

Skerningham Estates Limited
Skerningham Garden Community, Darlington

Transport Note

6 May 2021
Version 3.0
Issue



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1 Introduction

This Transport Note has been prepared by Fore Consulting Limited (Fore) on behalf of Skerningham Estates Limited in relation to the proposed allocation of Skerningham Strategic Allocation, Darlington. Figure 1 shows the location of the site.

The strategic allocation of the site is covered in Policy H10 of the Darlington Borough Proposed Submission Local Plan 2016-2036. The site (Skerningham Garden Community) has also been identified by the Government as a Garden Village.

Policy H10 identifies the site for the delivery of 4,500 dwellings alongside new schools; community and health facilities; and commercial / employment. Within the Local Plan period to 2036, Policy H10 identifies the site for the delivery of approximately 1,650 dwellings.

Under an accelerated delivery scenario the site could deliver 1,890 dwellings in the Local Plan period. However, in order to provide a robust assessment with a generous allowance for accelerated housing delivery, this Transport Note considers the delivery of 2,400 dwellings within the Local Plan period to 2036.

On the basis that 2,400 dwellings are delivered within the Local Plan period, the Transport Note also considers how the identified highway improvement works can assist in the delivery of the development beyond the Plan period between 2036 and 2050, including a further 2,100 homes and 100,000 sqm of employment land.

Skerningham Garden Community can complement the delivery of the Darlington Northern Link Road but equally its delivery would not be compromised if plans for the link road were not progressed. The assessments undertaken within this Transport Note have therefore been undertaken without reference to the proposed Northern Link Road.

2 Development Phasing

The anticipated phasing of the development (based on the generous allowance for accelerated housing delivery for 2,400 dwellings within the Local Plan period) would be broadly as follows:

- **Build Out Phase 1 (up to 600 dwellings to be delivered by 2025):** this would include up to 150 dwellings to be delivered within the Banks Group site to the west of the railway line.
- **Build Out Phase 2 (up to 1,500 dwellings to be delivered by 2030):** this would include up to 375 dwellings to be delivered within the Banks Group site to the west of the railway line.

- **Build Out Phase 3 (up to 2,400 dwellings to be delivered by 2035):** this would include up to 600 dwellings to be delivered within the Banks Group site to the west of the railway line.
- **Build Out Phase 4 (up to 4,500 dwellings and 100,000 sqm employment space to be delivered by 2050):** this would include up to 600 dwellings to be delivered within the Banks Group site to the west of the railway line. The employment space of 100,000 sqm is split as 20,000 sqm B1; 40,000 sqm B2; 40,000 sqm B8.

3 A Self-Sustaining Garden Community

Central to the evolution of the Garden Community proposal is the delivery of a holistically planned development which integrates new homes with key services and facilities to meet day-to-day needs. As such, the largely self-sustaining Garden Community will include a wide range of on-site facilities across the site to create sustainable and thriving new communities.

Figure 2 shows the outline transport strategy for the site, illustrating the existing and proposed sustainable travel connections.

The development of the Garden Community masterplan will ensure that the site is fully integrated with the surrounding pedestrian and cycle infrastructure. In doing so, the masterplan will incorporate pedestrian and cycle accessibility as a key design focus, seeking to establish a connected and legible network of streets that accommodate all modes of transport which are attractive, safe and not dominated by traffic movement or vehicular parking.

Further, as part of the delivery of an integrated and accessible public transport system, the Garden Community masterplan will ensure that new and extended bus networks can be created through the site, supported by smart technology. Fore have held initial discussions with Arriva, the principal local bus operator, to develop a coordinated bus service strategy for the site. Arriva has confirmed that they have a strong interest in working with the developers to provide a sustainable bus service, by enhancement of either existing service provision or by providing a bespoke new service. Further discussions will be held with Arriva to determine details of the above options as the site masterplan and phasing develops. The new bus stops within the site will be located to ensure that they are within acceptable walking distances to the built-up areas of the development.

In addition, patronage of the existing and proposed new bus services would be supported by promotion of sustainable travel options through implementation of travel planning measures. The overriding intention is to reduce reliance on the car by supporting public transport services alongside encouraging walking and cycling through enhanced and

dedicated routes and by increasing pedestrian permeability across the site, thus encouraging access to and from the wider locality.

4 Vehicular Access Strategy

The need to achieve high quality road access into the Garden Community from the strategic and local road network is essential. The site offers a logical and sustainable extension to Darlington and is accessible to the existing road network, benefiting from being within close proximity to the A1(M) and a suitable vehicular access strategy can be delivered for the site.

It is anticipated that the Garden Community would be served by five vehicle access points onto the A167 Beaumont Hill, A1150 Salters Lane, Barmpton Lane and Bishopton Lane. Figure 3 shows the vehicular access strategy for the site.

A new vehicle bridge crossing will be provided across the East Coast Mainline Railway to connect the western and eastern extents of the site, which it is anticipated could be delivered between 2030 and 2032 depending on the rate of delivery of the housing at the site.

5 Aimsun Microsimulation Traffic Model

An Aimsun microsimulation traffic model has been developed to identify the impacts of the proposed development on the local and strategic road networks. The focus of the accompanying Aimsun Modelling Report is to provide an assessment of the transport implications of the build out phases associated with the delivery of the first 2,400 dwellings within the Local Plan period up to 2036, based on a generous allowance for accelerated housing delivery.

To address the impacts of the proposed development on the local and strategic road networks, potential locations have been identified where highway improvement schemes could be delivered to improve the existing capacity and accommodate the development-generated traffic.

Taking into account the above, the modelling exercise accounts for the following development scenarios and phasing:

- 2020 Do Minimum Future Assessment Year (Reference Case)
- 2025 Do Minimum Future Assessment Year.
- 2025 Do Something (600 Dwellings) Future Assessment Year.

- 2030 Do Minimum Future Assessment Year.
- 2030 Do Something (1,500 Dwellings) Future Assessment Year.
- 2035 Do Minimum Future Assessment Year.
- 2035 Do Something (2,400 Dwellings) Future Assessment Year.
- 2035 Do Something (1,800 Dwellings) Future Assessment Year - Sensitivity Assessment.

The Do Minimum assessment scenarios represent the baseline future assessment year scenario including committed highway schemes and infrastructure expected to be delivered in north Darlington up to 2036 without the delivery of Skerningham Garden Community. The Do Something assessment scenarios have been undertaken which represent the future assessment year scenario including committed highway schemes and infrastructure expected to be delivered in north Darlington up to 2036 and the delivery of Skerningham Garden Community and associated highway schemes and infrastructure. Do Something + Mitigation scenarios represent the above scenario alongside the potential highway improvement schemes identified as follows:

- Scheme 1: Reconfiguration of the B6279 DETC / Haughton Road / Barton Street roundabout.
- Scheme 2: Reconfiguration of the B6279 DETC / McMullen Road traffic signal-controlled junction.
- Scheme 3: Provision of an additional traffic lane travelling westbound from the A66 / B6279 DETC roundabout.
- Scheme 4: Reconfiguration of the western arm of the A167 North Road / Bonomi Way / Albert Road traffic signal-controlled junction

In addition to the above, a review of the phasing and staging at several traffic signal-controlled junctions has been undertaken. Where considered necessary, the control plan has been adjusted in the “+Mitigation” scenario as the optimisation is likely to be required with the proposed development in place, at the following junctions:

- A167 North Road / Thompson Street East / Thompson Street West.
- A167 North Road / Bonomi Way / Albert Road.
- B6297 DETC / McMullen Road.

- Houghton Road / McMullen Road.

With the delivery of the potential highway improvement scheme options, the Aimsun modelling results demonstrate that the existing capacity constraints are improved, and the impacts of the proposed development can be satisfactorily accommodated on the local highway network. More generally, the results also demonstrate that, on some occasions, the overall number of vehicles able to pass through the network during both peak periods would increase and the number of vehicles queuing outside or within the model would reduce. This indicates that, even with additional development-generated traffic, overall network capacity could potentially be improved. In terms of journey times, the analysis suggests that in the vast majority of cases, the potential highway improvement schemes would provide overall network-wide capacity improvements and provide journey time savings that are projected to be lower than the corresponding Do Minimum scenario.

The Aimsun Modelling Report concludes that:

- 600 dwellings can be satisfactorily accommodated on the local and strategic road networks, up to 2025, subject to the delivery of Scheme 1 and Scheme 2.
- 1,500 dwellings can be satisfactorily accommodated on the local and strategic road networks, up to 2030, subject to the delivery of Scheme 1 and Scheme 2 by 2025 and the delivery of the East Coast mainline bridge link by 2030.
- 2,400 dwellings can be satisfactorily accommodated on the local and strategic road networks, up to 2035, subject to the delivery of all potential highway improvement scheme options and the delivery of the East Coast mainline bridge link.

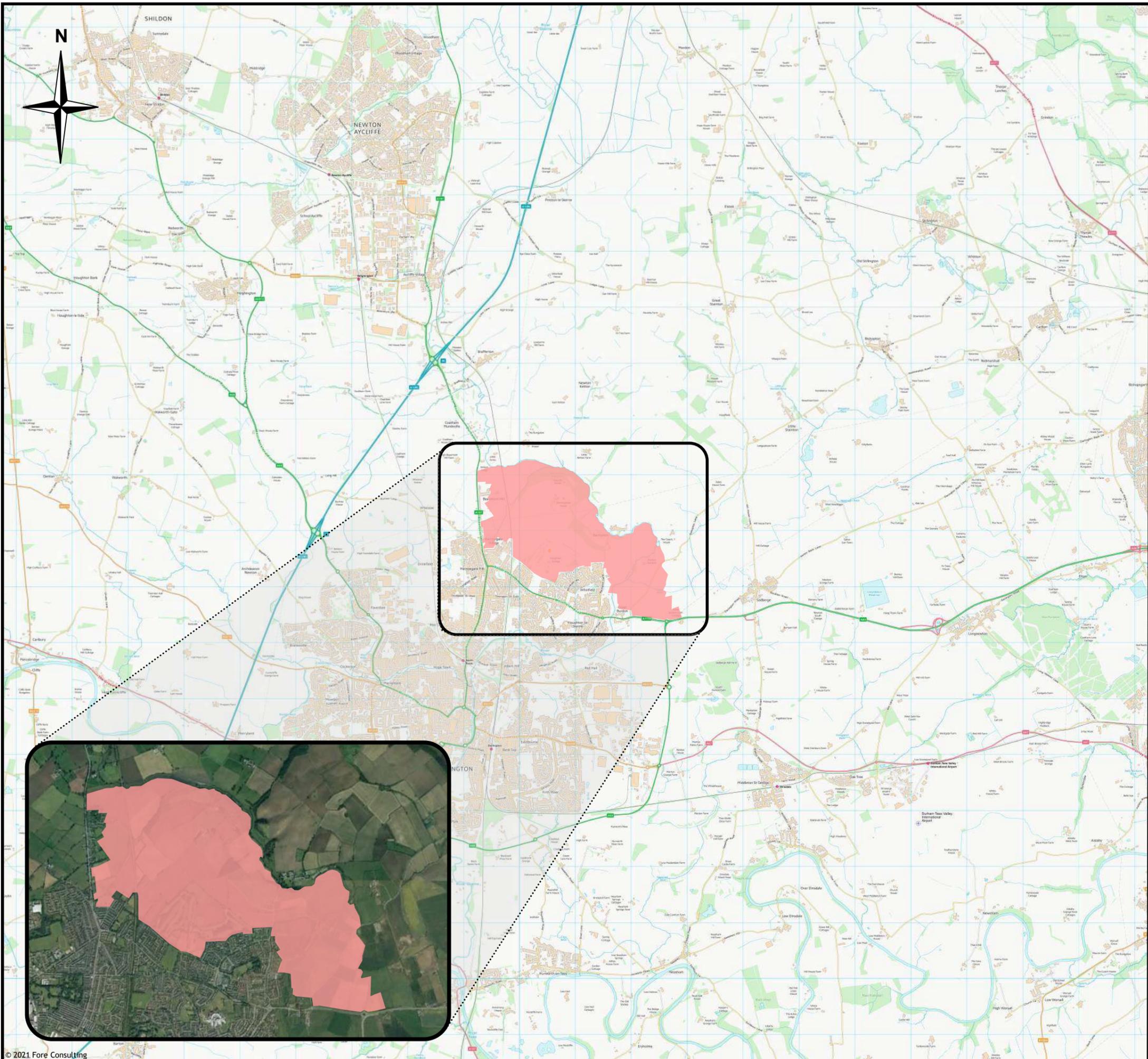
As such, the Aimsun Modelling Report concludes that, subject to the delivery of the potential highway improvement scheme options, the proposed development can be accommodated without giving rise to a detrimental impact on the operation of the local and strategic road networks. Indeed, with the additional development-generated traffic from 2,400 dwellings and the delivery of the potential highway improvement scheme options, overall network capacity could potentially be improved.

The extra capacity in the network can assist in the delivery of the development beyond the Plan period including a further 2,100 homes and 100,000 sqm of employment land. It is however recognised that as part of the delivery of the development quantum beyond the Plan period, further phased mitigation schemes may need to be identified along the key corridors in north Darlington.

6 Conclusion

The delivery of 2,400 homes at the Garden Community within the Plan period (based on a generous allowance for accelerated housing delivery) and an additional 2,100 homes and 100,000 sqm of employment space beyond the Plan period should be supported from a transport perspective.

Figures



Key:

 Site Location

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Fore Consulting Limited
 Suite 18, City Quadrant
 11 Waterloo Square
 Newcastle upon Tyne
 NE1 4DP

0191 255 7778
 enquiries@foreconsulting.co.uk
 www.foreconsulting.co.uk



Client:
 Skerningham Estates Limited

Project:
 Skerningham Garden Community, Darlington

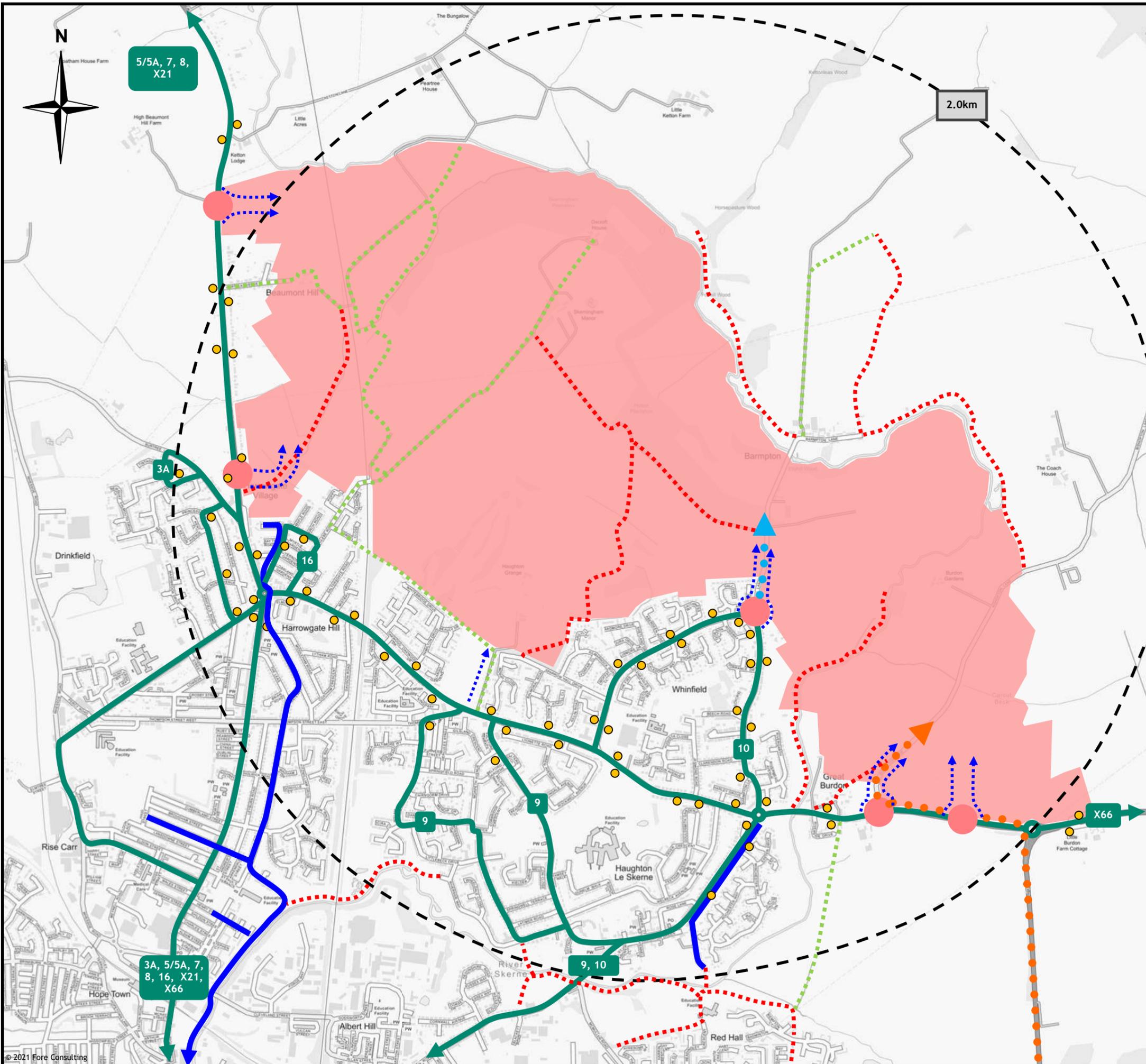
Figure Title:
 Site Location

Scale:
 Not to Scale

Figure Status:
 Issue

Job Number:
 2069

Figure Number:
 Figure 1



- Key:**
- Development Site
 - - - Existing Public Rights of Way (Footpath)
 - - - Existing Public Rights of Way (Bridleway)
 - Existing Signed Cycle Routes (Reference DBC Walking and Cycling Map 2020)
 - ↔ Proposed Pedestrian / Cycle Connections
 - Existing Bus Route
 - Potential Bus Extension (Service 10) - Connection into Site
 - ▶ Proposed New Bus Route / Connection into Site
 - Existing Bus Stop
 - Proposed Junction Changes
- Precise scale of works required to be confirmed following detailed capacity assessment
- - - Indicative Walking / Cycling Distance (Measured from indicative centroid within the site)

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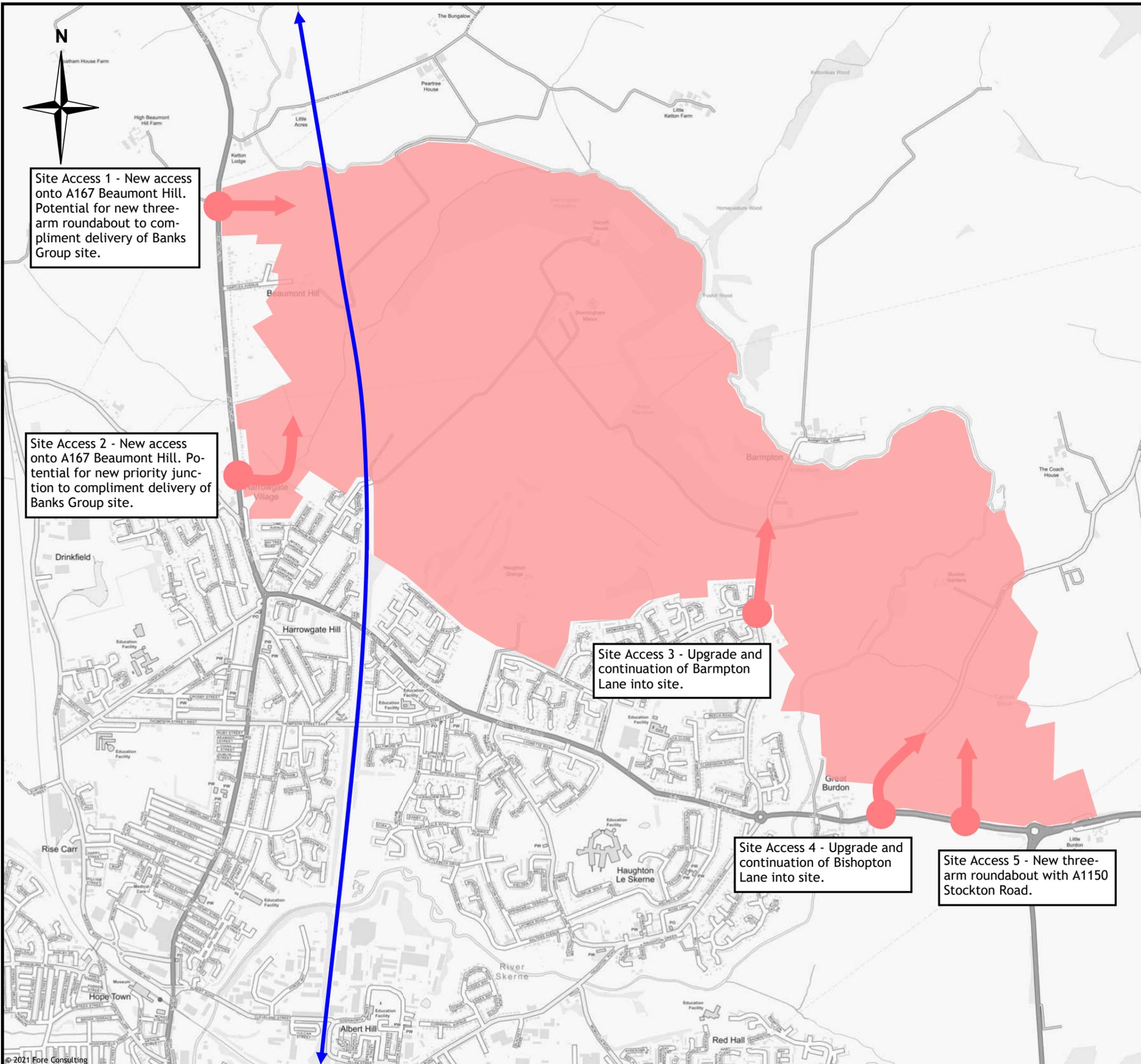
Figure Title:
Outline Transport Strategy - Sustainable Travel Connections

Scale:
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Figure Status:
 Issue

Job Number:
 2069

Figure Number:
 Figure 2



Site Access 1 - New access onto A167 Beaumont Hill. Potential for new three-arm roundabout to compliment delivery of Banks Group site.

Site Access 2 - New access onto A167 Beaumont Hill. Potential for new priority junction to compliment delivery of Banks Group site.

Site Access 3 - Upgrade and continuation of Barmpton Lane into site.

Site Access 4 - Upgrade and continuation of Bishopton Lane into site.

Site Access 5 - New three-arm roundabout with A1150 Stockton Road.

Key:

-  Development Site
-  Proposed Site Access
Precise scale of works required to be confirmed following detailed capacity assessment
-  Proposed Vehicle Access
-  East Coast Mainline Railway

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Newcastle upon Tyne
NE1 4DP

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enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:
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Project:
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Figure Title:
Vehicular Access Strategy

Scale:
Not to Scale

Figure Status:
Issue

Job Number:
2069

Figure Number:
Figure 3

Fore Consulting Limited
Suite 18, City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP

0191 255 7778
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Fore Consulting Limited. Registered in England and Wales No. 7291952.
Registered Address: Gresham House, 5 - 7 St Pauls Street, Leeds LS1 2JG, United Kingdom
VAT Registration No. 105 0341 75