



Suffolk
County Council

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A12 Major Road Network (MRN) Scheme (Seven Hills to Woods Lane)

Transport Summary for Public Consultation





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Contents

1	Introduction	1
2	The Proposed Scheme	4
3	Impact of the Proposed Scheme	21
4	Analysis of performance against specific scheme objectives	34
5	Conclusion	36

1 Introduction

1.1 Foreword

- 1.1.1. This report has been prepared on behalf of Suffolk County Council to provide a summary of the transport assessment conclusions in support of the presentation materials provided as part of the public consultation for the A12 Major Road Network (MRN) Improvement Scheme (Seven Hills to Woods Lane), which is referred to as the “Proposed Scheme” in this report.

1.2 Transport Assessment and Modelling

- 1.2.1. Full details of the traffic capacity modelling of the scheme proposals will be set out in the Transport Assessment that will accompany the planning application. The Transport Assessment will include further details about the baseline characteristics of the A12 and present relevant transport related data for the project and set out some of the proposals in greater detail than can be provided in this summary report.
- 1.2.2. The Transport Assessment is still being prepared for the planning application, and this report has been prepared to summarise some of the key information that will be contained in the Transport Assessment to support the information that is being provided at the public consultation.
- 1.2.3. The forecast year modelling has been undertaken for the scheme year of opening (2027) and fifteen years after scheme opening (2042). The forecast year model has been undertaken for two scenarios:
- Do Minimum – the existing network with traffic growth, committed schemes and committed developments; and
 - Do Something – the proposed network with the Proposed Scheme (A12 MRN), traffic growth, remaining committed schemes and committed developments.
- 1.2.4. The 2027 forecast year model includes construction traffic associated with the following Nationally Significant Infrastructure Projects (NSIP):
- Sizewell C
 - East Anglie ONE North and East Anglia TWO Offshore Windfarms
- 1.2.5. Table 1-1 and 1-2 summarise the schemes contained in each of the Do Minimum and Do Something scenarios. The “Developer Schemes” are the junction improvements associated with the outline planning consent for the Brightwell Lakes development.

Table 1-1 – Do Minimum Model Content

Infrastructure	2027 Do Minimum	2042 Do Minimum
A12 / A14 Seven Hills (A14 Junction 58)	Existing Layout	Developer Scheme
A12 / Foxhall Road	Existing Layout	Developer Scheme
New A12 junction – Brightwell Lakes main access junction	Developer Scheme	Developer Scheme
A12 / Barrack Square	Developer Scheme	Developer Scheme
A12 / Anson Road	Existing Layout	Developer Scheme
A12 / A1214	Existing Layout	Existing Layout
A12 / B1438	Existing Layout	Existing Layout
A12 dualling	Existing Layout	Existing Layout
A12 / B1079	Existing Layout	Existing Layout
A12 / A1152	Existing Layout	Existing Layout
Gloster Road / Barrack Square	Developer Scheme	Developer Scheme
A1214 Main Road / Portal Avenue	Existing Layout	Existing Layout
Ipswich Road – Western Access	Developer Scheme	Developer Scheme
Ipswich Road – Eastern Access	Developer Scheme	Developer Scheme

Table 1-2 – Do Something Model Content

Infrastructure	2027 Do Something	2042 Do Something
A12 / A14 Seven Hills (A14 Junction 58)	MRN Scheme	MRN Scheme
A12 / Foxhall Road	Developer Scheme	Developer Scheme
New A12 junction – Brightwell Lakes main access junction	Developer Scheme	Developer Scheme
A12 / Barrack Square	MRN Scheme	MRN Scheme
A12 / Anson Road	MRN Scheme	MRN Scheme
A12 / A1214	MRN Scheme	MRN Scheme
A12 / B1438	MRN Scheme	MRN Scheme
A12 dualling	MRN Scheme	MRN Scheme
A12 / B1079	MRN Scheme	MRN Scheme
A12 / A1152	MRN Scheme	MRN Scheme
Gloster Road / Barrack Square	MRN Scheme	MRN Scheme
A1214 Main Road / Portal Avenue	MRN Scheme	MRN Scheme
Ipswich Road – Western Access	Developer Scheme	Developer Scheme
Ipswich Road – Eastern Access	Developer Scheme	Developer Scheme

1.3 Report Structure

1.3.1. This report is structured as follows:

- Section 2 describes the transport aspects of the development proposals;
- Section 3 summarises some of the key modelling outputs and their relevance to the scheme objectives
- Section 4 provides further information about the transport performance of the proposed scheme against its objectives

2 The Proposed Scheme

2.1 Introduction

2.1.1. This section describes the A12 MRN scheme objectives and proposals, with particular focus on the proposed highway improvements, active travel (walking and cycling) and public transport interventions. The sustainable transport interventions have been designed in accordance with LTN1/20, guidance for local authorities for the design of high quality, safe cycle infrastructure. The public transport improvements have been designed to align with the policies outlined within Bus Back Better, the National Bus Strategy, and also Suffolk County Council's Bus Service Improvement Plan (BSIP) which were published following Bus Back Better.

2.2 Scheme Development

2.2.1. The Proposed Scheme comprises of a series of improvements to a stretch of the A12 between the Seven Hills Interchange at the A14 and A1120 Woods Lane at Woodbridge. This includes:

- Improvements to seven roundabouts on the A12 to the east of Ipswich, at Martlesham and at Woodbridge, namely:
 - A12/ A14 Seven Hills Interchange
 - A12/ Barrack Square/ Eagle Way, Martlesham
 - A12/ Anson Road/ Eagle Way, Martlesham,
 - A12/ A1214/ Main Road/ Park and Ride, Martlesham
 - A12/ B11438 roundabout, Woodbridge
 - A12/ B1079 Grundisburgh Road
 - A12/ A1152 Woods Lane.
- Improvements to minor road junctions adjacent to the above junctions, including;
 - Barrack Square/ Gloster Road
 - Anson Road/ Tesco/ Beardmore Park
 - A1214/ Portal Avenue/ Park and Ride junction
- Dualling the single carriageway section of the A12 at Woodbridge, between the A12 / B1438 Ipswich Road junction and the A12 / B1079 Grundisburgh Road junction;
- Construction of a mobility hub at Martlesham;
- A package of complimentary measures, which do not form part of the planning application, providing improvements for pedestrians and cyclists along the route; and
- A package of improvements for public transport., including providing a bus only link from the A12 to Portal Avenue.

2.3 MRN Scheme Objectives

2.3.1. The objectives of the A12 MRN Scheme are as follows:

- To improve the capacity of the A12 and improve the resilience of the local road network;
- To improve journey times and reliability on the A12 and reduce congestion, queuing and delays at junctions;
- To support delivery of planned housing growth, local economic growth and the creation of jobs;
- To improve connectivity to the region’s ports and support the visitor economy;
- To deliver improvements for all modes of transport including conditions for bus users and accessibility for pedestrians and cyclists to support and encourage walking and cycling;
- To improve the capacity of the A12 to handle current and expected traffic demand, including additional demand from the Brightwell Lakes development, wider housing and employment growth and traffic associated with Sizewell C;
- To reduce transport costs for businesses;
- To reduce Carbon Dioxide (CO2) emissions, improve air quality and support the East of England Energy Zone;
- To reduce community severance;
- To reduce the overall number and severity of casualties associated with the A12;
- To minimise the impacts of the Proposed Scheme on people and the built/natural environment; and
- To deliver a Proposed Scheme that offers best value for money.

2.4 Highway Proposals

A12 Junction Improvement Schemes

2.4.1. The Proposed Scheme will involve the improvement of seven junctions on the A12 and three associated local road junctions, together with the creation of a new signalised bus link junction on the A12 to the north of the A12 / Anson Road junction. The proposals for these junctions are summarised below in **Table 2-1**. Where signalisation is proposed the traffic signals will operate full time and will be subject to MOVA control.

Table 2-1 – Summary of Proposed Junction Improvements

Junction	Proposed Improvement
A12 / A14 Seven Hills junction	Partial signalisation of the roundabout and widening of the circulatory carriageway on the south side. Addition of a left turn free-flow filter lane connecting the A14 (eastbound) with the A12 (northbound) and a left turn free-flow filter lane connecting the A14 (westbound) with the A1156 Felixstowe Road (southbound).

Junction	Proposed Improvement
	<p>Extended section of two lanes on the A14 westbound on-slip. Widening of the A12 (southbound) approach to three lanes and widening the A1156 Felixstowe Road (northbound) approach to three lanes. No changes to existing A14 overbridges. Landscape planting.</p>
<p>A12/ Foxhall Road Roundabout</p>	<p>A junction improvement is proposed at the A12/ Foxhall Road roundabout as part of the Brightwell Lakes traffic mitigation. There are no proposals to make further improvements at this location as part of the A12 MRN scheme.</p>
<p>A12 / Barrack Square junction</p>	<p>Full signalisation and improvement of the roundabout to include widening of the circulatory carriageway to three lanes for A12 through traffic, widening of the A12 approach arms and extending the two-lane approaches from Barrack Square and Eagle Way, and a new small roundabout at the Barrack Square / Gloster Road junction. The existing Martlesham Footbridge would be replaced just north of its current position.</p>
<p>A12 / Anson Road junction</p>	<p>Full signalisation and improvement of the roundabout on the A12, to include widening the A12 southbound approach incorporating a third filter lane for left turn movements (subject to full subway structural analysis), changes to road markings to provide three lanes on the west side of the circulatory carriageway, widening of an existing shared use footway / cycleway on the north-east side of the roundabout, provision of a new controlled crossing over Eagle Way to the west of the junction and creating a new section of shared use footway / cycleway along the north side of Eagle Way (between the A12 and Squires Lane). Improved lighting for the pedestrian / cyclist underpass to the north of the junction.</p> <p>Together with improvement of the small roundabout at the Anson Road / Tesco / Beardmore Park junction to the east, incorporating new uncontrolled crossings on all four arms.</p> <p>Improved shared use pedestrian footway to north side of Anson Road where there is currently a pinch-point.</p>
<p>New Signalised A12 / Bus Link Junction</p>	<p>New signal-controlled junction on the A12 to connect with the proposed Portal Avenue Bus Link.</p>

Junction	Proposed Improvement
A12 / A1214 Main Road junction	<p>Upgrading of the signals at the junction to MOVA control and modifications to road markings on the circulatory carriageway and widening of Main Road approach from the west. Improved lighting for the pedestrian / cyclist underpass to the south of the junction.</p> <p>Together with a realigned signalised crossroads junction on Main Road to the west of the A12, connecting with the proposed Portal Avenue Bus Link and the access to the Martlesham Park & Ride, all linked to the signals at the improved Main Road roundabout and incorporating a new shared use footway / cycleway.</p> <p>Widening of the Main Road (west) approach arm to the A12 roundabout and either side of Main Road to facilitate the realigned signalised crossroad junction.</p>
A12 / B1438 Ipswich Road junction	<p>Widening of the A12 southbound approach to three lanes and local widening of the B1438 Ipswich Road approach. Replacement of the existing footway along the north side of Ipswich Road with a shared use footway / cycleway.</p>
A12 / B1079 Grundisburgh Road Junction	<p>Partial signalisation of the roundabout. A new shared use footway / cycleway commencing at the entrance to the Dobbies Garden Centre, then continuing along the south side of the B1079 Grundisburgh Road (west), crossing the A12 and B1079 Grundisburgh Road (east), via new controlled crossings over the A12 and the B1079 Grundisburgh Road (east) and terminating on the north-east side of the roundabout at its connection with the access to properties at Grove Road.</p> <p>Closure of northern end of Bilney Road to facilitate the provision of a new Toucan crossing of Grundisburgh Road, subject to a trial closure as part of the Woodbridge Mini-Holland Scheme.</p>
A12 / A1152 Woods Lane Junction	<p>Widening of the A1152 Woods Lane approach arm and widening of the A12 southbound approach to three lanes. Upgrading of the existing footway which runs along the north side of the A1152 Woods Lane and along the east side of the A12, to an uncontrolled A12 crossing approximately 64m to the north, with a shared use footway / cycleway.</p>
B1079 Grundisburgh Road/ Bilney Road	<p>In order to accommodate the proposed toucan crossing across the eastern B1079 Grundisburgh Road approach to the A12/ B1079 roundabout, it is necessary to close the northern end of Bilney</p>

Junction	Proposed Improvement
	Road, removing the left-in, left-out junction at the northern end of Bilney Road.
A1214/ Portal Avenue/ Park and Ride Access	The junctions of the A1214 with Portal Avenue and the Park and Ride access will be combined into a single traffic signal-controlled crossroads, with the northern end of Portal Avenue rerouted to a location opposite the park and ride access. The left turn from Portal Avenue to the A1214 will remain under priority control and follow the existing Portal Avenue route.
Barrack Square/ Gloster Road	The junction of Barrack Square and Gloster Road will be converted to a mini-roundabout, with associated road realignment to tie into the proposals at the A12/ Barrack Square roundabout.

Upgrading the Single Carriageway at Woodbridge

2.4.2. The Proposed Scheme includes upgrading the A12 single carriageway section between Seckford Hall Road and the B1079 Grundisburgh Road as follows:

- Widening this section of the A12 to provide a full dual carriageway standard, with two lanes running in both directions. The southbound dual section will make use of the existing single carriageway alignment, while the northbound carriageway is located to avoid the existing trees and hedge along the western side of the A14.
- Relocating a layby on the western side of the A12, combined with a farm access;
- Removing a layby on eastern side of A12 (tbc);
- Provision of a new 3m wide shared use footway / cycleway along the west side of the A12 between Seckford Hall Road and B1079 Grundisburgh Road to replace the existing facility to the east of the A12; and
- Introducing a 70mph speed limit between the A12 / B1438 junction and the A12 / B1079 Grundisburgh Road junction.

2.4.3. The widening of the A12 between the Seckford Hall Road junction and the B1079 Grundisburgh Road junction and associated improvement works will require land outside the existing highway boundary.

2.5 Proposed Active Travel Measures

2.5.1. The proposed package of improvements for pedestrians, cyclists and horse-riders is summarised in **Table 2-2** and illustrated in **Figure 2-1**.

Table 2-2 - Summary of Proposed Improvements for Pedestrians and Cyclists

Location	Proposed Improvement	Benefit
<p>North of the A12 / Barrack Square / Eagle Way junction</p>	<p>Replacement of the Existing Martlesham Footbridge</p> <p>Providing a new overbridge to accommodate a segregated pedestrian / cycle route, just north of its current position (which will support walking / cycling between Martlesham Heath’s residential and commercial areas). The replacement of the existing bridge is referred to as ‘Replacement of Existing Martlesham Footbridge’.</p>	<ul style="list-style-type: none"> • Improved safety: minimisation of conflicts between pedestrians, users of mobility aids and cyclists using the footbridge. • Providing an improved ramp gradient on the east side to assist all users • Enhanced connectivity between Martlesham Heath residential and commercial areas. • Promotion of active travel: by providing a more convenient route, the bridge encourages walking and cycling, contributing to healthier lifestyles and reducing dependence on cars. • Strengthened community ties: potential to reduce severance between residential and commercial areas fosters a stronger sense of community, as people are more likely to interact and engage with their surroundings. • Enhanced public space: a well-designed bridge can serve as a landmark and a point of pride for the community. • Modern design standards: replacing the old bridge with a new one allows for the incorporation of current best practices in bridge design, construction, and materials, potentially extending the lifespan

Location	Proposed Improvement	Benefit
		of the infrastructure and reducing long-term maintenance costs.
Anson Road / Tesco / Beardmore Park junction	Parallel pedestrian / cycle crossings Provision of uncontrolled parallel crossings on all arms of the improved roundabout.	<ul style="list-style-type: none"> Improved safety: minimisation of number of conflict points between pedestrians, cyclists and motor traffic by providing crossings in specific locations with better visibility. Improved connectivity: better connection between residential areas and Tesco. Traffic calming: crossings naturally calm traffic as drivers are more likely to slow down when they anticipate pedestrians and cyclists crossing, reducing the risk of accidents. More efficient use of space: parallel crossings are integrated into the roundabout design without the need for additional infrastructure like traffic lights, making them a cost-effective solution.
North of A12 / Anson Road junction	Underpass improvement Improved lighting for pedestrians and cyclists.	<ul style="list-style-type: none"> Enhanced visibility: improved lighting ensures that pedestrians and cyclists can see clearly and be seen by others, reducing the risk of accidents and collisions. Safety benefits: well-lit areas deter criminal activities, making the underpass safer and more secure for users, especially during nighttime or early morning hours. Better lighting also helps in identifying and avoiding obstacles, uneven surfaces, or

Location	Proposed Improvement	Benefit
		<p>other potential hazards within the underpass.</p> <ul style="list-style-type: none"> Improved connectivity: a well-lit underpass is more inviting and will encourage use by pedestrians and cyclists, enhancing connectivity between different parts of the community. Improved accessibility: improved lighting ensures that the underpass is safe and accessible at all times, regardless of the time of day or weather conditions. Increased user comfort: better lighting creates a more pleasant and comfortable environment for pedestrians and cyclists, enhancing their overall experience.
<p>South of A12 / A1214 Main Road junction</p>	<p>Underpass improvement Improved lighting for pedestrians and cyclists.</p>	<ul style="list-style-type: none"> Enhanced visibility: improved lighting ensures that pedestrians and cyclists can see clearly and be seen by others, reducing the risk of accidents and collisions. Safety benefits: well-lit areas deter criminal activities, making the underpass safer and more secure for users, especially during nighttime or early morning hours. Better lighting also helps in identifying and avoiding obstacles, uneven surfaces, or other potential hazards within the underpass. Improved connectivity: a well-lit underpass is more inviting and will encourage use by pedestrians and cyclists,

Location	Proposed Improvement	Benefit
		<p>enhancing connectivity between different parts of the community.</p> <ul style="list-style-type: none"> Improved accessibility: improved lighting ensures that the underpass is safe and accessible at all times, regardless of the time of day or weather conditions. Increased user comfort: better lighting creates a more pleasant and comfortable environment for pedestrians and cyclists, enhancing their overall experience.
<p>Seckford Hall Road junction</p>	<p>Upgraded pedestrian / cycle crossing</p> <p>Upgrading of an uncontrolled crossing of the A12 in the vicinity of Seckford Hall Road junction.</p>	<ul style="list-style-type: none"> Improved safety: minimisation of number of conflict points between active travel modes and motor traffic by providing crossing in specific location with better visibility. Promotion of active travel: by providing a safer route for walking and cycling, the crossing encourages more physical activity, contributing to better health and wellbeing. Improved connectivity: the crossing will enhance connectivity between residential areas, local amenities, and the existing bus stops.
<p>A12 - between Seckford Hall Road and the A12 / B1079 Grundisburgh Road junction</p>	<p>New shared footway / cycleway</p> <p>Creation of over 1km of 3m wide shared footway / cycleway along the west side of the A12 from the Seckford Hall Road junction to the</p>	<ul style="list-style-type: none"> Enhanced safety: the widened shared footway/cycleway provides a safe, designated space for pedestrians and cyclists, reducing the risk of accidents with vehicles.

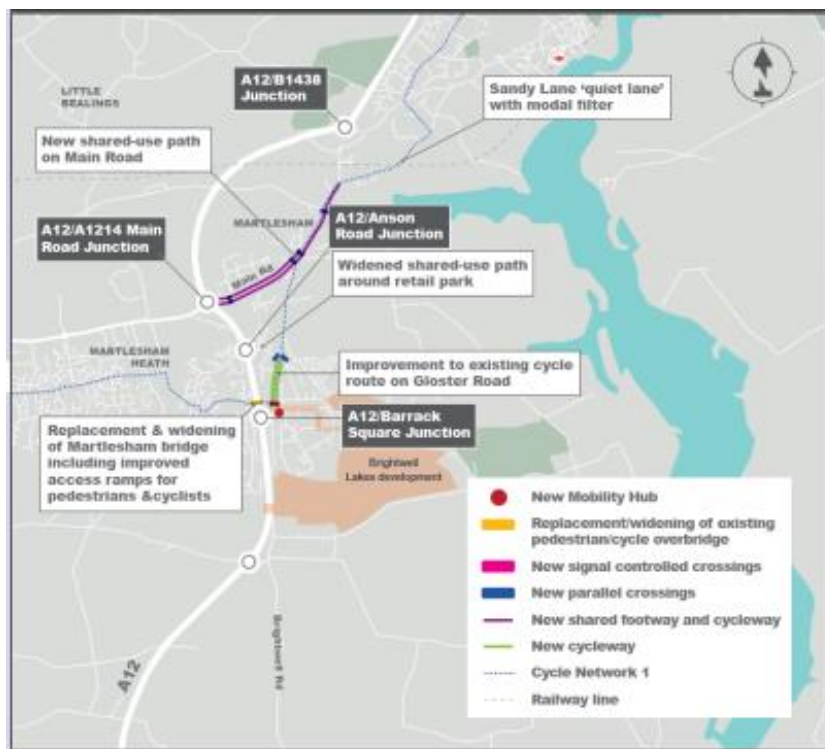
Location	Proposed Improvement	Benefit
	<p>B1079 Grundisburgh Road junction, as part of the A12 dualling scheme.</p>	<ul style="list-style-type: none"> • Improved connectivity: the shared path improves the existing active travel provision on the western side of the A12. • Accessibility for all users: the wide path accommodates a variety of users, including people with disabilities, parents with children, and recreational cyclists. • Promotion of walking and cycling: a safe and attractive route encourages more people to walk or cycle, promoting healthier lifestyles. • Increased physical activity: providing a dedicated space for walking and cycling encourages more physical activity, contributing to better physical health and overall wellbeing.
<p>A12 / B1079 Grundisburgh Road junction</p>	<p>New pedestrian / cycle crossing</p> <p>Provision of a new controlled crossing over the A12, just south of the roundabout junction (included in junction the improvement).</p>	<ul style="list-style-type: none"> • Enhanced pedestrian and cyclist safety: A controlled crossing provides a safe, designated place for pedestrians and cyclists to cross the busy A12, reducing the risk of accidents. • Increased accessibility: the crossing makes it easier for all users, including those with disabilities, parents with children, and the elderly, to cross the road safely. • Direct route: a controlled crossing provides a direct and efficient route for pedestrians and cyclists, improving connectivity between different parts of the community.

Location	Proposed Improvement	Benefit
		<ul style="list-style-type: none"> Promotion of walking and cycling: Safer and more convenient crossings encourage more people to walk or cycle, promoting healthier lifestyles and reducing reliance on motor vehicles.
<p>B1079 Grundisburgh Road (east)</p>	<p>New pedestrian / cycle crossing</p> <p>Provision of a new Toucan crossing over the B1079 Grundisburgh Road on the east side of the A12 junction (included in the junction improvement).</p>	<ul style="list-style-type: none"> Improved safety: minimisation of number of conflict points between active travel modes and motor traffic by providing crossing in specific location with better visibility. Promotion of active travel: by providing a safer route for walking and cycling, the crossing encourages more physical activity, contributing to better health and wellbeing. Traffic calming: crossings naturally calm traffic as drivers are more likely to slow down when they anticipate pedestrians and cyclists crossing, reducing the risk of accidents. Improved connectivity: the crossing will enhance connectivity between residential areas, local amenities, and the existing bus stops.
<p>A12 – North of Woods Lane</p>	<p>Improved pedestrian crossing facilities</p> <p>Improved uncontrolled crossing on A12 north of the Woods Lane junction and on the Woods Lane arm, together with shared footway / cycleway on the northeast</p>	<ul style="list-style-type: none"> Enhanced pedestrian and cyclist safety: improved crossings with better visibility and signage reduce the risk of accidents, providing a safer environment for non-motorised users.

Location	Proposed Improvement	Benefit
	side of the junction to be provided as part of junction improvement.	<ul style="list-style-type: none"> Increased connectivity: pedestrian facilities will improve connectivity along A12 on the north-south route. Increased comfort: silent route away from motor traffic provides more comforting walking and cycling conditions including less noise and air pollution. Promotion of active travel: by providing a safer route for walking and cycling, the crossing encourages more physical activity, contributing to better health and wellbeing.

2.5.2. **Figure 2-1** below shows the extend of the proposed active travel network within the Proposed Scheme.

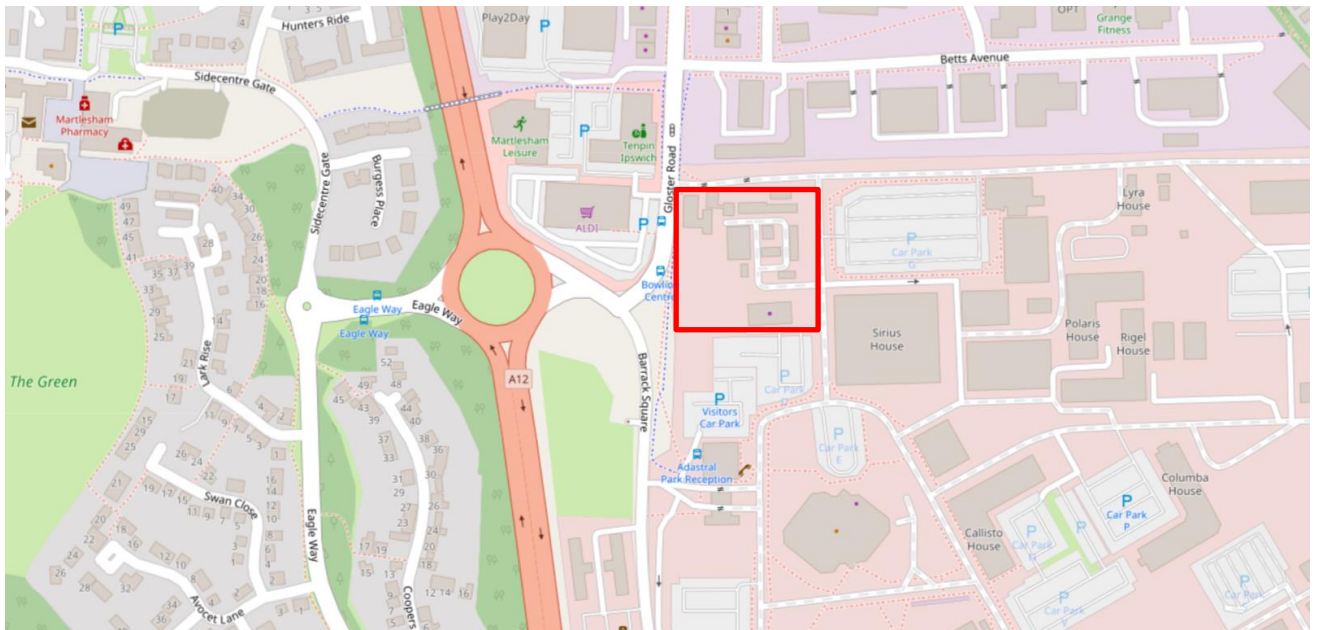
Figure 2-1 - Proposed Improvements for Pedestrians and Cyclists



2.6 Mobility Hub

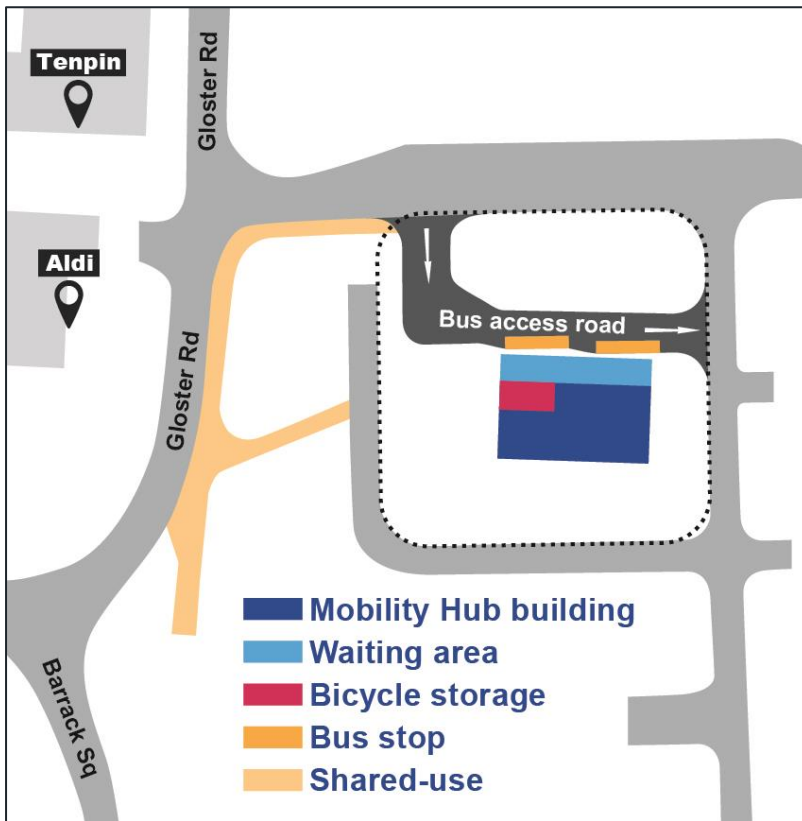
- 2.6.1. A mobility hub is a location that brings together shared transport, public transport and active travel options to improve the public realm and enable travel mode choice.
- 2.6.2. The Mobility Hub is part of the package of sustainable measures to support the wider A12 MRN improvement scheme. It will be located within the existing Adastral Park business park and science campus to the east of Gloster Road and Barrack Square, as shown in **Figure 2-2**.

Figure 2-2 - Location for Mobility Hub



- 2.6.3. The final layout for the hub is still to be decided however, **Figure 2-3** below shows a concept design stage layout, comprising:
 - Provision for two bus stops and waiting area;
 - Indoor waiting area: providing toilets, changing facilities, showers;
 - Canopy area – shelter transitioning to the bus, architectural feature;
 - Secure cycle storage – short/long stay;
 - Logistics hub - small consolidation centre, e-cargo bikes for good distribution, parcel lockers
 - for deliveries, e-cargo bike hire;
 - Café/ retail space;
 - E-car club space;
 - Future e-micro mobility: E-scooters/ E-bike docking areas; and
- Public realm improvements and enhanced access east-west.

Figure 2-3 - Mobility Hub Indicative Layout



2.6.4. The concept design for the Mobility Hub is subject to further design development.

2.6.5. The provision of the Mobility Hub will require land outside the existing highway boundary and the clearance of the site, including demolition of existing buildings.

2.7 Public Transport

2.7.1. The public transport measures within the MRN scheme focus on reducing travel times and/or improving reliability of bus services in the study area.

- A new, ANPR controlled bus-link connecting Portal Avenue to the A12; and
- New bus shelters on Eagle Way to facilitate improved passenger waiting area and improve access to local bus services.

Portal Avenue Bus Gate

2.7.2. The most significant interventions for bus services in the study area is the introduction of a bus link between Portal Avenue and the A12, which will allow buses to access Portal Avenue and have priority access onto the A12 via traffic signals, rather than queue on the approach to the A12/ Main Road roundabout. It is anticipated that the following bus services could be diverted to use the bus gate:

- Service 66 and 66A (both directions)
- 800 Park and Ride (when serving Adastral Park)

- 975 (school bus to Kesgrave High School)

2.7.3. The proposed bus gate will also improve access to the Police HQ site, and which will also provide improved access to any development that may come forward on that site in the future.

2.7.4. Access to the bus only section of the Portal Avenue bus gate will be expected to be controlled using ANPR cameras, with fines to control unauthorised access. There is also potential for police emergency response vehicles leaving the police HQ to use the bus link on blue lights to speed up response times from Portal Avenue.

2.8 Summary of Measures

2.8.1. The proposed package of improvements for bus users is summarised in **Table 2-3**.

Table 2-3 - Summary of Proposed Public Transport Improvements

Location	Proposed Improvement	Benefits
Gloster Road / Adastral Park	<p>Mobility Hub</p> <p>Creation of a mobility hub comprising:</p> <ul style="list-style-type: none"> ▪ Provision for two bus stops, shelters, CCTV, real-time passenger information; ▪ Indoor waiting area, including toilets, changing facilities, lockers and showers; ▪ Canopy area – shelter transitioning to the bus, architectural feature; ▪ Secure cycle storage – short / long stay; ▪ Logistics hub – small consolidation centre, e-cargo bikes for good distribution, parcel lockers for deliveries, e-cargo bike hire; ▪ Café / retail space; ▪ E-car club space; ▪ Future e-micro mobility: E-scooters / E-bike docking areas; and ▪ Public realm improvements and enhanced access east-west. <p>The concept design for the Mobility Hub is subject to further design development.</p>	<ul style="list-style-type: none"> • Enhanced comfort and user experience <p>An indoor waiting area with amenities will enhance the waiting experience for passengers, improve comfort and safety, making public transportation a more attractive option.</p> <ul style="list-style-type: none"> • Increased mobility and accessibility <p>Secure cycle storage for both short and long stays will encourage cycling, providing a convenient option for first and last-mile connectivity. Future provision for e-scooter and e-bike docking areas will support micro-mobility solutions, offering flexible and sustainable travel options.</p> <ul style="list-style-type: none"> • Enhanced community benefits

Location	Proposed Improvement	Benefits
	<p>An indicative/illustrative layout is shown in Figure 2-3.</p> <p>The provision of the Mobility Hub will require land outside the existing highway boundary and the clearance of the site, including demolition of existing buildings and structures.</p>	<p>The hub will feature public realm improvements and enhanced access, making the area more pedestrian-friendly and supporting the sense of community for the Martlesham Heath residents.</p>
<p>Eagle Way</p>	<p>New Bus Shelters</p> <p>Provision of new bus shelters on Eagle Way.</p>	<p>New shelters will provide waiting facilities for passengers will make using local bus services more attractive.</p>
<p>Portal Avenue</p>	<p>Bus link</p> <p>Construction of a dedicated two-way bus link between the A12 and Portal Avenue, including modifications to road markings at Portal Avenue to facilitate bus routing and modifications to the access Suffolk Police Head Quarters (HQ). Together with a junction new shared use footway / cycleway along the route of the Bus Link and Portal Avenue.</p> <p>Allows improved journey times for bus services 63, 64, 65, 66, 800, 978, UOS.</p> <p>.</p> <p>Construction of Portal Avenue Bus Link between the A12 and Portal Avenue and modifications to the access to Suffolk Police HQ will require land outside the existing highway boundary.</p>	<ul style="list-style-type: none"> • Increased Bus Punctuality: <p>By prioritising buses at traffic signals, detection systems help maintain bus schedules, leading to greater reliability and punctuality.</p> <ul style="list-style-type: none"> • Improved accessibility <p>The new bus link improves bus access to the Adastral Park employment area, the Tesco supermarket, and the Beardmore Park retail area and</p> <ul style="list-style-type: none"> • Sustainable development <p>The new bus link supports future growth and development in the area. This proactive infrastructure planning ensures that new residential and commercial areas are well-connected from the start, promoting sustainable urban development.</p>

Location	Proposed Improvement	Benefits
A12 Portal Avenue Bus Link to Main Road	<p>Reduced junction delay</p> <p>The proposed bus link will remove buses from queues at the A12/ A1214 roundabout and provide priority access onto the A12 southbound.</p>	<ul style="list-style-type: none"> • Increased Bus Punctuality: <p>Prioritising buses on this proposed link, will lead to greater reliability and punctuality for bus services using the link</p> • Enhanced Passenger Experience: <p>Reduced delays and increased punctuality contribute to a more pleasant and predictable journey for passengers.</p> • Improved bus service outside Police HQ

3 Impact of the Proposed Scheme

3.1 Model Types

- 3.1.1. Two types of transport modelling have been undertaken to understand the impact of the proposed scheme. A strategic model, based on the Suffolk County Transport Model (based in SATURN software) has been used to identify the wide area traffic redistribution and provide high level traffic flows and information about delays and travel times through the network. With the exception of the bus journey times, all of the model data presented in this report are based on the strategic model.
- 3.1.2. The second model, a VISSIM microsimulation model, has been prepared to understand the localised impacts of the scheme. This model shows the trips made by individual vehicles through the existing and proposed model and is used to review and identify any interactions between junctions (such as queues blocking roundabout exits) which cannot be identified in the Strategic model. The VISSIM model is based on forecast traffic flows exported from the strategic model.

3.2 Introduction to Impact Assessment

- 3.2.1. The sub-sections which follow summarise the results taken from the transport modelling. A review of the strategic modelling results for the base, with the proposed A12 MRN scheme (Do Minimum) and without the proposed A12 MRN scheme (Do Something) has been undertaken. Traffic impacts have been considered on travel times along the A12 route in both directions, and delay at relevant junctions on the A12 east of Ipswich and at Woodbridge. These junctions are expected to experience significant changes in traffic as a result of the committed developments. The following are the metrics taken from the transport modelling which have been reviewed as part of the assessment:
- Average delays;
 - Traffic flows; and
 - Journey times.

3.3 Average Delay

3.3.1. In this section an “average” delay at each junction and the proposed dual carriageway section has been provided. This delay has been calculated by multiplying the delay and total vehicles on every junction approach to provide a total delay in PCUhr (Passenger Car Unit hours) and then dividing the total delay by the total traffic flow entering the junction to obtain an average delay per vehicle in seconds, which is independent of the direction that drivers arrive from.

A14/ A12 Seven Hills Interchange

3.3.2. **Table 3-1** shows the forecast average delay on all approaches at the Seven Hills Interchange across all years modelled. In 2027, the comparison is against the existing junction layout, whilst in 2042 the alternative Brightwell Lakes developer scheme would be in place in the Do Minimum (Without A12 MRN scheme scenario).

Table 3-1 - A12 / A14 Seven Hills Junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Developer scheme	2042 Forecast A12 MRN scheme
Morning Peak Hour	15	33	12	28	14
Evening Peak Hour	9	23	9	21	10

3.3.3. The comparisons show that the existing junction layout will experience increased delays in the future. The Brightwell Lakes developer scheme in 2042 would reduce delays compared to 2027, however average delays would still be above those which are currently experienced.

3.3.4. The A12 MRN scheme would result in average delays significantly reducing in the morning peak comparing to existing levels in 2023 in both forecast years, whilst in the evening peak the existing levels of delay experienced would be maintained at or close to 2023 levels in both the 2027 and 2042 forecast years.

A12/ Foxhall Road/ Newbourne Road roundabout

3.3.5. **Table 3-2** shows the forecast average delay on all approaches at the A12 / Foxhall Road junction across all years modelled. This compares the existing situation in 2023 to a scenario where the developer scheme has been delivered in 2027 and 2042.

Table 3-2 - A12 / Foxhall Road junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Developer scheme	2042 Forecast Developer scheme
Morning Peak Hour	19	9	10
Evening Peak Hour	69	11	13

3.3.6. The comparisons show the proposed developer scheme would reduce delays in 2027 and 2042 in both the morning and evening peak compared to the existing situation in 2023.

3.3.7. This change is most notable in the PM peak hour, this junction experiences larger delays in this time period due to higher levels southbound traffic turning right towards Ipswich which increases delays on the A12 northbound approach as this traffic has less opportunities to pull out and enter the roundabout. The signalisation of the A12 arms which is proposed as part of the developer scheme alleviates this issue.

A12/ Barrack Square/ Eagle Way Roundabout

3.3.8. **Table 3-3** shows the forecast average delay on all approaches at the A12 / Barrack Square junction across all years modelled. This compares the existing situation in 2023 to either the developer scheme being delivered or the A12 MRN scheme in both 2027 and 2042.

Table 3-3 - A12 / Barrack Square junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Developer scheme	2027 Forecast A12 MRN scheme	2042 Forecast Developer scheme	2042 Forecast A12 MRN scheme
Morning Peak Hour	37	16	12	11	12
Evening Peak Hour	10	13	10	13	13

- 3.3.9. The table demonstrates the developer scheme reduces delays experienced in the morning peak in 2027 and 2042 to be lower than the existing situation in 2023. The A12 MRN scheme would offer an even greater improvement in 2027 in terms of the reduction in average delay and performs similarly to the developer scheme in 2042.
- 3.3.10. In the evening peak, the A12 MRN scheme would maintain existing levels of delay in the 2027 forecast year, offering an improvement in terms of reducing delay compared to the developer scheme, whilst performing similarly to the developer scheme in 2042.

A12/ Anson Road/ Eagle Way roundabout

- 3.3.11. **Table 3-4** shows the forecast average delay on all approaches at the A12 / Anson Road junction across all years modelled. In 2027, the comparison is against the existing junction layout, whilst in 2042 the alternative Brightwell Lakes developer scheme would be in place in the Do Minimum (Without A12 MRN scheme scenario).

Table 3-4 - A12 / Anson Road junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Developer scheme	2042 Forecast A12 MRN scheme
Morning Peak Hour	6	6	10	11	15
Evening Peak Hour	20	30	13	12	12

- 3.3.12. The table demonstrates the A12 MRN scheme would result in a slight increase in delay in the AM peak hour compared to the existing situation in 2027 and 2042. However, the A12 MRN scheme would result in an improvement in the evening peak in 2027 and 2042 compared to existing levels of delay.

A12/ A1214/ Main Road/ Park and Ride Junction

3.3.13. **Table 3-5** shows the forecast average delay on all approaches at the A12 / A1214 / Park and Ride junction comparing the performance of the existing layout in 2023, 2027 and 2042 to the proposed A12 MRN scheme in 2027 and 2042.

Table 3-5 – A12 / A1214 Main Road junction – Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	18	20	19	20	19
Evening Peak Hour	18	19	19	22	18

3.3.14. The comparison demonstrates the A12 MRN scheme will offer a minor improvement in terms of average delay compared to the existing junction layout in 2027 and 2042. The strategic transport model used as the basis for this comparison uses fixed signal timings across an average hour and is not able to replicate the dynamic response which the proposed MOVA control at this junction will offer when implemented. Therefore the strategic transport modelling is considered to be under estimating the reduction in delay which will be experienced as this junction.

A12/ B1438 Junction

3.3.15. **Table 3-6** shows the forecast average delay on all approaches with the existing and forecast future traffic flows at the A12/ B1438 junction, comparing the existing layout to the proposed A12 MRN scheme.

Table 3-6 - A12 / B1438 junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	6	8	6	8	6
Evening Peak Hour	8	9	6	6	4

3.3.16. The comparison demonstrates the A12 MRN will reduce delays in 2027 and 2042 in the evening peak hour compared to the existing situation, whilst in the morning peak the scheme will be able to maintain the existing levels of delay experienced.

A12 dual carriageway

3.3.17. **Table 3-7** compares the changes in average delay which would be experienced on the existing A12 single carriageway (between the B1438 and B1079) to the proposed dual carriageway across all years modelled, in the northbound direction.

Table 3-7 - A12 dual carriageway Northbound - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	12	16	1	15	1
Evening Peak Hour	17	20	1	46	1

3.3.18.

3.3.19. **Table 3-8** compares the changes in average delay which would be experienced on the existing A12 single carriageway (between the B1438 and B1079) to the proposed dual carriageway across all years modelled, in the southbound direction.

Table 3-8 - A12 dual carriageway Southbound - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	18	61	2	49	2
Evening Peak Hour	14	20	1	16	1

3.3.20. The comparison of the changes in average delay as a result of the introduction of the dual carriageway demonstrate there is a notable reduction in delay in both directions and in all time periods considered. The most notable reduction in delay would occur in the morning peak in the southbound direction.

A12/ B1079 Grundisburgh Road

3.3.21. **Table 3-9** shows the forecast average delay on all approaches with the existing and forecast future traffic flows at the A12/ B1079 Grundisburgh junction, comparing the existing layout to the proposed A12 MRN scheme.

Table 3-9 - A12 / B1079 Grundisburgh Road junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	8	9	16	9	16
Evening Peak Hour	7	9	13	9	13

3.3.22. This comparison demonstrates forecast delays are predicted to increase at the existing junction in 2027 and 2042 as forecast traffic levels increased compared to the existing situation in 2023.

3.3.23. The A12 MRN scheme will result in increased vehicular delays at this junction on average in both 2027 and 2042 forecast years as a result of the proposed signalisation. The proposed improvements at this junction are seeking to improve the ability of non-vehicular traffic to be able to cross the junction through proposed signalised crossings. Therefore the proposed improvements are seeking to balance the needs of all modes of travel.

A12/ A1152 Woods Lane

3.3.24. **Table 3-10** shows the forecast average delay on all approaches with the existing and forecast future traffic flows if no improvements are made to the junction.

Table 3-10 - A12 / A1152 Woods Lane junction - Average delays at junction (seconds)

Time	2023 Base Existing Layout	2027 Forecast Existing Layout	2027 Forecast A12 MRN scheme	2042 Forecast Existing Layout	2042 Forecast A12 MRN scheme
Morning Peak Hour	7	8	6	8	6
Evening Peak Hour	7	8	7	7	7

3.3.25. The modelling of the A12/ Woods Lane junction indicates that the predicted delays will be similar across the 2023, 2027 and 2042 forecast years, with the A12 MRN offering a minor improvement in terms of reducing delays in the morning peak.

Summary of Average Delay results

3.3.26. **Table 3.11** summarises the average change in delay weighted by the relative traffic flow in the AM and PM peak hours modelled in each forecast year. This analysis provides an average between the AM and PM peak delay changes in order to show the sections of the scheme which are providing the most significant benefit in terms of reduction in delay. This analysis demonstrates the A12 MRN scheme proposals offer benefits overall across the scheme corridor in terms of reductions in delay compared to the alternative Do Minimum scenario.

Table 3.11 Average change in delay (seconds) – 2027 & 2042

Junction	2027 (DS vs DM)	2042 (DS vs DM)
A12-A14 Seven Hills	-17	-13
A12-Barrack Square-Eagle Way	-3	+1
A12-Anson Road-Eagle Way	-7	+1
A12-Main Road-P&R	-1	-2
A12-B1438	-3	-2
A12 Dualling	-29	-32
A12-B1079 Grundisburgh Road	+6	+5
A12-A1152 Woods Lane	-1	-1

3.4 Traffic Flows

- 3.4.1. The strategic model has been used to forecast daily traffic flows at 8 key locations on or in the vicinity of the A12 that are most likely to be affected by the Proposed Scheme.
- 3.4.2. The traffic flows presented below are average peak hour flows taken from the AM peak hour (0800-0900) and PM peak hour (1700-1800) time periods defined in the transport modelling. These traffic flow figures are for an average weekday.
- 3.4.3. **Table 3-12** presents the change in traffic flows for the 2023 Base and 2027 Do Something scenarios. This shows an increase in traffic is predicted at nearly all of the A12 MRN scheme junctions and the proposed dual carriageway section.

Table 3-12 – 2027 average peak hour traffic flows at key locations

ID	Location	Base	2027 Do Something	Difference – DS vs Base (%)
1	A12-A14 Seven Hills	4,595	5,140	12%
2	A12-Barrack Square-Eagle Way	4,385	4,645	6%
3	A12-Anson Road-Eagle Way	4,355	4,355	0%
4	A12-Main Road-P&R	4,630	5,030	9%
5	A12-B1438	3,550	4,095	15%
6	A12 Dualling (south of Grundisburgh Rd)	3,015	3,500	16%
7	A12-B1079 Grundisburgh Road	3,860	4,210	9%
8	A12-A1152 Woods Lane	3,420	3,820	12%

3.4.4. **Table 3-13** presents the change in traffic flows for the 2023 Base and 2042 Do Something scenarios. This shows an increase in traffic is predicted at all of the A12 MRN scheme junctions and the proposed dual carriageway section.

Table 3-13 – 2042 average peak hour traffic flows at key locations

ID	Location	Base	2027 Do Something	Difference – DS vs Base (%)
1	A12-A14 Seven Hills	4,595	5,675	24%
2	A12-Barrack Square-Eagle Way	4,385	4,730	8%
3	A12-Anson Road-Eagle Way	4,355	6,680	53%
4	A12-Main Road-P&R	4,630	4,995	8%
5	A12-B1438	3,550	4,950	39%
6	A12 Dualling (south of Grundisburgh Rd)	3,015	3,410	13%
7	A12-B1079 Grundisburgh Road	3,860	4,130	7%
8	A12-A1152 Woods Lane	3,420	3,715	9%

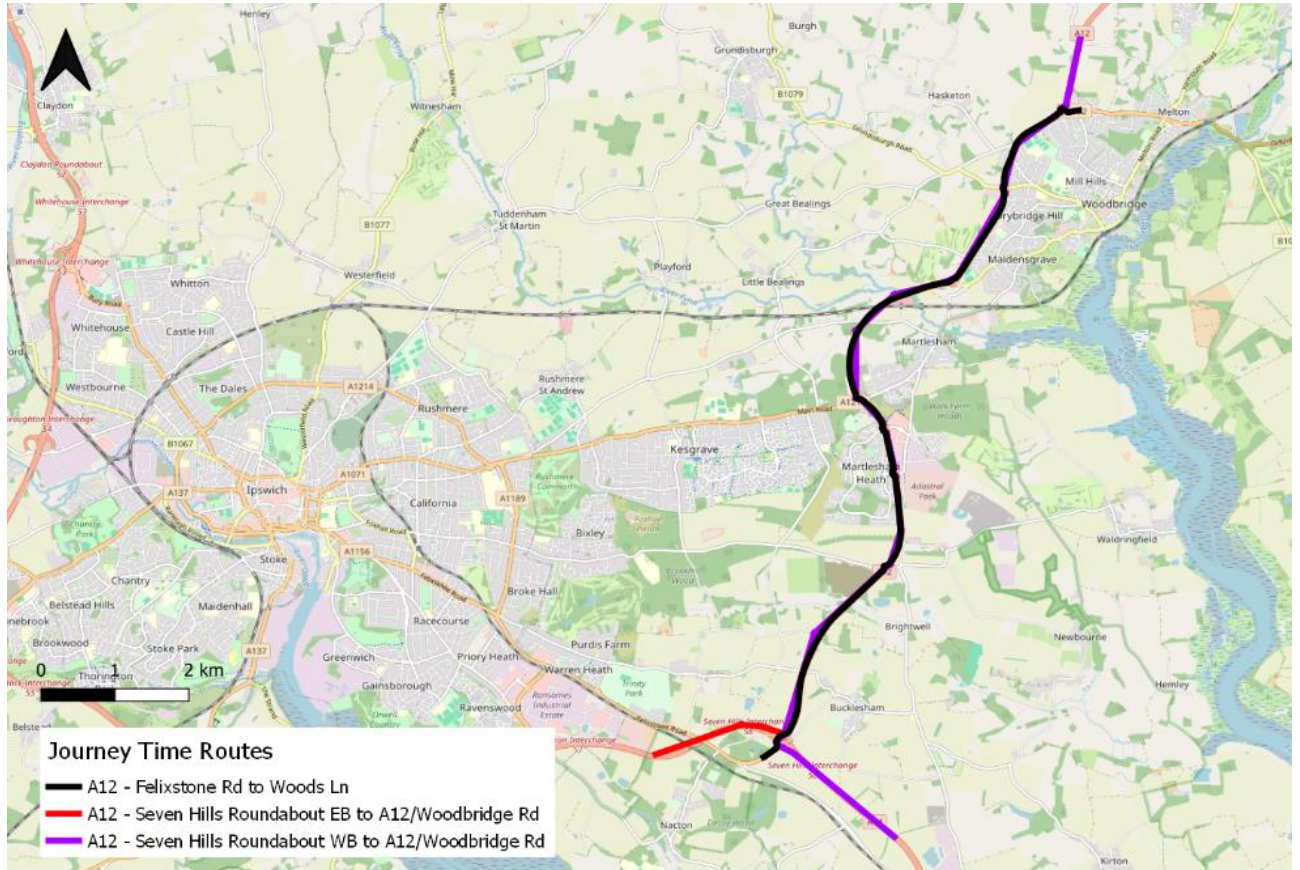
Summary of traffic flow analysis

3.4.5. The traffic flow analysis presented for each junction and the proposed dualled section of the A12 demonstrates the scheme is predicted to experience increases in traffic compared to existing traffic levels in 2023. The increases in traffic will continue between 2027 and 2042 as the Brightwell Lakes development and other local developments come forward. The traffic flow analysis further demonstrates the benefits of the scheme as when considered alongside the average delay information, despite the scheme having to provide capacity for increased levels of traffic, it offers improvements in terms of congestion relief in many cases compared to the existing situation in 2023.

3.5 Journey Times

3.5.1. Journey times along the A12 have been assessed using the strategic transport model for the sections that could be impacted by the A12 MRN scheme are shown in **Figure 3.1**.

Figure 3.1 Strategic Model Journey Time Routes for Proposed Scheme Assessment



3.5.2. The journey time route between the A12/A14 Seven Hills and the A12/A1152 Woods Lane, as well as two alternatives of this route were selected to assess the impact of the proposed scheme on travel times. The three journey time routes that were assessed are:

- Route 1: (Black) - A1156/Felixstowe Rd to Woods Lane
- Route 2: (Red) - A14 EB/Seven Hills Roundabout to A12/Woodbridge Road
- Route 3: (Purple) - A14 WB/Seven Hills Roundabout to A12/Woodbridge Road

3.5.3. Full details of journey times along these routes will be presented in the Transport Assessment. The above journey times have been weighted by traffic flows for the AM and PM peak hour and then averaged to provide a predicted journey time from end to end (A14 to Woods Lane) with and without the scheme.

3.5.4. **Table 3-14** compares the predicted northbound journey times, with and without the proposed scheme for the 2027 assessment year.

Table 3-14 – 2027 Journey Times (mm: ss)

Year	Do Minimum	Do Something	Difference
Northbound	15:02	12:50	-02:12
Southbound	13:19	13:04	-00:14

3.5.5. The 2027 model results predict that for northbound traffic the journey time from Seven Hills to Woods Lane would over 2 minutes faster with the proposed scheme when compared against the Do Minimum situation. For southbound traffic, the journey time from Woods Lane to Seven Hills would be slightly faster (14 seconds) with the scheme than without.

3.5.6. **Table 3-15** compares the predicted northbound journey times, with and without the proposed scheme for the 2042 assessment years.

Table 3-15 – 2042 Journey Times (mm: ss)

Year	Do Minimum	Do Something	Difference
Northbound	13:44	12:57	-00:47
Southbound	13:57	13:15	-00:42

3.5.7. In 2042, the northbound journey time is predicted to be about 47 seconds faster and the southbound journey time is predicted to be 42 seconds faster with the proposed scheme than it would be in the Do Minimum scenario.

3.5.8. Overall, the modelling is predicting that the proposed scheme will improve journey times in both directions along the A12 between the Seven Hills interchange and Woods Lane. This is on the basis of comparing against an alternative forecast situation in 2027 and 2042 if the A12 MRN scheme did not occur.

3.6 Bus Journey Times

- 3.6.1. The key bus services operating within the study area are the 66 and 66A which are the services that will be diverted to use the proposed bus link via Portal Avenue.
- 3.6.2. The operational transport model has been used to inform predictions of the impact on bus journey times as a result of the scheme.
- 3.6.3. **Table 3-16** compares the predicted bus journey times in seconds for the 2027 and 2042 forecast years for bus services 66 and 66A.

Table 3-16 – Predicted difference in bus journey times, seconds (Services 66/ 66A)

	AM Peak	PM Peak
2027	-94	-44
2042	-91	-83

- 3.6.4. The modelling predicts that in the AM peak in 2027 and 2042 the average journey time saving for bus service 66/66a would be over 90 seconds. During the 2027 PM peak this would be about 44 seconds in 2027, increasing to 83 seconds in 2042.
- 3.6.5. The modelling does not include an assessment of bus journey times during the inter-peak period, where congestion is much less; however, as the route using the Portal Avenue link is about 200m shorter and includes some element of bus priority onto the A12, it is considered likely that there will also be a travel time saving of about 10 seconds.
- 3.6.6. Overall, it is predicted that the proposed scheme will provide bus journey time benefits for the bus services serving the retail and residential areas of Martlesham Heath.

4 Analysis of performance against specific scheme objectives

4.1 Accident Benefits

- 4.1.1. Due to the proposed changes in the types of junction along the A12, it is very likely that the types of accident will also change. At a roundabout, collisions typically fall within one of the following types
- Failure to give way;
 - Rear end collisions;
 - Side-swipes; and
 - Incorrect lane choice.
- 4.1.2. The proposed schemes introduce traffic signal control at some parts of roundabouts, meaning that the failure to give-way will be eliminated by the traffic lights – it is noted that accidents at traffic lights can involve failing to stop at a red light, but this is typically less likely than failing to give-way. As the traffic lights will make it clearer to drivers that the vehicle in front will stop, this may also reduce the rate of rear-end collisions.
- 4.1.3. The proposed schemes also introduce spiral lane markings accompanied by clear lane destination markings to ensure that vehicles are in the correct lane when they reach the roundabout and can follow that lane to their roundabout exit without needing to change lane. These changes will help to reduce the likelihood of vehicles being in the wrong lane, which will also help to reduce collisions due to side-swipes/ incorrect lane choice and will allow vehicles using remaining priority roundabout entries to have more confidence about where a vehicle is heading.
- 4.1.4. Calculation of accident benefits is normally undertaken as part of the business case for the scheme rather than for the Transport Assessment. The next business case stage has not commenced for the A12 MRN, however at the Outline Business Case stage it was estimated that the proposed scheme would result in a reduction in 108 accidents and result in 43 fewer slight injuries, nine fewer serious injuries and would have no negative effect on the expected number of fatalities over a period of 60 years.

4.2 Benefits to Pedestrians and Cyclists

- 4.2.1. Improving pedestrian and cycle crossing facilities, will help to reduce the effects of community severance and to make walking and cycling more attractive as modes of travel in the vicinity of the scheme. The mobility hub will also introduce a facility that will allow people to easily interchange between cycling and public transport encouraging people to cycle to access local bus services if the nearest bus stop is too far away to walk.
- 4.2.2. Local improvements to pedestrian and cyclist facilities on Anson Road and Gloster Road will also make walking and cycling in the retail and industrial area more attractive.

4.3 Benefits to Public Transport

4.3.1. The Proposed scheme provides several benefits to public transport:

- The proposed bus link will provide priority to buses travelling between Martlesham Heath and Ipswich, helping to reduce the overall journey time and make the Martlesham section of the bus service more reliable;
- The proposed bus shelters will offer an improved waiting environment for passengers, providing shelter, seating and travel information to help encourage mode shift to local bus services;

4.4 Benefits to Vehicle Trips

- 4.4.1. While it is noted that the proposed scheme will not benefit all journeys in the study area, it is also noted that the scheme concentrates of the Major Road Network (i.e. the A12) and the modelling predicts that the travel time from the A14 to north of Woodbridge will be reduced.
- 4.4.2. In locations where additional delay is introduced, this is often to compensate for the strategic journeys along the A12 while reducing priority for local trips that could be made by other modes.

5 Conclusion

- 5.1.1. This report has set out details of how the impact of the A12 Major Road Network (MRN) Improvement Scheme (Seven Hills to Woods Lane) has been assessed using transport modelling to define a Do Minimum situation (Without the scheme) to a Do Something situation (With the scheme) for forecast years of 2027 and 2042. The forecast year of 2027 has been assessed as this is the scheme opening year for the scheme, with a further assessment undertaken for 2042 in order to further understand the impact of the scheme following the full build out of committed developments in the local area.
- 5.1.2. The elements of the Proposed Scheme have been set out in detail, with the objectives of the scheme specified. The scheme offers a range of interventions which benefit highway travel and active travel, therefore seeking to improve the travel situation across a range of modes.
- 5.1.3. The impacts of the Proposed Scheme taken from analysis of a strategic transport model and a more localised micro-simulation transport model have been presented. The strategic transport model has been used to present information on the average delays, traffic flows and journey times with and without the scheme in place in order to demonstrate the impact of the scheme. The analysis of average delays combined with the traffic flow analysis demonstrates that whilst the scheme will be required to accommodate future growth in highway traffic it is able to either maintain existing travel times at junctions on the A12 or improve the situation compared to the existing situation. The most significant benefit which the scheme provides in terms of travel time to highway users comes from the ensuring there is continuous dualling of the section of the A12 between the B1438 Ipswich Road and B1079 Grundisburgh Road. The scheme is demonstrated to deliver an overall journey time improvement northbound and southbound on the A12 between Seven Hills Interchange and Woods Lane in the morning and evening peaks. This benefit is over 2 minutes in the northbound direction and 14 seconds in the southbound direction.
- 5.1.4. Bus journey time improvements have been considered using the micro-simulation transport model. This shows there are improvements of over 1 minute in most instances for the Route 66 / 66A which is a key service benefiting from the proposed Portal Avenue bus link.
- 5.1.5. Further to the aforementioned highway and bus benefits, the scheme will be safer in terms of reducing road accidents, having demonstrated a positive impact on accidents as part of the previous Outline Business Case submitted to the Department for Transport.
- 5.1.6. The scheme will be holistic in also offering improvements to pedestrian and cycle crossing facilities at multiple locations, reducing severance and increasing accessibility by non-highway travel modes, with a mobility hub offering the ability to easily interchange between cycling and public transport.



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