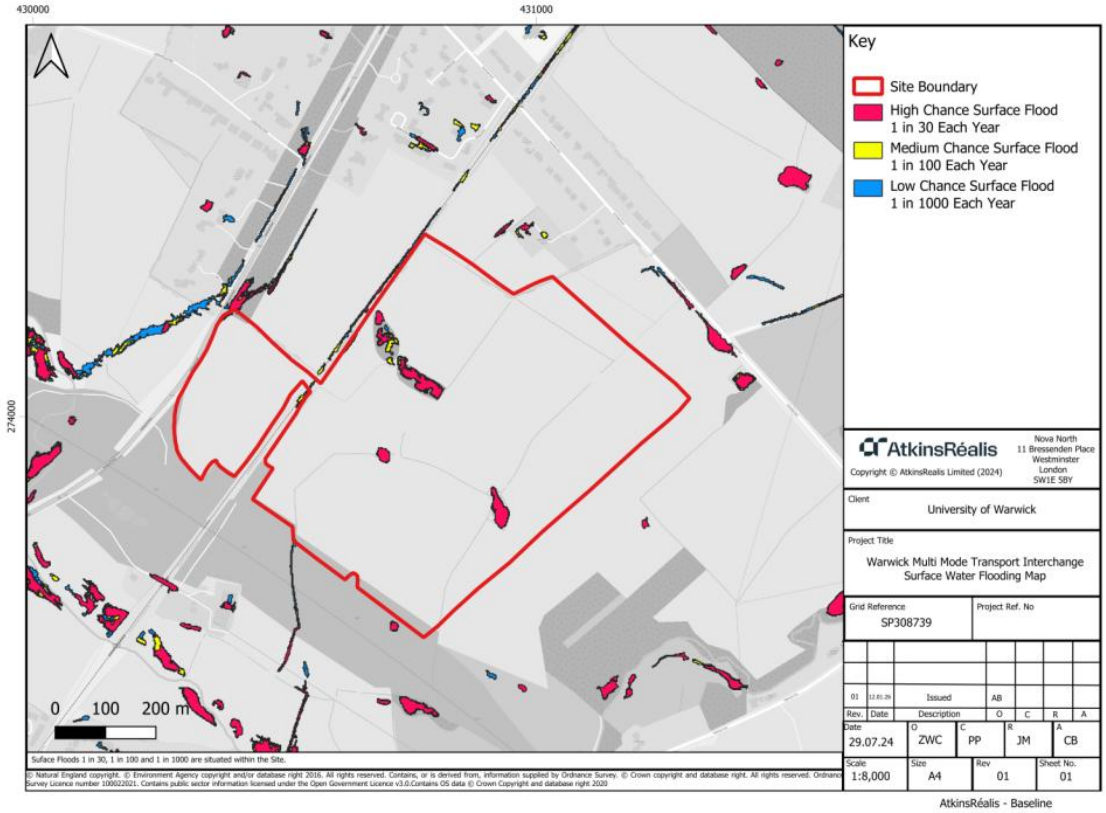
The section of the site adjacent to the conservation area and nature reserve could be considered for landscaping and any biodiversity net gain, this will help ensure protection of heritage assets compliance with biodiversity legislation and requirements and soften the site from the public highway.

Figure 3-1 Environmental constraints map



The site is at very low risk of fluvial flooding although there are very small patched of land at risk of surface water flooding shown in Figure 3-2, this is within the woodland area on the site and can be appropriately designed into a future design, this could mean the appropriate location of any water attenuation methods, which can also have BNG and Green Infrastructure value. A drainage and water management strategy will be required as part of any future development strategy.

Figure 3-2 Surface Water Flood Risk



AtkinsRéalis - Baseline

Figure 3-3 Agricultural Land Classification

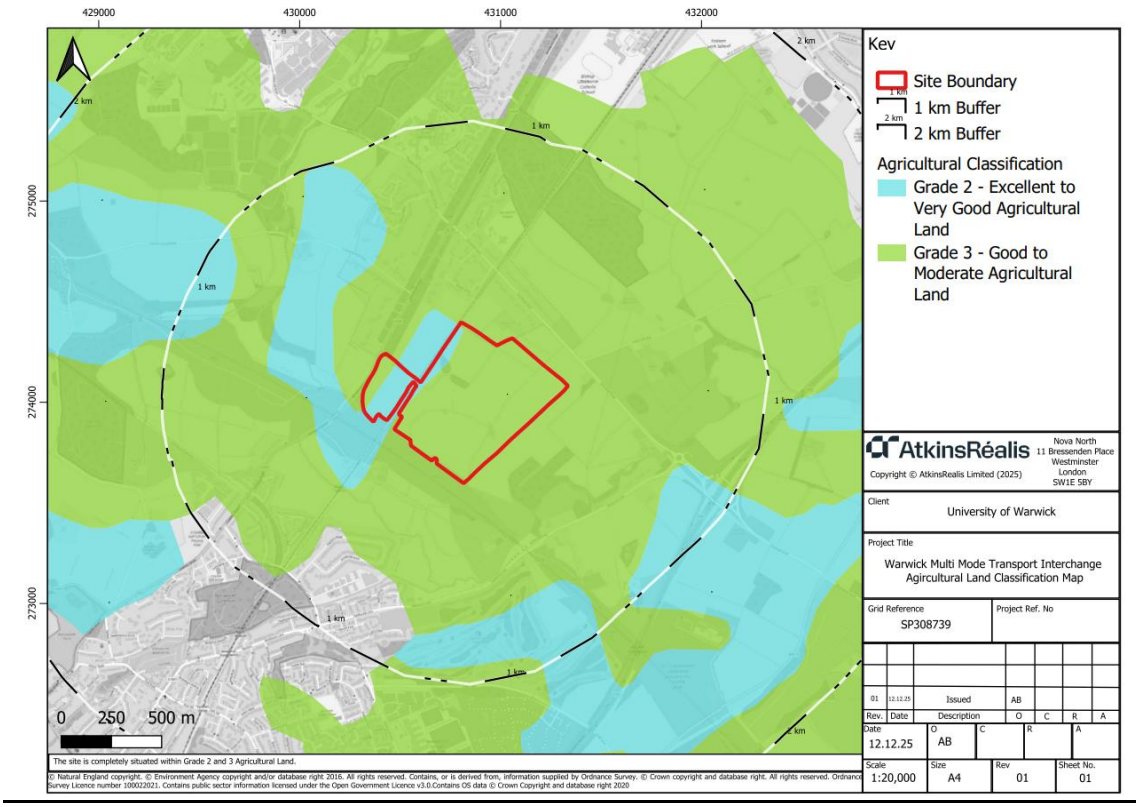


Figure 3-3 shows the high level agricultural land classification. A further specific onsite agricultural land classification survey will need to be undertaken to specify the exact ALC of the land, particularly to distinguish between grade 3a and 3b agricultural land.grade 2 and grade 3a constitute Best and Most Versatile land (BMV). Development on high grade agricultural land will require specific justification, demonstration that lower grade ALC has been considered and that the least about of BMV land has been used. The presence of grade 2 land indicates it will possibly be grade 3a land.

3.4 Constraints

The main constraints for the project relate to the physical and policy constraints, including:

- The site is within a Green Belt land designation, although less of a constraint for transport infrastructure.
- HS2 defines the southern extent of the site.
- The proposed multimodal corridor (previously referred to as the A46 Link Road) bisects the site east/west.
- The rail line bisects the site north/south. Any development needs to ensure that allowance is made for a potential new rail station and double tracking.
- A British Pipeline Agency oil pipeline crosses the site in a similar alignment to the proposed multimodal corridor.

4. Confirm and justify the location of the MMTI facility

4.1 Introduction and Purpose

This section confirms and justifies the proposed location for the University of Warwick Multi-Modal Transport Interchange (MMTI) and sets out the planning rationale for safeguarding the land required to enable its phased delivery. The safeguarding objective is to ensure that land critical to the delivery of strategic transport infrastructure is protected from piecemeal or conflicting development that would prejudice the scheme's feasibility, increase costs, constrain design options, or undermine the ability of the emerging South Warwickshire Local Plan (SWLP) to deliver growth supported by sustainable transport.

The evidence in this report demonstrates that the MMTI is a strategic, cross-boundary intervention intended to address current and forecast transport constraints in the NoKSoC/SG01 corridor and to enable a step-change in sustainable accessibility to and from the University of Warwick, Coventry and key growth locations. The MMTI is also structured as a phased facility, allowing early delivery of bus-based Park & Ride / mobility hub benefits, with later safeguarding to enable integration with Very Light Rail (VLR) and a future heavy rail station subject to wider rail capacity and service planning.

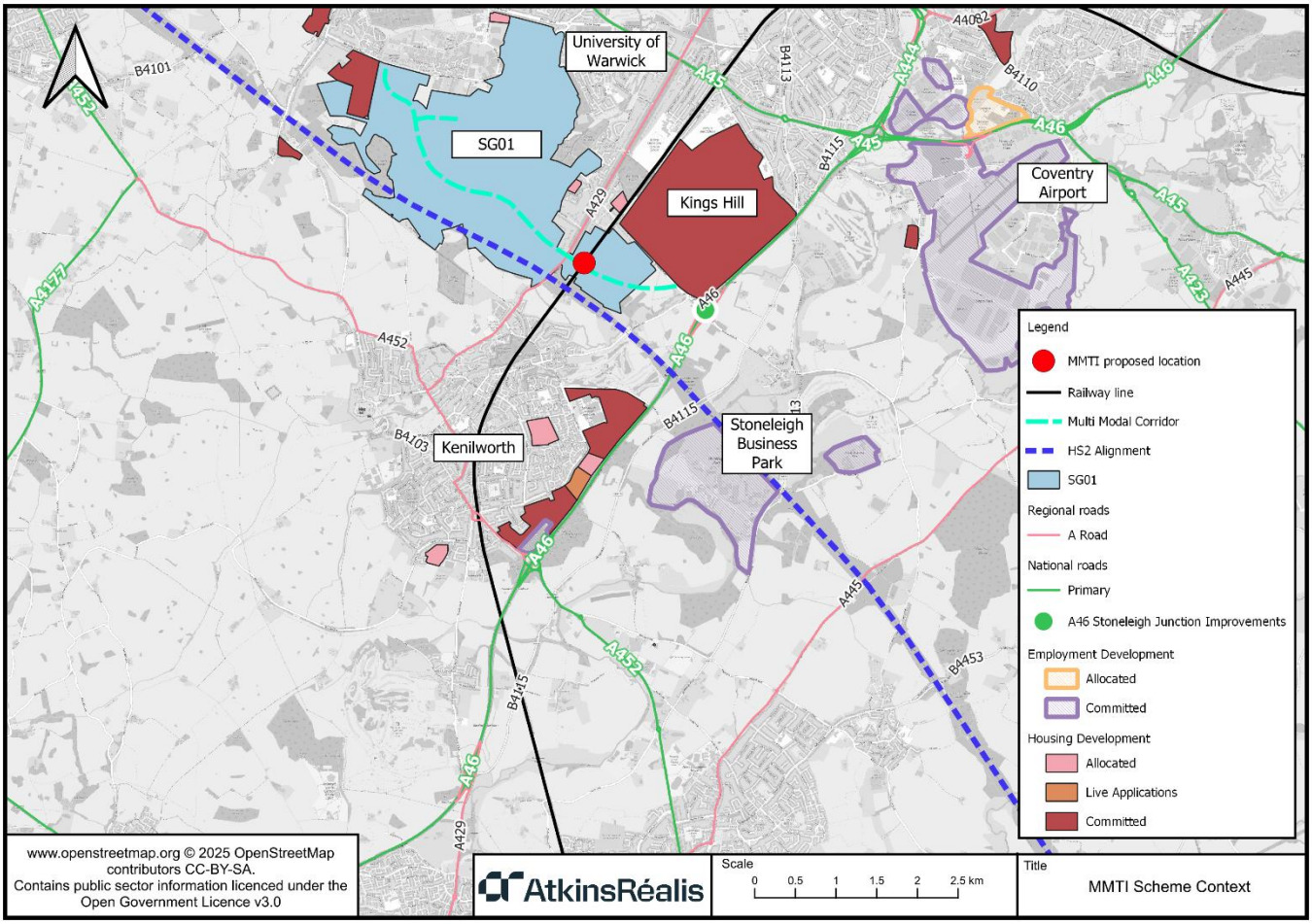
Scope clarification: This safeguarding relates to the interchange site land only (i. e. the land required to deliver the interchange footprint, its internal layout, passenger facilities, parking and supporting mitigation). It does not safeguard off-site highway schemes, junctions or corridor links. However, the justification recognises the interchange's functional relationship with surrounding networks, which will be progressed through subsequent design and business case stages

4.2 Site Selection

The work undertaken for this study confirms that the proposed site, between Coventry and Kenilworth, adjacent to the Elephant & Bear Line and close to the University of Warwick, offers the strongest combination of strategic fit, deliverability and future-proofing for an interchange in this corridor. This conclusion is supported by the Strategic Dimension evidence (Section 3) and the constraints/opportunities assessment (Section 4) and is reinforced by stakeholder engagement (Section 3. 15).

Importantly, the evidence points to the south-western part of the identified site as the most suitable focus for the interchange footprint because it combines the most advantageous rail geometry, greatest separation from sensitive receptors and the clearest opportunity to deliver a phased hub layout within a single coherent land parcel. The proposed MMTI location in its surrounding context is outlined in Figure 4-1.

Figure 4-1 - MMTI Scheme Context



The preferred location is justified on five grounds:

- **Strategic fit: intercepting demand at the right point in the network**
  - The interchange must operate as an intercept and transfer facility that captures trips before they reach the most constrained approaches into the University and Coventry. The congestion mapping, journey time variability and traffic count evidence presented in Section 3. 8 demonstrates peak-period stress on the A429/Gibbet Hill approaches and associated junctions. A site in this corridor, close to the strategic approach routes, provides the strongest opportunity to intercept trips and convert them to bus/VLR/rail/active modes without importing additional pressure into constrained local roads or campus streets.

- **Engineering and operational feasibility on the rail corridor**
  - A future station component (Phase 3) must be capable of being delivered where the rail alignment can accommodate platforms and station infrastructure and where there is sufficient land to develop a station concept that remains compatible with rail operations and future enhancement. The preferred site includes a straight, open section of the Elephant & Bear Line and provides space for an interchange arrangement that can incorporate passive provision for future rail infrastructure (subject to further rail industry assessment). This materially strengthens deliverability compared to alternatives constrained by adjacent development, complex geometry or limited land availability

- **Multi-modal connectivity and phased delivery capability**

- The MMTI is intended to function as a multi-modal hub, not a single-mode facility. The proposed interchange site is uniquely capable of accommodating the phased concept within one safeguarded land parcel, including:
    - Phase 1 bus-based Park & Ride / mobility hub functions and passenger facilities;
    - Phase 2 potential VLR integration/stop concept (subject to route development); and
    - Phase 3 future heavy rail station concept (subject to rail capacity/service planning), with sufficient flexibility for phased expansion and operational refinement over time. This supports a "deliver now, expand later" approach that is aligned to early delivery of policy outcomes (mode shift, congestion relief, inclusive access), while maintaining future optionality

- **High deliverability: land assembly and scheme safeguarding**
    - Safeguarding must be realistic and capable of being implemented. The site benefits from being within single land ownership, which reduces land assembly risk, supports coherent masterplanning and enables efficient safeguarding compared with locations requiring multiple acquisitions or complex third-party interfaces. This materially strengthens the case that safeguarding will protect a deliverable option rather than a speculative aspiration.

- **Planning/environmental risk profile**
    - The constraints mapping and high-level environmental review (Section 4) indicates that the site has manageable environmental constraints relative to alternatives, including:
    - Largely agricultural land use with limited built development;
    - Ability to avoid higher-risk surface water areas through layout and drainage design;
    - Scope to incorporate mitigation, landscape and biodiversity net gain within the safeguarded envelope; and
    - Limited proximity to residential receptors compared with more northerly or urban-edge options.

These characteristics reduce consenting risk and increase the likelihood that the safeguarded land can support a deliverable scheme once design is developed.

4.3 Reasonable Alternatives

At Examination, safeguarding proposals are typically tested against whether the authority has:

- Identified a strategic requirement;
- Considered reasonable alternatives; and
- Safeguarded only what is necessary to avoid prejudicing delivery.

This report demonstrates that the strategic requirement arises from forecast growth and existing network constraints (Section 3. 8–3. 11), and that the preferred location is the one that best meets the multi-modal, intercept and rail deliverability criteria.

Alternative broad locations in the corridor are generally weaker because they are more likely to be constrained by one or more of:

- Insufficient direct access to strategic approaches (reducing intercept effectiveness);
- Land take conflicts with existing development or sensitive receptors;
- Reduced ability to accommodate phased expansion and integration across modes; and
- Increased complexity for future station delivery (geometry, access, or operational constraints).

4.4 Safeguarding Extent

Safeguarding should be proportionate: sufficient to maintain a deliverable design envelope, but not so extensive that it appears speculative. On that basis, the safeguarded land at this stage should therefore be capable of accommodating the functional requirements of the phased facility, namely:

- **Core interchange footprint (all phases):** land for platforms (future), station building (future), bus interchange, pedestrian/cycle access, interchange public realm, and operational/service areas;
- **Phase 1 parking and access**: land for initial P&R parking and circulation, plus access junctions/links that enable safe access from the A429 and integration with the Multimodal Corridor;
- **Phased expansion / resilience within the site:** land to allow incremental expansion of parking and interchange capacity as demand grows and as later phases are progressed. This is evidenced by the report's demand and parking sensitivity ranges (Section 7), which indicate that land take may need to accommodate growth beyond initial Phase 1 provision;
- **Future rail compatibility/passive provision:** land that enables station delivery without precluding future rail corridor enhancement, consistent with the report's recognition that heavy rail deliverability depends on rail capacity and service pattern development; and
- **Mitigation and place-making:** land for drainage attenuation, landscaping, buffers and biodiversity net gain where required, consistent with the opportunities and constraints described in Section 4.

This approach ensures that safeguarding is grounded in identified functional need, while keeping design flexibility so that later technical work (highways design, station feasibility, environmental assessment) can optimise the final layout.

4.5 Green Belt and planning balance

The interchange site lies within the Green Belt and this is a material planning consideration. However, the purpose of safeguarding is not to grant planning permission or approve a final design; it is to ensure that the Local Plan does not inadvertently foreclose a strategic infrastructure solution required to support sustainable growth and mode shift. National policy expects plans to identify and coordinate the provision of infrastructure, including transport infrastructure, alongside growth.

Safeguarding the interchange site is justified in this context because:

- The interchange is strategic supporting infrastructure for planned growth, with a clear role in reducing car dependency, supporting sustainable travel choices and addressing congestion pressures evidenced in the report;
- Potential Green Belt effects can be addressed through later design development, including consolidating built form within a defined node, integrating landscape and green infrastructure, and using mitigation land within the safeguarded site;
- The land's context is strongly influenced by existing and planned linear infrastructure (including HS2 and corridor proposals described in the study), meaning a consolidated interchange location enables a planned and mitigated approach rather than incremental, dispersed interventions.

Safeguarding therefore represents an appropriate plan-making action to retain an infrastructure option that aligns with sustainable transport outcomes while allowing the detailed Green Belt planning balance to be addressed at the consenting stage when the scheme design is sufficiently defined.

4.6 Deliverability and stakeholder alignment

Safeguarding is strengthened where there is evidence of deliverability and stakeholder alignment. The report demonstrates supportive engagement with key partners, including local authorities and the University, and

recognises interdependencies that will be managed through phased delivery (Section 3. 14) and ongoing option development.

The phased approach reduces delivery risk by enabling early benefits through Phase 1 while safeguarding preserves the opportunity to integrate later phases as wider rail and corridor programmes mature (Section 7)

4.7 Conclusion on site selection

On the basis of the evidence presented in Sections 3, 4 and 7, the proposed interchange site, particularly the south western focus area, represents the most appropriate and deliverable location for a multi modal interchange in this corridor. It offers:

- The strongest intercept position relative to congested approaches, with evidence showing recurrent AM and PM congestion at Gibbet Hill, the A429 and Cannon Hill Road, key access points for both the University and wider South Coventry, demonstrating a clear operational need for an intercept facility upstream of these pressure points;
- Feasible rail alignment conditions and the land required to accommodate a future station concept and passive provision for future rail capacity enhancement, noting that this is one of the only straight, unconstrained rail sections between Kenilworth and Coventry suitable for a station;
- The best opportunity for phased multi modal integration (bus, VLR and heavy rail) and incremental expansion within a single, coherent safeguarded land parcel, ensuring the facility can evolve to support major growth areas such as SG01, King's Hill, and the expanding University of Warwick campus;
- High deliverability given the single ownership of the site, which materially reduces land assembly risk and makes safeguarding more effective compared with more fragmented parcels elsewhere in the corridor; and
- Manageable environmental constraints relative to other nearby locations, including avoidance of the more sensitive conservation area interface to the north and the ability to accommodate mitigation, drainage and biodiversity enhancements within the site boundary.

In practical terms, the south western portion of the safeguarded site provides the clearest opportunity to position the interchange close to the rail corridor while maintaining separation from the conservation area to the north and avoiding the small, isolated surface water patches identified in the constraints review. The extent of land proposed for safeguarding is justified by the specific spatial requirements of the phased MMTI concept and the local demand context:

- Phase 1 requires land for an initial Park & Ride to intercept car trips approaching from the Warwick/Kenilworth direction and those funnelling toward the University of Warwick via the congested A429. Demand analysis shows a potential requirement for up to 879 P&R spaces under emerging Local Plan scenarios, rising to up to 1,381 spaces under sensitivity tests reflecting realistic University parking displacement behaviour, patterns strongly influenced by the high proportion of student and staff trips in the immediate local catchment;
- Later phases require safeguarding of land to incorporate VLR and a future rail station concept that reflects local trip patterns, including short to medium distance flows between Coventry, the University campus, Kenilworth and Leamington. Spatial flexibility is essential to accommodate platforms, public realm, interchange movements and operational areas within the site without constraining future timetable or service pattern development; and
- The local environmental setting, adjacent agricultural land, proximity to Crackley's conservation area edge and the need to integrate sustainable drainage, means that on site mitigation, structural landscaping, and biodiversity net gain all require additional safeguarded space to ensure the interchange is deliverable without exporting environmental impacts elsewhere.

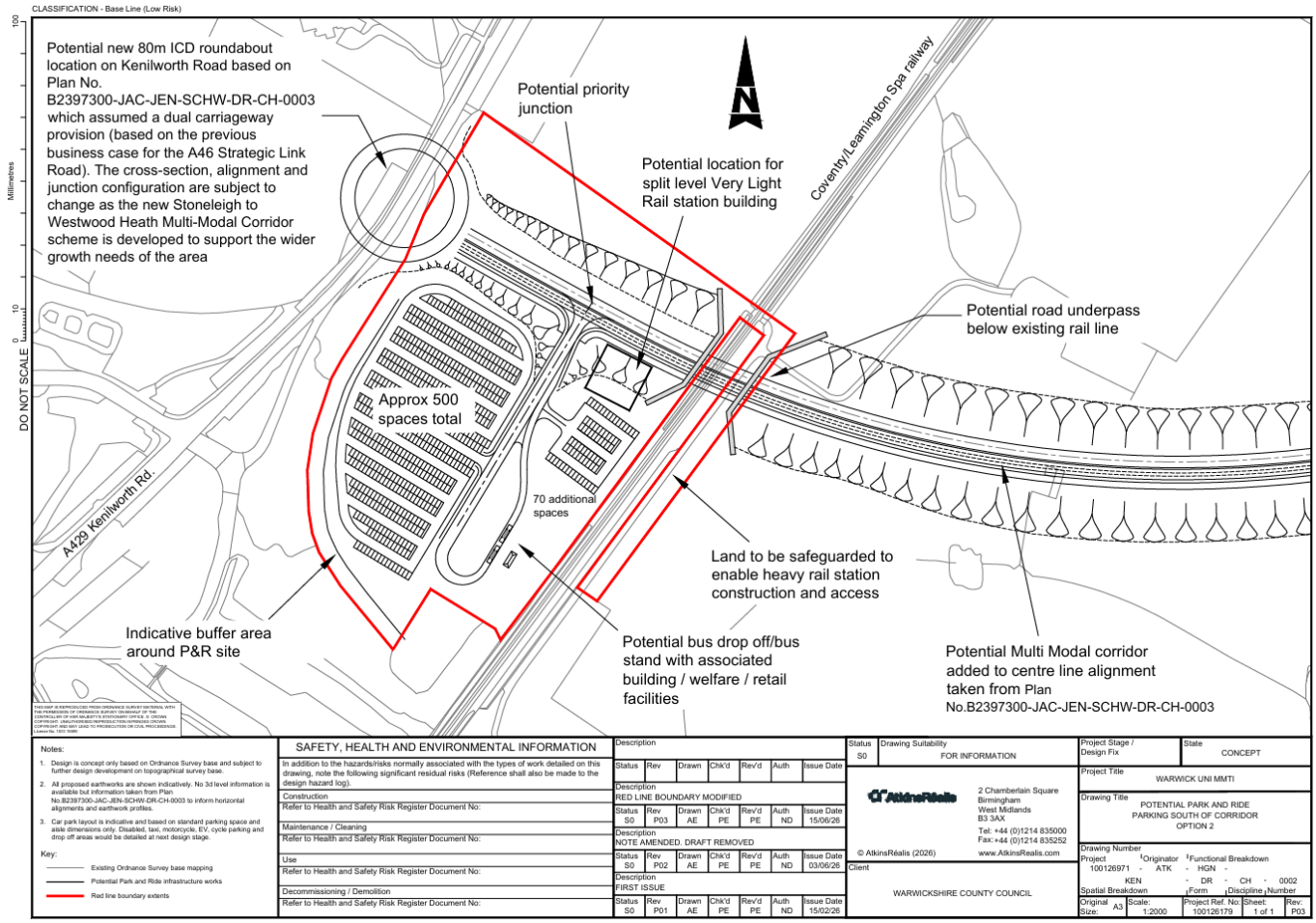
Taken together, these localised operational, environmental and growth related factors mean that a site of this scale is necessary, not excessive, to ensure that the interchange can be delivered in a manner that reflects the transport pressures, growth dynamics and environmental context of the University–Kenilworth–South Coventry corridor.

Following further discussions with Warwickshire County Council, Warwick District Council, and the developer of the SW01 site, a revised, more concise boundary to be safeguarded has been proposed. This boundary (see Figure 4-2) now covers the south-western corner of the site, which is bordered by the railway line, HS2, and the A429. The change aims to reduce the impact on land available for development and to help ensure the remaining site remains viable for future use.

There is also an option to add decking over parking areas at a later stage, allowing the site to be adapted to support the planned phased development of the MMTI. A small section to the west of the railway line has also been included to ensure access and space for construction of the heavy rail element of the proposal.

Safeguarding the interchange site through the SWLP is therefore fully justified to protect delivery of strategic transport infrastructure that supports the area's planned growth, improves access to the University of Warwick, reduces pressure on the A429/Gibbet Hill network, and enables sustainable mode shift consistent with national expectations for aligning development with strategic infrastructure in plan making.

Figure 4-2 – Revised Red Line Boundary



5. Establish the purpose of the facility

5.1 Purpose of the facility

The emerging thinking regarding the trip types associated with the MMTI are set out in Table 5-1. This sets out the various journey types and function of the MMTI in relation to the modes of public transport that could serve it. The scope is to understand the potential demand associated with its function as, a) a Park & Ride facility for bus and/or very light rail (VLR) and b) as a railway station. The purpose of these demand estimates is to understand the potential number of car trips associated with the facility in order to derive the total potential number of car parking spaces required at the facility. This in turn will influence the required land take.

Table 5-1– Trip types associated with multi-modal interchange

	MMTI as origin interchange for onward journeys	MMTI as destination interchange
Facility	P&R – bus & VLR	Rail
Final destination	Bus P&R - Coventry city centre VLR orbital – Coventry and Warwickshire Investment Zone, Coventry University	University of Warwick
Origin catchment	P&R: Kenilworth area – see select link analysis (SLA) in 8.2Appendix A. Active travel: Kings Hill development, University of Warwick.	Rail: from Coventry, regional.
First mile/access mode assumption	Bus – walk up to 800 metres from the site, cycle 2km (needs a proper route and crossings). VLR - walk up to 800 metres from site, cycle up to 2km (expect this to be low as VLR route goes through Kings Hill). Bus & VLR - beyond 800 metres assume car access. Bus access = Assumed as 0, but future bus network uncertain and hence interchange possibilities may occur	Not in scope.
Last mile mode assumption	Not in scope – assume active travel, PT, taxi.	To University of Warwick campus – active travel (needs a proper route and crossings), bus accessing services on carriageway (existing services) rather than re-routing
Service stopping/routing assumption	Bus – assume remain on carriageway rather than routing into site. There could be an opportunity to efficiently route through the site – e.g. in at Kenilworth Road, out on multi-modal corridor. (Site concept will include a bus facility, for rail replacement services and possible other bus route changes to extend to the site) VLR – assume stays on multi-modal corridor with stop facilities at this point.	1 train per hour (TPH) local Leamington Spa – Nuneaton service (calling at Leamington Spa, Kenilworth, University of Warwick, Coventry, Coventry Arena, Bedworth, Bermuda Park and Nuneaton). 1TPH long distance inter-regional service (e.g. Reading to Manchester Piccadilly)

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6. Demand forecasting

This section forecasts demand on the basis that the MMTI will be delivered in phases, with each phase broadening the catchment and strengthening the attractiveness of sustainable travel. In the near term (Phase 1) the facility is assumed to operate primarily as a bus-based Park & Ride / mobility hub, intercepting car trips from the A46/A429 corridor for onward travel to Coventry and the University; the demand work therefore estimates Park & Ride demand using Kenilworth and Stoneleigh Wide Area (KSWA) model outputs for 2029 and 2037.

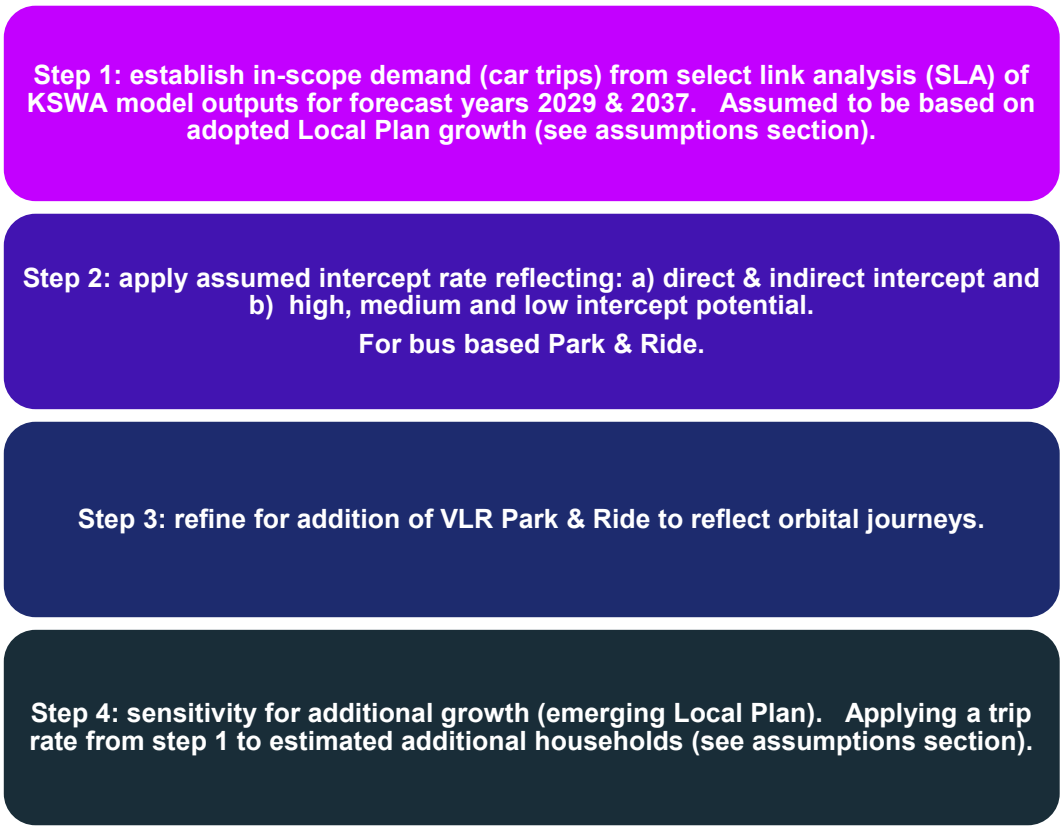
In the medium term (Phase 2) a VLR connection is assumed to be introduced, providing an additional orbital public transport option (particularly to the employment/growth corridor), and the demand assessment reflects this through an uplift in Park & Ride attractiveness relative to bus-only provision. In the longer term (Phase 3) the MMTI is assumed to evolve to include a new heavy rail station on the Coventry–Leamington corridor; accordingly, rail demand is forecast separately, with the report assumptions indicating heavy rail is expected to be modelled from around 2045, subject to wider rail capacity and service planning.

6.1 Park and Ride: bus & very light rail

6.1.1 Approach

The approach to the demand estimates for car trips to the MMTI for bus based and very light rail (VLR) Park & Ride is set out in Figure 6-1. This is based upon the methodology adopted for the Warwick/Leamington Spa Park and Ride/Stride Study Stage 2 completed by AtkinsRéalis for Warwickshire County Council in 2020.

Figure 6-1 - Approach to Park & Ride demand estimates: bus and very light rail (VLR)



6.1.1.1 Assumptions

In-scope car trips

These have been derived from select link analysis of the KSWA model. The location for the select link analysis was chosen to reflect the potential car trips that could be directly and indirectly (diversion) intercepted by a Park & Ride facility on their journey to their final destination. The number of car trips was taken for the AM and IP periods, to reflect inbound flows to destinations in Coventry, from the following locations:

- Direct intercept:
  - Car journeys on the A429 travelling from Kenilworth northbound into Coventry.
- Indirect/diversion intercept:
  - Car journeys from north Kenilworth travelling north into Coventry via A46; and
  - Longer distance car journeys travelling into Coventry via A46. Specifically, journeys starting south of the Kenilworth north A46 junction.

Intercept rates

The assumed intercept rates are set out in Table 6-1. These are consistent with those applied in the 2020 Warwick/Leamington Spa Park and Ride/Stride Study Stage 2.

Table 6-1 - Assumed intercept rates

	Direct pass-by flows interception rate	Potential diversion flows interception rate
Low	10%	5%
Medium	15%	7. 5%
High	20%	10%

Core growth assumptions – adopted Local Plan

The select link analysis is based upon outputs from the KSWA model forecast years of 2029 and 2037. As such, the KSWA reflects the core growth assumptions as set out in Table 6-2. The number of households assumed for Warwick District in each of these forecast years is provided.

Table 6-2 - Core growth assumptions in the KSWA model (source: KSWA Forecasting Report, 14. 03. 2025 (Draft), SLR)

	Bus & VLR	Bus & VLR
Source	Select link analysis (KSWA)	Select link analysis (KSWA)
Forecast year	**2029**	**2037**
Growth included	Adopted local plan, inc. larger sites of: Kings Hill Lane site at 450 dwellings, Eastern Green at 1,366 dwellings.	Adopted local plan, inc. larger sites of: Kings Hill Lane site at 2,050 dwellings, Eastern Green at 2,250 dwellings.
Multi-modal corridor included?	No	No

Number of households in Warwick District	67,486	71,531

6.1.1.2 Sensitivity - emerging Local Plan growth assumptions

A sensitivity test has been conducted to understand the potential impact of increased number of households in the area to be set out in the emerging South Warwickshire Local Plan. Based upon the available documents[24], an indicative increase of 16,000 households has been assumed for 2050, this is set out in Table 6-3. The potential change in demand associated with this is estimated in the demand sensitivity test.

Table 6-3 - Core growth and sensitivity growth assumptions

	Growth in households compared to base households	Total households
2029	3,379	67,486
2037	7,424	71,531
Sensitivity - 2050 emerging local plan	16,000	80,107

6.1.1.3 Sensitivity - University of Warwick off campus car parking at the MMTI

A sensitivity test has been conducted to understand the potential car parking requirements for University staff, students & visitors to use the MMTI as a location to park and travel to the University campus by bus or active travel (assuming a high-quality active travel option between the MMTI and the campus is available).

This sensitivity test used University of Warwick campus car parking information presented in Table 6-4 and confirmation from the University of Warwick that they have identified a shortfall of 350 parking spaces on-campus.

This shortfall has been applied to estimate the total number of car parking spaces that could be required at the MMTI with bus-based P&R, VLR based P&R and providing for off campus car parking for the University of Warwick. The charges have been used to estimate potential car parking revenue which is presented in Section 6.3.

[24] Warwick District: 630 homes needed per year, 16,000 homes total (2025–2050). Source: South Warwickshire Local Plan – Meeting Housing Growth Needs through the SWLP (Joint Cabinet Committee, August 2024), South Warwickshire Local Plan – Preferred Options & HEDNA evidence (SWLP official website).

Table 6-4 - University of Warwick campus car parking[25]

Car park	Capacity, no. of spaces	Type (defined for the purposes of this project)	Parking charge	Staff allowed?
Central Campus – 8	450	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Central Campus – 8a	170	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Central Campus – 15	460	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Lynchgate	600	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Kirby Corner	1300	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Westwood Campus– 12	165	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Westwood Campus– 14 & 14A	190	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Westwood Campus– 13	221	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Cryfield Village	430	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Argent Court (Science Park)	105	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Schmitt & Institute House (Science Park)	23	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Sports & Wellness Hub	190	Visitor	Pay on exit (special tariff)	No
Milking Parlour	38	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
University of Warwick – 6	135	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
University of Warwick (54 spaces)	54	Staff & student	hourly, £8. 50 per day (or £3. 50 staff registered)	Yes at discounted rate if registered
Scarman (conference centre)	100	Visitor	Free for delegates	Yes, at standard rates (£8. 50 a day)
Radcliffe (conference centre)	150	Visitor	Free for delegates	Yes, at standard rates (£8. 50 a day)

[25] sourced from Parkopedia

The Slate (conference centre)	90	Visitor	Free for delegates	Yes, at standard rates (£8. 50 a day)

6.1.2 Demand estimates - Park and Ride: bus & VLR

The demand estimates for bus and VLR Park & Ride are set out below.

6.1.2.1 Direct and indirect (diversion) intercept of car trips

The number of assumed intercepted car trips for direct and indirect intercepts in each forecast year are provided in Table 6-5. It is noted that the SLA data shows no growth between 2029 and 2037, a review of the available KSWA forecasting has been unable to provide an explanation for this. It is noted that the KSWA forecasting report includes assumption of an increase in 3,000 households in Warwick district from 2029-2037. The forecasting report doesn't include a commentary on network impacts, as such it's not possible to understand whether this small increase is because the highway network is at/near capacity, and therefore cannot take traffic growth, or is it a quirk of the model that most traffic stays on the A46.

Table 6-5 - Estimated number of car trips intercepted

Direct intercept summary

Intercept rate	2029 intercepted car trips	2037 car trips
5%	91	91
10%	182	182
15%	272	273

Indirect intercept summary

Intercept rate	2029 intercepted car trips	2037 car trips
5%	199	205
7. 50%	299	308
10%	399	410

6.1.2.2 Bus-based Park & Ride

The estimated total number of car trips (both direct and indirect) intercepted by the bus-based Park & Ride is provided in Table 6-6. This also includes estimates based upon an emerging local plan scenario.

Table 6-6 - Estimated number of car trips intercepted to use bus-based Park & Ride

Intercept rate	2029 intercepted car trips	2037 intercepted car trips	2050 emerging local plan sensitivity
Low (5% direct and 5% indirect)	290	296	331
Medium (10% direct, 7. 5% indirect)	481	489	548

High (15% direct, 10% indirect)	671	683	765

6.1.2.3 Bus-based and VLR Park & Ride

The estimated total number of car trips intercepted to use bus-based Park & Ride along with an eastern orbital VLR route (to reflect current CCC ambitions) is provided in Table 6-7. This also includes estimates based upon an emerging local plan scenario.

Table 6-7 - Estimated number of car trips intercepted to use bus based & VLR Park & Ride

Intercept rate	2029 intercepted car trips	2037 intercepted car trips	2050 emerging local plan sensitivity
Low (5% uplift on P&R low scenario)	305	311	348
Medium (10% uplift on P&R medium scenario)	529	538	603
High (15% uplift on P&R high scenario)	772	785	879

6.1.2.4 Sensitivity: University of Warwick off campus car parking at the MMTI

Table 6-8 presents the sensitivity test for University of Warwick (UoW) off campus car parking at the MMTI for bus based Park & Ride and bus based and VLR based Park & Ride. This applies the 350 spaces on-campus shortfall.

Table 6-8 - Sensitivity: University of Warwick off campus car parking at MMTI

Total bus-based P&R

Intercept rate	2050 Max no. of car parking spaces needed without UoW parking	Max no. of car parking spaces needed with 350 UoW parking added (visitor & staff)
Low (5% direct and 5% indirect)	331	681
Medium (10% direct, 7. 5% indirect)	548	898
High (15% direct, 10% indirect)	765	1,115

Total bus-based P&R and VLR

Intercept rate	2050 Max no. of car parking spaces needed without UoW parking	Max no. of car parking spaces needed with 350 UoW parking added (visitor & staff)
Low (5% uplift on P&R low scenario)	348	698
Medium (10% uplift on P&R medium scenario)	603	953
High (15% uplift on P&R high scenario)	879	1,229

6.1.3 Summary

The demand estimates for Park & Ride have identified that a maximum of 879 car parking spaces could be required under the bus based and VLR Park & Ride emerging local plan scenario. Adding University of Warwick off campus car parking at the MMTI could require up to 1,229 car parking spaces could be required.

6.2 Phase 3 – Heavy Rail Facility

6.2.1 Approach

The outline approach for forecasting rail demand at the MMTI is broken down as below.

From the brief the suggested routing and frequency has been aligned with the modelling:

- *1TPH local Leamington Spa – Nuneaton service (calling at Leamington Spa, Kenilworth, University of Warwick, Coventry, Coventry Arena, Bedworth, Bermuda Park and Nuneaton).*
- *1TPH long distance inter-regional service for this we have taken the CrossCountry Manchester Picadilly – Southampton service which currently serves Coventry and Leamington Spa, assuming an additional stop to be included for the University of Warwick interchange.*

The core component of demand modelling for the base-year utilises a **trip-end** modelling approach which has been utilised to assess demand at a new station.

Step 1: Origin-destination data from Rail Data Market Place has been used, utilising 2024/25 rail data for the in-scope flows with a focus on Leamington Spa and Kenilworth as comparator stations for the two suggested services.

Step 2: For each of the existing stations an assumed 2km catchment area to generate a residential and workplace population for each catchment to assign to trips to generate a trip rate for existing O-D flows.

Step 3: Breakdown key flows to forecast demand for based on the agreed service patterns:

Local Demand (assigned to local Leamington Spa – Nuneaton service)

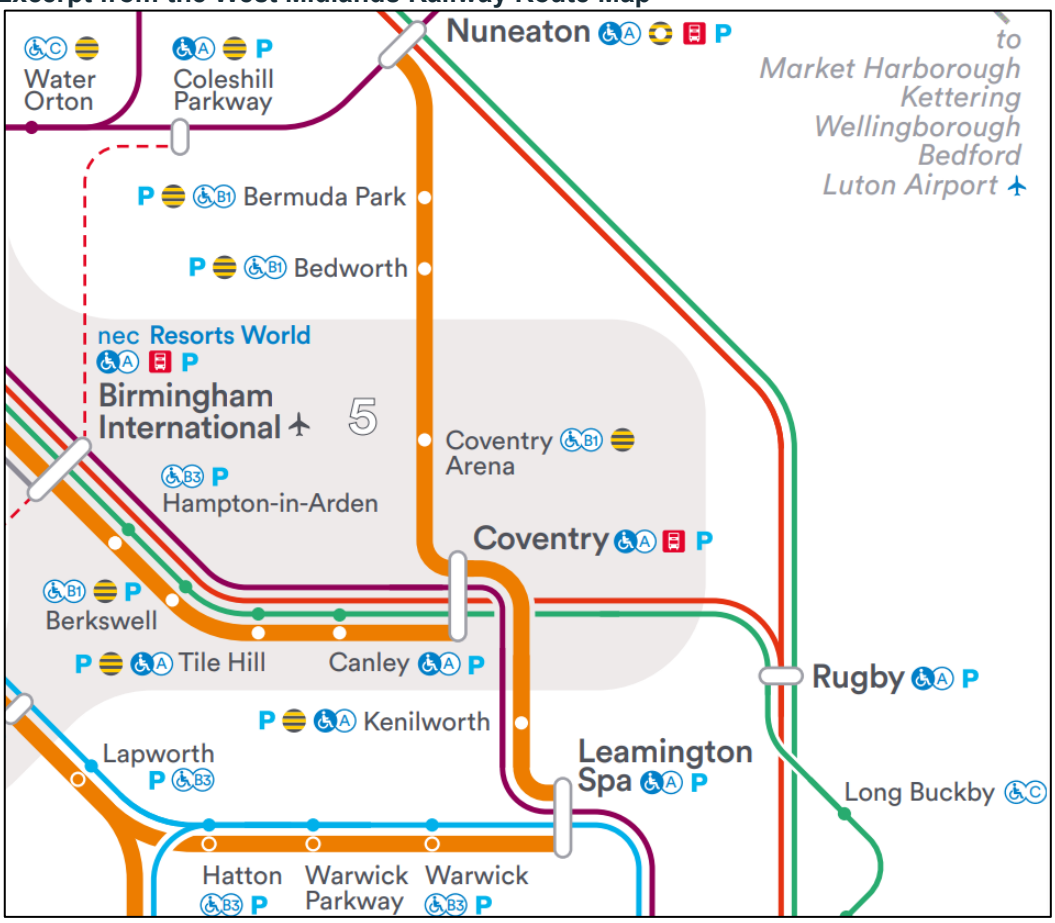
Kenilworth has been used as the comparator station for this element of demand; it has a similar residential population to the Multi-Modal interchange site and so trip rates should be comparable. For the top 15 flows to/from Kenilworth (as the comparator station for this local service) there are 6 stations (Table 6-9 which serve as direct

connections highlighted below. This will form the bulk of forecasted demand for the regional stopper service, there will be a migration of existing connecting passengers assumed here too.

Table 6-9 – Comparator Flow Journeys (Kenilworth)

Origin	Journeys
Coventry	**48,460**
Leamington Spa	**41,090**
London Euston	15,362
Birmingham New Street	13,024
Coventry Arena	**10,572**
Nuneaton	**5,864**
Birmingham International	4,830
Bedworth	**3,932**
Birmingham Moor Street	3,026
Warwick	2,888
Oxford	2,598
Rugby	2,184
Banbury	1,850
Birmingham Snow Hill	1,808
Bermuda Park	**1,726**
Total In Scope Journeys	**159,214**

Figure 6-2 - Excerpt from the West Midlands Railway Route Map



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Longer distance demand (assigned to XC Reading – Manchester Picadilly service)

Based on existing key flows to/from Leamington (as the comparator station for this local service) along the identified XC service route, there are 8 in-scope stations highlighted in Table 6-10 which will be subject to demand forecasting for the new station, based on existing demand levels to stations along that route to/from Leamington:

Table 6-10 - Comparator Flow Journeys (Leamington)

Origin	Journeys
London Marylebone	495,926
Birmingham Moor Street	434,426
Coventry	208,968
Oxford	147,242
Banbury	101,942
Birmingham New Street	91,740
Birmingham International	74,556
Manchester Piccadilly	41,528
Rugby	24,900
Nuneaton	23,294
University (Birmingham)	13,480
Wolverhampton	10,692
Leicester	10,680
Coventry Arena	8,986
Northampton	8,606
Milton Keynes Central	6,004
Watford Junction	1,942
Tile Hill	1,250
Canley	674
Berkswell	618
Total In Scope Journeys	**1,748,544**

Figure 6-3 - Excerpt from CrossCountry Trains Route Map



Step 4: Calculate an existing trip rate for key flows to use as a comparator for the new interchange station. This was achieved by aligning residential and workplace populations within the agreed catchment area around each comparator station as in Table 6-11.

Table 6-11 – Comparator Station Demographic Comparison

TLC	Station	Residential Population	Employed Population	Workplace Population	Mixed Population
KNW	Kenilworth	22,800	10,473	8,000	30,000
COV	Coventry	72,050	25,415	80,000	152,000
LMS	Leamington Spa	50,566	23,930	22,500	73,066

Using these population figures denotes a trip rate for each key station in Table 6-12 and Table **6-13**, derived from comparing observed journeys to the mixed population for each comparator station for use in the do minimum:

Table 6-12 - West Midlands Railway Local Service (Kenilworth Journeys and Trip Rate)

Origin	Journeys	Trip Rate
Coventry	48,460	1.57
Leamington Spa	41,090	1.33
Coventry Arena	10,572	0.34
Nuneaton	5,864	0.19
Bedworth	3,932	0.13
Bermuda Park	1,726	0.06

Table 6-13 - CrossCountry Trains Long Distance Service (Comparator Journeys and Trip Rate)

Origin	**Journeys**	**Trip Rate**
Birmingham New Street	2,384,690	15.68
Birmingham International	376,482	2.48
Coventry	208,968	1.37
Wolverhampton	162,894	1.07
Manchester Piccadilly	67,556	0.44
Oxford	63,056	0.41
Banbury	57,586	0.38

These trip rates form the basis of the high-level demand forecasting for the heavy rail section of the brief at University of Warwick Interchange. Utilising trip rates from existing data using comparator stations means that generated estimate of journeys for the facility will include a real-world representation of functionality within the wider network.

6.2.2 Do-Something Assumptions and Outputs

Using the population and trip rate mapping outlined above the future demand levels have been explored, accounting for residential and workplace growth as outlined in the various planning documents supplied. With the phasing of the brief, this phase of the development is not yet scoped out enough for a full evaluation of potential demand and so the following assumptions have been made:

- Phase 1 and 2 are in place and heavy rail is expected to be modelled from 2045.
- TAG guidance states degrees of uncertainty when forecasting more than 20 years in the future – exogenous growth assumptions will need confirming, given the early stage of this study there has been no exogenous growth applied as yet.
- SG01 Residential dwellings within the red line boundary (1,250 dwellings) have been included as population growth in the do-something forecasting, this is in addition to the 2,050 planned development at King's Hill (planning reference 3 within KWSA). We have not included the maximum potential range of 4,000 dwellings within SG01 as the build out rate is uncertain. We have used a conversion factor of 2.4 people per household[26] to convert this combined additional dwellings (3,300) to a population of 7,590 as a conservative estimate.

Assuming the populations as outlined above the modelled population for each stations catchments is in Table **6-14**:

[26] TS017 - Household size - Nomis - Official Census and Labour Market Statistics

Table 6-14 Mixed population to use in the Do-Something

TLC	Station	Residential Population	Employed Population	Workplace/Student Population	Mixed Population
KNW	Kenilworth	22,800	10,473	8,000	30,000
LMS	Leamington Spa	50,566	23,930	22,500	73,066
WUI	University of Warwick	18,953	4,491	19,750	38,703

The trip rates have then been adjusted based on catchment populations and service frequency and benchmarking based on the view of the new station being an attractor (akin to Coventry) or a facilitator (similar to Kenilworth). An important distinction when forecasting journeys for the new facility using comparator stations is drawing out differences that could alter the expected demand levels. The modelling therefore accounts for differences using a Generalised Journey Time (GJT) framework. The GJT framework adopted in this analysis captures the key drivers of passenger choice by reflecting not only in-vehicle travel time, but also the broader door-to-destination journey experience. Specifically, the following elements have been incorporated:

- In-vehicle time, representing time spent travelling on the primary service
- Service frequency effects, through the inclusion of average waiting time (taken as 0. 5 × headway)
- Interchange penalties, where applicable, to reflect the additional perceived cost associated with transfers
- Access time, particularly the final connection between rail stations and the University campus.
- Competitiveness between bus and rail given to account for likelihood of mode share change given the already well-established bus route on the corridor.

This approach allows for a like-for-like comparison of journey quality across both rail and bus options and ensures that differences in service provision, connectivity and first/last mile access are appropriately reflected in the analysis. The outputs for the GJT framework used in the modelling assumes the GJT comparisons shown in Table 6-15against bus and future rail timings to reflect the attractiveness of switching to rail.

Table 6-15 – GJT comparisons

Origin	Mode	In Vehicle Time	Wait Time	Access Time	Total GJT
Tile Hill	Rail	5	15	15	35 mins
	Bus	10	10	5	25 mins
Canley	Rail	5	15	15	35 mins
	Bus	10	5	5	20 mins
Kenilworth	Rail	10	15	10	35 mins
	Bus	15	15	5	35 mins

The modelling accounts for the positive and negative variances for these key locations withing the outputs and forecasted journeys i. e. a factored GJT based on total GJT for rail vs bus.

The initial view of the forecasted journeys is broken down by flow in Table 6-16 and are generated based on the mixed population within 2km radius of University of Warwick Interchange site and incorporating the GJT framework as mentioned above. A more detailed breakdown is provided in 8.2Appendix B.

The student weighting has been sensitivity-tested, given the current usage of public transport for travel to the university and other key locations. The recommendation for modelling at this early stage is a mid-range 50% weighting of students to be included in the mixed population. It is important to note that this infers the current travel behaviours of students and no future changes to student travel behaviour or location.

Table 6-16 – Forecast trips

	Forecasted Journeys

Stopper Daily Trips	200
Long-Distance Daily Trips	480
Total Daily Trips	**680**
Car Park Requirement	~220 Spaces

Using a conversion factor of ~0.32 this would require the additional spaces as outlined in the table above for car parking at the site once the heavy rail element of the interchange is live, this conversion factor is gathered from multiple evidence sources, primarily ORR station usage and publicly available car parking capacity[27], this is broken down in Table 6-17:

Table 6-17 – Comparable car parking required

Station	Annual Trips (,000)	Car Park Size	Conversion	Access Type
Coleshill Parkway	~206	~186	0. 33	Car-led parkway
Kenilworth	~181	~200	0. 41	Car + bus
Lichfield Trent Valley	~250–300	~215	0. 31	Car-led interchange
Warwick Parkway	~500+	~600	0. 44	Car-dominant
Oxford Parkway	~700+	~800	0. 42	P&R + congestion charge

Warwick and Oxford Parkway have been excluded from the generated average conversion factor as they are not scale or purpose appropriate.

Abstraction

Demand for the new station has been forecast using a trip-rate approach to estimate gross demand. Abstraction from existing stations has been estimated separately, consistent with DfT guidance that new stations represent a special case not directly covered by PDFH. Abstraction has been allocated to competing stations based on relative accessibility and service characteristics, ensuring that net rail demand and station-level impacts are robust and internally consistent. Abstraction levels are set for stations in close proximity to the Multi-Modal site using the following categories:

- University-based trips: 55–70% abstraction: strong improvement in final access relative to Canley/Kenilworth;
- Local residential trips: 35–55% abstraction: moderate substitution against Kenilworth with some plausible generative journeys from modal shift from bus/car; and
- Longer-distance trips: 0–15% abstraction: destination accessibility improves but competitors (Coventry/Leamington) retain long-distance roles as with current market.

Each of these abstraction levels have been sensitivity tested given the early stages of this proposal to reflect uncertainty and level of robust modelling required at this stage. The scenarios are based on the sensitivities in Table 6-18:

Table 6-18 – Abstraction sensitivities

	Low (40% Abstraction)	Medium (50% Abstraction)	High (60% Abstraction)	Central (Medium) Case
Canley	45%	55%	60%	**55%**
Kenilworth	30%	35%	35%	**35%**

[27] Estimates of station usage | ORR Data Portal

Tile Hill	25%	10%	5%	**10%**

Using these scenarios against the 3 weighted demand forecasts from above, abstraction from existing stations is estimated in Table 6-19. The net generated journeys that remain (125k) are journeys that are newly generated which does not abstract from existing station demand but includes modal shift from car/bus/walking and the released of supressed demand.

Table 6-19 – Weighted demand abstraction forecasts

Scenario → Metric ↓	Low	Medium	High	Central Case
Canley	45,190	55,233	60,254	**55,233**
Kenilworth	30,127	35,148	35,148	**35,148**
Tile Hill	25,106	10,042	5,021	**10,042**
Abstracted Journeys Total	**100,423**	**125,529**	**150,635**	**125,529**
Net generated journeys (including Mode Shift and supressed demand)	**150,635**	**125,529**	**100,423**	**125,529**

6.2.3 Heavy Rail Forecast Summary

On conservative assumptions at this stage given the stage of the facility planning, the Multi-Modal Interchange would deliver a material net rail uplift with a scalable parking footprint, and shifts significant campus travel from bus/car to rail. With logical phasing and strong bus-rail integration, the scheme should be operationally deliverable and economically defensible at Outline Business Case.

6.2.3.1 Forecasted Demand

Gross station demand (local + long-distance) is forecast in bands driven by student-population weighting. University of Warwick student body is a dominant generator with high Public Transport propensity, but actual usage at opening could vary due to:

- **On-campus presence** (timetabling, hybrid attendance)
- **Competition** with frequent bus service for local market (today's dominant mode)
- **Interchange quality** (walk time, signage, service reliability and ticketing)

Setting levels of student activation produces credible bracketing of outcomes while preserving observed demand. This approach allows policy-led levers to be tested transparently. These totals reflect the new station's direct and interchange role across the Coventry/Leamington/Birmingham corridors with local flows to Coventry and Leamington, and trips to Oxford, Banbury, Birmingham New Street/International.

6.2.3.2 Car Parking Provision

Using comparative stations of similar scale/purpose (e.g., Coleshill Parkway, Kenilworth for scale/purpose match), the derived conversion rate is 0. 35 (spaces relative to daily trips). Applying this to the forecasted bands outlines a required parking provision of 220 spaces.

Our recommendation would be to provide an initial core of 200–230 spaces with expansion safeguarded. Plan to integrate with bus and active travel to avoid over-build and manage peak term-time pressures.

6.2.3.3 Abstraction & Net Generation

Abstraction has been treated separately from trip-rate generation to align with good practice:

- University-based trips: 55–70% abstraction (clear access win vs Canley/Kenilworth)
- Local residential: 35–55% (moderate substitution vs Kenilworth, with some new-to-rail)
- Long-distance: 0–15% (strategic roles at Coventry/Leamington largely retained)

Applying this to key stations along the route for each student weighted banding creates a low, medium and high case of abstraction of 40%, 50%, or 60% respectively. Even under higher abstraction, the scheme generates some substantial new rail trips, supporting economic and carbon benefits for later feasibility assessment. Our central case at this stage is to recommended to be 50% abstraction levels.

6.3 Summary of parking requirement estimates

The car parking space requirement estimates presented above are summarised in Table 6-20.

Table 6-20 - Summary of car parking requirement estimates – range and by phase

	Minimum	Maximum	Mid-range
Bus – phase 1	290	765	527
Bus & VLR – phase 2	305	879	592
Rail – phase 3	190	254	210
UoW off campus parking	350	350	350
Total - bus, VLR, rail, UoW off campus	845	1,450	1,150

The estimates presented above consider the car parking requirements for each mode/phase sequentially, however it is recognised it is reasonable to assume an element of bus & VLR demand could transfer to rail in phase 3. That is, it could be assumed that a proportion of bus users transfer to rail when that option becomes available, especially for those with a destination in Coventry city centre. As such, an assumption has been made that 20% of bus and VLR associated parking spaces transfer to rail in phase 3. This adjust is presented in Table 6-21 alongside the sensitivity for University of Warwick off-campus parking spaces.

Table 6-21 - Summary of parking requirements - adjustment for transfer to rail in phase 3

	Minimum	Maximum	Mid-range
20% of bus and VLR (which switches to using rail)	61	176	118
Bus & VLR total minus proportion to rail	244	704	474
Rail total (original rail parking estimate minus already assumed bus & VLR parking spaces who would now use rail)	129	254	210
UoW off campus parking	350	350	350
Total rail, bus & VLR & UoW (with overlap) & UoW off campus	**723**	**1,308**	**1,015**

Parking demand has been assessed on a sensitivity basis to reflect current uncertainties and the evolving nature of the interchange and its surrounding context. This includes uncertainty over future development in the wider area, including within the vicinity of the University of Warwick, and the potential for such development to influence wider travel behaviour and mode choice at a strategic level.

The sensitivity testing explicitly recognises that parking provision at the University is subject to an effective planning cap, as a result of previous conditions associated with the granting of planning permission for the growth of the Campus. However, the purpose of the sensitivity testing is not to assume or provide for parking demand generated by the University, but to understand how constraints on parking provision elsewhere in the system may influence patterns of travel and interchange use more broadly.

The assessment draws together parking demand associated with the interchange's strategic transport functions, including bus, VLR and rail. Sensitivities allow for potential interaction between modes over time, for example where changes in travel options or constraints elsewhere in the network may affect how and where trips are intercepted. The resulting outputs are therefore presented as a range of parking requirements, providing realistic upper and lower bounds to inform land take, layout development and phasing, without prejudging the role of the interchange in serving specific third-party parking demands.

As the scheme progresses, and as greater certainty emerges around local development patterns and transport provision, these sensitivities can be refined further through more detailed multi-modal modelling.

6.4 Revenue estimates

6.4.1 Car parking revenue estimates

Potential annual car parking revenue have been estimated for the off-campus University of Warwick car parking based on the confirmed shortfall of 350 spaces on campus. This is the primary consideration, noting that successful a successful Park & Ride offer as seen in Cambridge and elsewhere, provides car parking free of charge for Park & Ride users.

Table 6-22 presents an annual car parking revenue estimate based upon the estimated car parking requirements presented in section 6.1.2.4 and the published on-campus car parking charges (£3.50 per day assumed for staff & students, £8.50 for visitors).

Table 6-22 - University of Warwick off campus car parking at MMTI - car parking revenue estimates

	Daily	Annual - assumed working days only (253 days)
Staff & student	£1,076	£272,244
Visitor	£362	£91,512
Total	£1,438	£363,756

6.4.2 Other Income Streams

In addition to parking revenue the MMTI could generate other income through a mix of commercial, digital and energy related activities that are commonly used by transport operators to improve financial resilience and help offset operating costs. This approach typically includes advertising, commercial/retail leasing and other ancillary services, and are increasingly seen as an important complement to traditional transport funding streams.

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EV charging hub and associated "dwell-time" income: A dedicated EV charging hub can create a revenue stream through charging services (where permitted under the operating model) and, importantly, through the secondary spend it attracts while drivers dwell on site (e.g., coffee, convenience retail). EV hubs are often positioned as commercial opportunities because charging creates predictable dwell time and can support complementary services and concessions. It should be noted that due to charging times and the need to vacate a space once a charge is complete, EV charging opportunities would need to be focused on transient charging rather than longer stay/all day parking stays associated with Park & Ride.

Retail and service concessions (food & beverage / convenience / pop-ups): Small footprint concessions, such as a coffee kiosk, "grab-and-go" retail, or rotating pop-up units, can be let on short or medium-term agreements, capturing value from footfall while enhancing the user experience of the interchange. Mobility hub guidance and exemplars commonly include links to cafés/shops and other local amenities as part of a successful hub offer, and wider non-fare revenue literature identifies retail as a core income category. However consideration is needed of any associated planning requirements.

Advertising and sponsorship (including digital): The MMTI could host physical and digital advertising assets (e.g., totems, screens, wayfinding panels with sponsor space) and explore sponsorship packages (for example, "powered by" branding for the hub, charging area, or cycle facilities). Advertising is a well-established non-fare revenue source for transport authorities, often delivered via a concession arrangement. However consideration is needed of any associated planning requirements.

Parcel lockers and last-mile logistics services: Parcel lockers can provide a modest but stable rental/licensing income and increase site utility for users, particularly when combined with a mobility hub proposition. Mobility hub concepts frequently include parcel lockers as a complementary service, and microhub models show how logistics functions (including lockers) can be integrated into transport nodes to support more efficient last-mile activity.

Telecommunications and digital infrastructure leasing: Where suitable, the site could accommodate telecoms equipment (e.g., small cells, masts) or provide routes/ducting for fibre, generating lease/licence income. Non-fare revenue programmes in the rail sector often consider telecommunications and fibre leasing alongside other commercial options as a way of monetising existing infrastructure.

Energy opportunities (subject to feasibility): Depending on land, grid capacity and design, there may be potential for solar canopies/roof PV and battery storage associated with EV charging operations, with income derived through power purchase arrangements or energy services (subject to approvals and business model). Solar panels could be used to provide sheltered parking spaces, and/or any larger parking structures could be clad in solar panels. Energy-related approaches are commonly assessed as part of broader non-fare revenue strategies for transport assets and can complement EV charging by helping manage peak loads and operating costs.

Commercial partnerships and procurement route: Many of the opportunities above can be delivered through concession-style arrangements (e.g., advertising concession, retail concessions, EV charging operator concession), which can reduce upfront operational burden for the authority and transfer some demand risk to the concessionaire, while providing a revenue share or fixed rental structure. Any such approach would need to be progressed in line with the applicable public procurement framework for concession contracts.

7. Design Optioneering and Costings

7.1 Design

Options have been developed to demonstrate a staged implementation of P&R car parking provision together with associated infrastructure for VLR and Heavy Rail. These options are included in 8.2Appendix C and demonstrate the following stages of implementation:

- **Option 1 – P&R car park provision prior to any potential A46 Multi Modal Corridor works and MMTI**
    - New junction with A429 and future link road to P&R site
    - Approximately 500 parking spaces
    - Waiting/welfare/retail facilities
- **Option 2 – P&R car park with Multi Modal Corridor and MMTI in place**
    - P&R provision as per Option 1, plus VLR split level building in place.
- **Option 3 - P&R car park including for overspill car park (East of rail line)**
    - As per option 2 with additional parking provision to east of rail line and potential new Rail station building. (c. 1500 spaces in total – potentially to split into further staged implementation)
- **Option 4 – P&R car park including for overspill car park (North of potential A46 Multi Modal Corridor)**
    - As per Option 3 but with alternative location for overspill car park area (north of Multi Modal Corridor), necessitating need for new signalised crossing facility along the Multi Modal Corridor. (c. 1500 spaces in total – potentially to split into further staged implementation)
- **Option 5 – Surface P&R car park, plus multi storey car park (MSCP) provision prior to any potential A46 Multi Modal Corridor works and MMTI**
    - New junction with A429 and link road to P&R site
    - Approximately 250+ surface parking spaces, plus c. 200 spaces per floor of MSCP
    - Waiting/welfare/retail facilities
- **Option 5a - Surface P&R car park, plus MSCP provision with Multi Modal Corridor and MMTI in place (Potential additional floors to MSCP)**
    - Potential additional floors to MSCP.

7.2 Costings

7.2.1 Methodology and assumptions

At this stage, only preliminary design concept sketches have been produced, and therefore high-level cost estimates have been produced to account for the various stages of implementation, based on approximate lengths of new roads and areas for new car parking. The estimated direct construction costs for each option is then adjusted to include various provisions for contractor's preliminaries, statutory undertakers, traffic management, design, survey, supervision and highway authority costs. The resulting cost for each option is then adjusted for risk, uncertainty and inflation to derive a forecast outturn cost.

Highways/civil costs have been estimated based on the latest SPON's rates which represent contractor prices achieved in 2025. For early-stage estimates, approximate rates are provided on a per metre basis for rural all-purpose single carriageway roads which includes provisions for the costs of the main carriageway, signage, earthworks and landscaping. Similarly for footway lengths a comparable rate is applied and for car parking areas a rate per square metre has been applied.

The following provisions has been applied to cover various costs not included in the rates for highways costs.

- Preliminaries – 25% of total civils costs
- Site investigation – 10% of total civils costs and prelim costs (Reduced for Options 5 and 5a to give comparable cost totals to other options)
- Design, planning etc – 10% of total civils costs, prelims and site investigation costs (Reduced for some options to give comparable cost totals for all options)
- Supervision – 5% of total civils costs, prelims and site investigation costs (Reduced for Options 5 and 5a to give comparable cost totals to other options)
- Statutory Undertakers – 10% of total civils costs (Reduced for Options 5 and 5a to give comparable cost totals to other options)
- Highway Authority costs – 5% of total civils costs, prelims and site investigation costs (Reduced for Options 5 and 5a to give comparable cost totals to other options)
- Traffic Management – 20% of civils costs only (Reduced for Option 5a due to the off-highway nature of the works)

7.2.2 Base cost estimates (2025 prices)

The base cost estimates in 2025 prices are presented in Table **7-1**. A base cost is the starting estimate of how much a project is expected to cost before adding any extra allowances for risk, uncertainty, or inflation.

As noted earlier the overspill car parks could be split into further staged implementation, hence Options 3 and 4 are shown as two separate stage costs assuming approximately half of the overspill car park areas would be built at different times.

Option 5 considers the cost for the surface car park and one floor of the MSCP (i. e. approximately 400 spaces), while Option 5a considers the cost for 1 additional floor (approximately 200 spaces) of the MSCP only.

The estimated costs of undertaking the work included in the area proposed in Figure 4-2 would include the costs of Option 1 and Option 2. Any future decking of the car park would be additional cost, at similar costs to Option 5a per floor. No costs have been attributed to a railway station building at this stage in any of the options.

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Table 7-1 - Base Cost Estimates (£M, 2025 prices)

Option	Base Estimate
Option 1	£8.8M
Option 2 – VLR building	£1.9M
Option 3 – northern half of overspill car park	£4.1M
Option3 – southern half of overspill car park	£5.2M
Option 4 – southern half of overspill car park	£4.7M
Option 4 – northern half of overspill car park	£5.4M
Option 5	£23.0M
Option 5a	£8.3M

7.2.3 Adjustment for risk and uncertainty

DfT's 'Updating the evidence behind the optimism bias uplifts for transport appraisal (2020 data update)' explains why projects often end up costing more, taking longer, or delivering fewer benefits than first expected. In order to counter this, the report uses a method called Reference Class Forecasting (RCF) which looks at real data of past transport projects to understand the typical size of overruns. DfT recommend that appropriate uplifts are applied at different stages of project development so project budgets and timescales are more realistic from the start. By applying the RCF, it helps decision makers apply more realistic uplifts which are essentially extra allowances added to early cost and benefit estimates to avoid underestimating.

The RCF refers to uplifts using p-values. A p-value is the probability that all risks and uncertainties have been captured. The recommended uplifts for p-70, p-75 and p-80 for an early stage project are shown below in Table **7-2**:

Table 7-2 - P-value taken from DfT guidance

Type of works	P70 uplift	P75 uplift	P80 uplift
Highways	42%	77%	98%

The DfT's Tag Unit A1. 2 Scheme Costs presents the recommended levels of 'optimism bias' uplifts for transport projects at different stages to be used in economic appraisal. (For Road schemes 46% is the recommended minimum). However, the application of Optimism bias only applies in economic appraisal. When developing financial estimates it is recommended that a range of uplifts are considered. Table **7-3** below provides costs across the range from P70 to P80.

Table 7-3 - Base costs adjusted for risk and uncertainty (£m, 2025 prices)

Option	P70 Uplift	P75 uplift	P80 uplift
Option 1	£12.5M	£15.5M	£17.4M
Option 2 – VLR building	£2.7M	£3.4M	£3.8M
Option 3 – northern half of overspill car park	£5.8M	£7.2M	£8.1M
Option3 – southern half of overspill car park	£7.4M	£9.2M	£10.3M
Option 4 – southern half of overspill car park	£6.7M	£8.3M	£9.3M
Option 4 – northern half of overspill car park	£7.6M	£9.5M	£10.6M
Option 5	£32.6M	£40.7M	£45.5M
Option 5a	£11.8M	£14.7M	£16.5M

7.2.4 Outturn forecasts including inflation

The outturn cost is the total actual cost of delivering the scheme in nominal or cash terms, including future cost inflation and all expenditure incurred up to completion. Inflation series from the TAG data book have been used which results in a long term cost inflation forecast of approximately 4. 4% per annum.

Indicative annual spend profiles have been produced in Table **7-4** for two potential opening years (2030 and 2037) which enables weighted inflation factors to be generated for each assumed opening year. This assumes that approximately 85% of costs would be incurred relating to the construction phase. The weighted inflation factors for each opening year are: 15. 48% (2030) and 53. 33% (2037).

Table 7-4 - Forecast outturn costs (£m)

Option	Opening Year	P70 Uplift	P75 uplift	P80 uplift
Option 1	2030	£14.4M	£17.9M	£20.1M
Option 2 – VLR Building	2037	£4.2M	£5.2M	£5.9M
Option 3 – north half of overspill carpark	2037	£8.9M	£11.1M	£12.4M
Option 3 – south half of overspill car park	2037	£11.3M	£14.1M	£15.8M
Option 4 – south half of overspill car park	2037	£10.2M	£12.7M	£14.3M
Option 4 – north half of overspill car park	2037	£11.7M	£14.6M	£16.3M
Option 5	2030	£37.7M	£47.0M	£52.5M
Option 5a	2037	£18.1M	£22.6M	£25.3M

8. Conclusion

8.1 Summary

This study has demonstrated a robust and compelling strategic case for the University of Warwick MMTI and for safeguarding the land required to deliver it through the SWLP. The evidence shows that the transport network serving the University of Warwick, Kenilworth, South Coventry, and the wider A46 corridor is already operating under significant pressure, with recurrent congestion at key junctions, limited public transport competitiveness, and constrained modal choice for local and regional trips. Without intervention, planned growth, including over 4,000 homes in SG01, extensive development at King's Hill, major employment proposals, and continued university expansion, will intensify demand and further reduce network resilience.

The MMTI directly addresses these challenges through a phased, flexible, multimodal solution. Phase 1 delivers a bus based Park & Ride capable of intercepting car trips before they reach the most constrained approaches. The initial operating assumption is that bus services would continue to operate along the A429, with stops on the main road. However, the interchange has been designed with sufficient flexibility to respond to changing travel patterns over time. As demand grows and the role of the MMTI becomes more established, there is potential for bus services to be reconfigured to serve the site directly, providing enhanced integration and customer convenience.

Phase 2 allows integration with Coventry Very Light Rail (VLR), expanding modal choice and supporting orbital connectivity. Phase 3 enables a new heavy rail station, strengthening regional and national accessibility and aligning with the long-term aspirations of the West Midlands Rail Investment Strategy.

The site chosen for safeguarding is justified on strategic, operational, environmental and deliverability grounds. Located adjacent to the Elephant & Bear Line, close to key strategic corridors, and benefiting from single ownership, it offers an optimal intercept location, a suitable rail alignment, space for phased expansion, and manageable environmental constraints. Its rural, largely undeveloped character, combined with the transformation already imposed by HS2 works, reinforces its suitability as a strategic transport location. The location offers:

- Optimal intercept capability, capturing demand before it reaches the most constrained campus approaches.
- A suitable rail alignment, one of the few straight sections between Kenilworth and Coventry able to support a new station.
- Adequate space for phased development, including P&R, VLR, platforms, public realm, mitigation, and future expansion.
- Manageable environmental constraints, including opportunities for surface water management, biodiversity net gain and landscape screening.
- Relative absence of incompatible development, with the surrounding context already influenced by major infrastructure and large-scale growth to the north.

Demand forecasting demonstrates strong potential for the MMTI across all phases:

- Up to 880 Park & Ride users per day in the bus + VLR scenario.
- Up to 1,381 spaces required if accounting for University of Warwick parking displacement.
- Heavy rail demand of 600–1,330 daily trips, with 190–430 parking spaces required.

These forecasts indicate that the facility could provide meaningful mode shift, reduce pressure on the A429 and Gibbet Hill network, and support wider decarbonisation objectives. The interchange also supports non-fare revenue opportunities (e.g., EV charging, retail, commercial concessions), contributing to financial sustainability.

Overall, safeguarding the MMTI site is necessary, proportionate, and fully aligned with national, regional, and local policy. It provides the only realistic opportunity to secure the land required for long-term, sustainable, multi-modal transport infrastructure in this rapidly growing corridor.

8.2 Recommendations

Based on the findings of this study, the following recommendations are made:

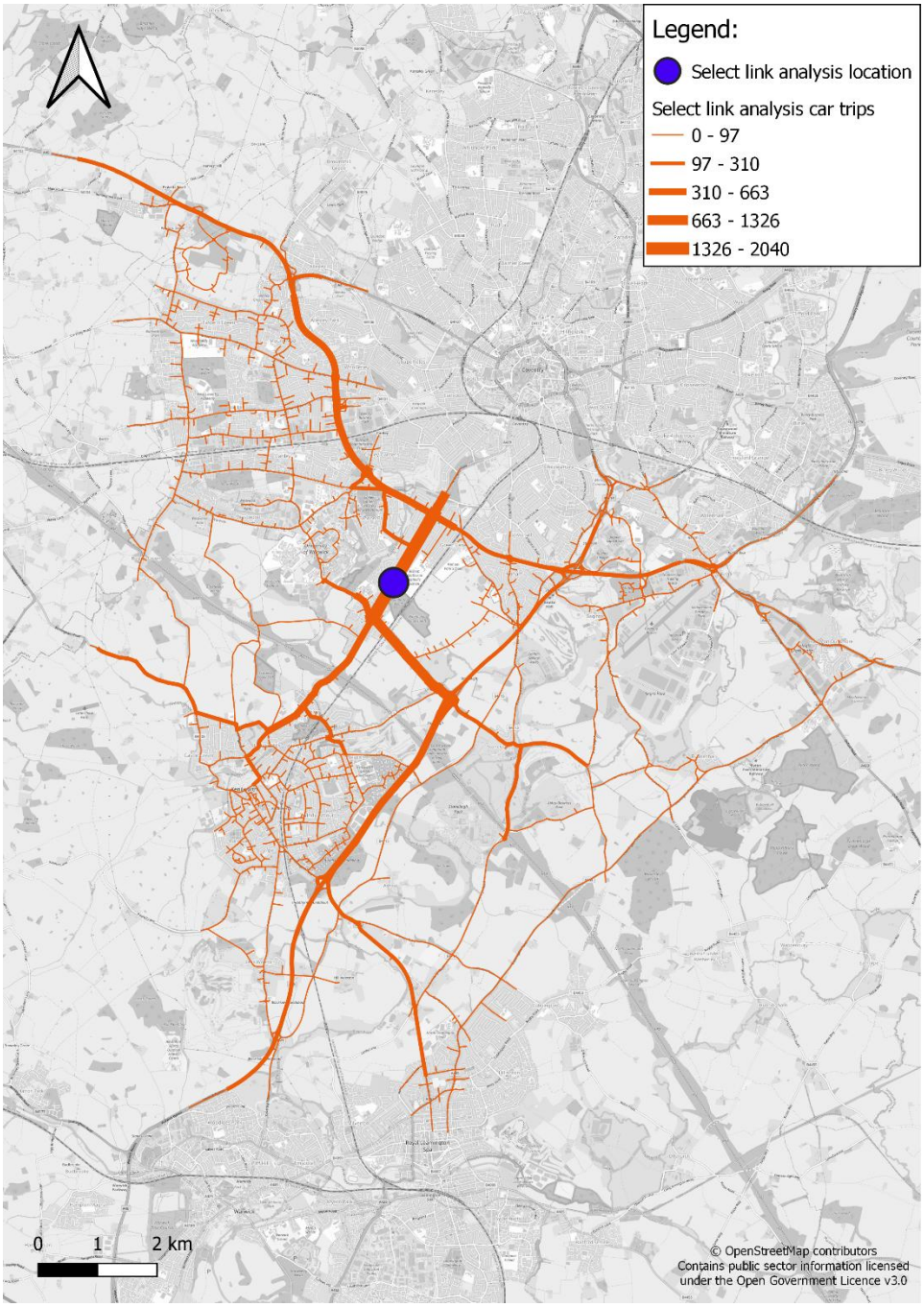
- Safeguard the site through the SWLP. Following further discussions with Warwickshire County Council, Warwick District Council, and the developer of the SW01 site, a revised, more concise boundary (see area shown in Figure 4-2 has been proposed. This boundary now covers the south-western corner of the site, which is bordered by the railway line, HS2, and the A429. The change aims to reduce the impact on land available for development and to help ensure the remaining site remains viable for future use. There is also an option to add decking over parking areas at a later stage, allowing the site to be adapted to support the planned phased development of the MMTI. A small section to the west of the railway line has also been included to ensure access and space for construction of the heavy rail element of the proposal.
- Progress Phase 1 (Bus -based P+R) towards an SOBC including detailed routing assumptions, and updated cost assumptions based on future phases.
- Investigate the feasibility of a high quality active travel link with the university to maximise ambition of MMTI.
- Further develop the multi modal corridor plans to enable the MMTI to be brought forward in line with future phases without significant realignment.
- Coordinate with the University of Warwick about potential parking changes and opportunities/likely demand changes for student accommodation locations (eg moving from Leamington to Coventry).
- Further analysis is required to define rail capacity, service patterns, and the engineering feasibility of the heavy rail station.
- Given demand for EV infrastructure at modern mobility hubs, an assessment of grid reinforcement requirements should be undertaken early if significant EV provision planned.
- Investigate commercial delivery models to include concession contracts for EV charging, retail, advertising, and mobility services, which could reduce public funding requirements.
- Review agreed Local Plan for final growth figures and impact on forecasted demand.

APPENDICES

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Appendix A. Select analysis maps - 2029

A.1 Select link analysis A – AM 2029

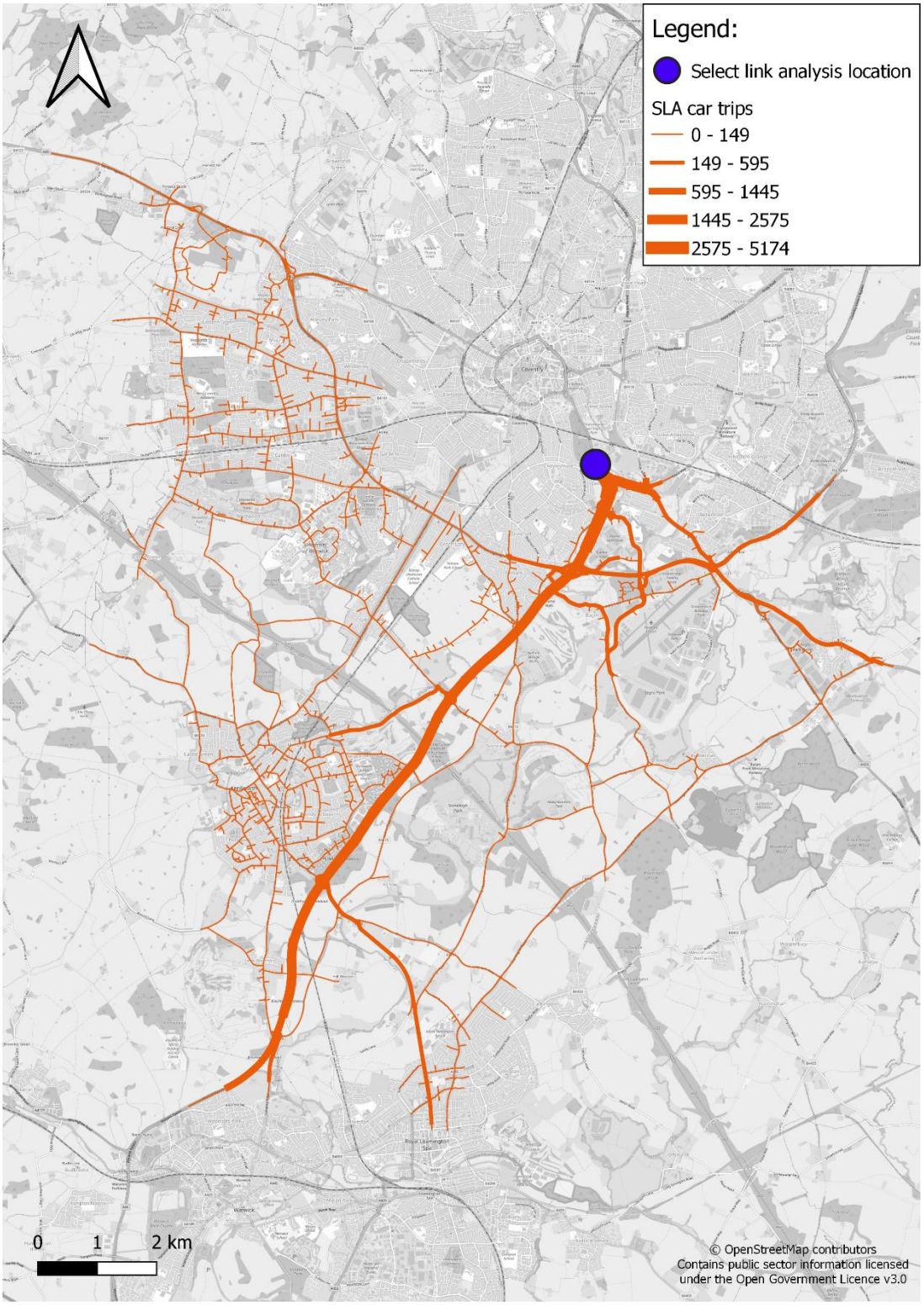


A.2 Select link analysis A – AM 2037

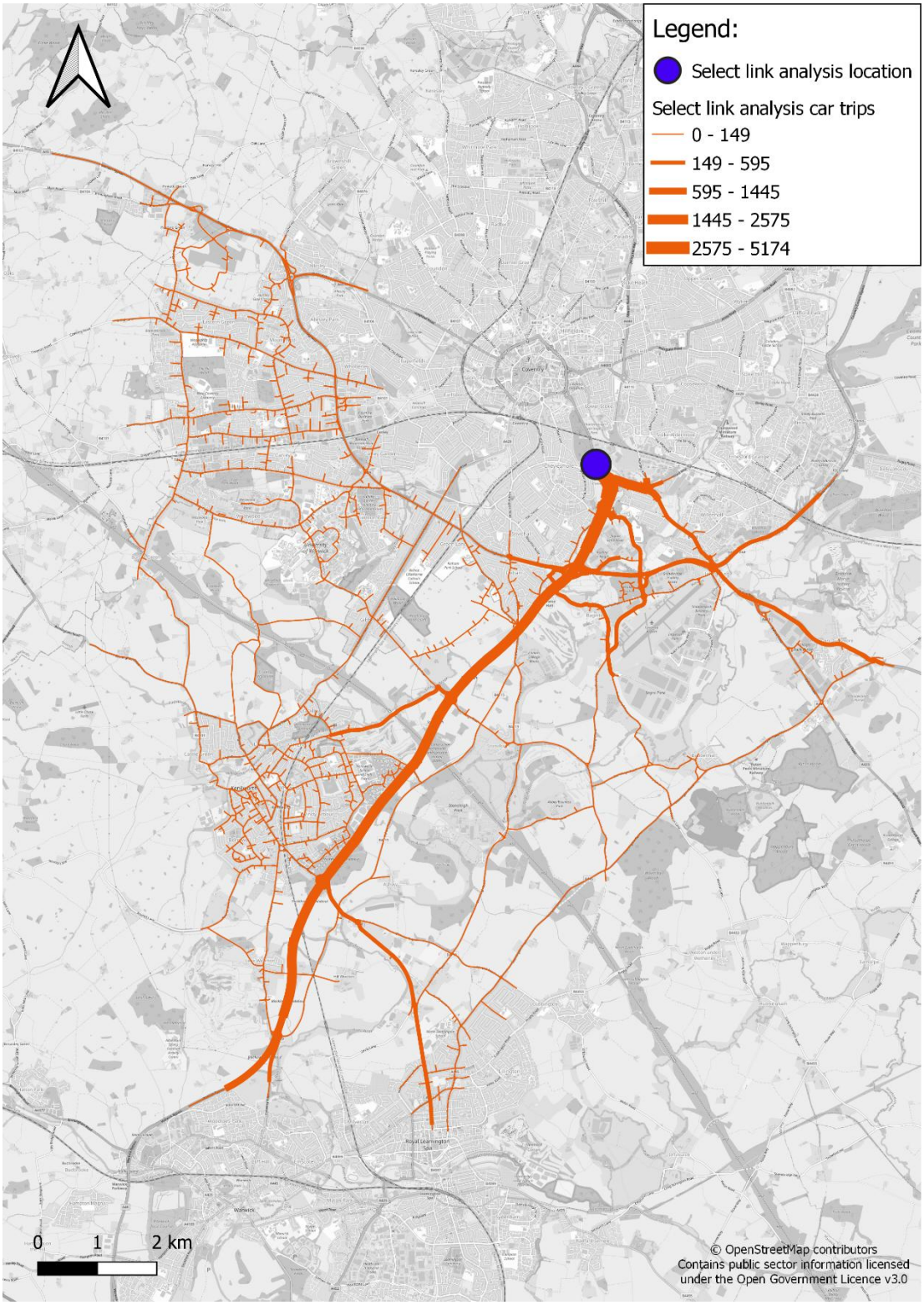


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A.3 Select link analysis C – AM 2029



A.4 Select link analysis C – AM 2037



Appendix B. Breakdown of Forecasted Journeys for Heavy Rail

Service	Station Name	Forecasted Journeys
WMR Direct	Leamington Spa	22,640
WMR Direct	Coventry	30,058
WMR Direct	Coventry Arena	5,831
WMR Direct	Bedworth	2,165
WMR Direct	Bermuda Park	950
WMR Direct	Nuneaton	3,242
WMR Non-Direct	Birmingham New Street	3,574
WMR Non-Direct	Birmingham Moor Street	826
WMR Non-Direct	Birmingham International	1,336
WMR Non-Direct	Birmingham Snow Hill	493
WMR Non-Direct	Warwick	910
WMR Non-Direct	Oxford	850
WMR Non-Direct	Rugby	704
WMR Non-Direct	Banbury	600
	WM Stopper Total	**74,180**
	Daily Trips	**200**
WMR Non-Direct	Banbury	600
XC Direct	Oxford	18,135
XC Direct	Banbury	11,687
XC Direct	Leamington Spa	34,284
XC Direct	Coventry	45,517
XC Direct	Birmingham International	2,808
XC Direct	Birmingham New Street	8,205
XC Direct	Manchester Piccadilly	301
Indirect	London Marylebone	28,070
Indirect	Warwick	1,989
Indirect	Birmingham Moor Street	1,202
Indirect	Birmingham Snow Hill	7,219
Indirect	Solihull	3,320
Indirect	Dorridge	5,886
Indirect	Kenilworth	4,910
Indirect	Stratford-Upon-Avon	3,344
Long-Distance Total		**176,878**
Daily Trips		**480**
Overall Total Journeys		**251,058**
Overall Daily Journeys		**680**

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Appendix C. Design Option Drawings

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