Land North of Beaconside, Stafford

Transport Strategy
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Transport Strategy

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SJT/RJM/11021-01b Transport Strategy

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1. INTRODUCTION

1.1 This report has been prepared by David Tucker Associates (DTA) on behalf of Maximus Strategic Land and sets out the Transport Strategy for the proposed residential led development of land immediately to the north of the A513 Beaconside, Stafford.

1.2 The proposals envisage a development of around 2,000 residential units together with community facilities which will provide as educational and retail opportunities. It is envisaged that these would include local centres and school. Such facilities are important to develop community links and thereby minimise the external travel demands to adjacent areas.

1.3 A significant amount of work has been done to consider the highway/transport infrastructure requirements for the development in the northern area of Stafford taking into account the implications not only of this development site but the planned and proposed developments on adjacent sites.

1.4 Various studies have confirmed the general scale of highway infrastructure improvements required to facilitate development in the northern direction, and generally identify the need for transport investment to also include more sustainable modes to allow travel independent of the private car by walking, cycling and by public transport improvements.

1.5 Any investment in transport infrastructure should take the form of enhancements to the existing network. On the A513 Beaconside it is likely that these would include junction enhancements, signalling improvements and carriageway alterations. In addition, options have been considered to provide the linkages within and through the site and how these could form part of a wider access strategy for the area.

1.6 An illustrative framework plan has been developed for the site by Pegasus Urban Design on behalf of Maximus, and this is included in Appendix A.
2. **EXISTING TRANSPORT NETWORK**

**Site Context**

2.1 The proposals envisage the development of a new community within which residents will be able to walk and cycle to work, to school and the local shops. This will be achieved by developing the appropriate infrastructure links with the adjacent areas and by developing within the site local facilities such as shops and schools. The site context would therefore evolve as it is brought forward.

2.2 It is also important to consider other developments that are envisaged for the Stafford Area. During the plan period as two out of three proposed strategic employment sites (89% by area) are located to the north and east and accessed via Beaconside. These are in addition to the already consented employment site to the west of Stone Road.

2.3 Land to the west of the site (Akzi Nobel) has already been consented for development and a further phase of residential is planned for the future.

2.4 The location of the site in relation to Stafford is shown on Appendix B.

**Local Road Network**

2.5 The site is located immediately adjacent to the single carriageway A513 Beaconside, which effectively forms an orbital route around the north-east of Stafford. It runs in an east-west direction along the southern boundary of the site. The A513 runs alongside the Tollgate Industrial Estate on its south side and RAF Stafford which is mainly located on its eastern side. Further to the east the A513 connects to the A518 radial route into Stafford town centre.

2.6 To the west, the A34 Stone Road runs in a north-south direction and forms another radial route into Stafford.

2.7 A number of local roads serve the area in the vicinity of the site. To the west of the site, Marston Road runs north from the A513. Common Road runs from a point just to the east of the Marston Road junction towards Stafford town centre. Further to the east, the B5066 Sandon Road runs through the eastern part of the site.

2.8 To the west of the site, the A513 Beaconside connects to the M6 Motorway at Junction 14 at the north-west corner of Stafford. The M6 forms the western perimeter of Stafford and forms a further junction, Junction 13 approximately 5 km south of Stafford Town Centre.
Bus Provision

2.9 The main bus routes currently serving the area around the site are those running along the A513 Beaconside. There are 5 bus services in total that operate within a 2 km isochrone of the site, the 4, 5, 5A, 8 and 101 (Appendix B).

2.10 These services and the frequencies are summarised in Table 1 below. The No.8 is the most frequent with a service every 12 minutes, Monday to Friday and 15 minutes on a Saturday. The service also operates on a Sunday with a frequency 60 minutes. The bus route can be accessed via Parkside Avenue and Beaconside, approximately 500m west of the site.

2.11 The 101 also operates with a high frequency with a service every 20 minutes Monday to Saturday. The service operates on a Sunday with a frequency 60 minutes. The bus route can be accessed via Stone Road, approximately 1km west of the site and provides a direct route to both Stafford Rail Station and the Hanley Bus Station.

Table 1 - Summary of bus services

<table>
<thead>
<tr>
<th>No.</th>
<th>Route (single direction)</th>
<th>Frequency (approx average mins)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mon - Fri</td>
</tr>
<tr>
<td>4</td>
<td>Stafford – Chell Road – Sandon Road – Stafford</td>
<td>60</td>
</tr>
<tr>
<td>5</td>
<td>Stafford – Sandon Road – Beaconside – Hixon</td>
<td>120</td>
</tr>
<tr>
<td>5A</td>
<td>Stafford – Sandon Road – Beaconside – MOD Stafford Technology Park - Hixon</td>
<td>120</td>
</tr>
<tr>
<td>8</td>
<td>Parkside – Stafford – Mosspit</td>
<td>12</td>
</tr>
<tr>
<td>101</td>
<td>Stafford Rail Station – Stone – Newcastle – Hanley Bus Station</td>
<td>20</td>
</tr>
</tbody>
</table>

2.12 The 5 and 5a services operate to the east of the site and have a frequency of 120 minutes. It should be noted however, that these two services run in tandem and therefore offer an actual service frequency of 60 minutes. There is no service on a Sunday. The bus route can be accessed via Sandon Road, Beaconside and Hopton Lane, the closest of which is Hopton Lane situated approximately 700m east of the site.

2.13 Service 4 again operates to the east of the site and provides a direct link into the centre of Stafford. This service has a frequency of 60 minutes Monday to Saturday with no service on a Sunday. The route can be accessed on Sandon Road approximately 700m south of the proposed development.
**Rail Provision**

2.14 Stafford Rail Station is located on the West Coast Main Line and is situated in the town centre approximately 3.5km south of the proposed development.

2.15 The Railway Station provides access to both local and national destinations including Wolverhampton, Crewe, Stoke on Trent, Birmingham, London Euston, Manchester Piccadilly and Liverpool Lime Street. A summary of these services are provided in Table 2 below.

Table 2 - Summary of Rail Services from Stafford Railway Station

<table>
<thead>
<tr>
<th>Destination</th>
<th>Journey Time (minutes)</th>
<th>Frequency (No. Of services per hour)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crewe</td>
<td>21</td>
<td>2 per hour</td>
</tr>
<tr>
<td>Stoke On Trent</td>
<td>19</td>
<td>3 per hour</td>
</tr>
<tr>
<td>Wolverhampton</td>
<td>14</td>
<td>3 per hour</td>
</tr>
<tr>
<td>Birmingham New Street</td>
<td>34</td>
<td>3 per hour</td>
</tr>
<tr>
<td>Liverpool Lime Street</td>
<td>52</td>
<td>3 per hour</td>
</tr>
<tr>
<td>Manchester Piccadilly</td>
<td>58</td>
<td>2 per hour</td>
</tr>
<tr>
<td>London Euston</td>
<td>80</td>
<td>1 per hour</td>
</tr>
</tbody>
</table>

2.16 As Table 2 illustrates, a large number of destinations can be accessed via Stafford Rail Station. These services have good frequencies of operation with short journey times.

2.17 The 101 bus service provides access to the station and, as set out above, routes within 700m of the site. Ways to provide appropriate accessibility to public transport are discussed further below. The station has a 350 space car park and hence could provide for linked trips by rail from the site. It also has secured covered cycle facilities on all platforms.

**Cycle Provision**

2.18 Cycling has been considered as an alternative to car use for short trips, typically those of lengths up to 5km. The advantages of cycling include greater speed and range than walking. However, issues such as topography may be more important, and it is essential that appropriate provision is not only made along the route but also at the trip ends, i.e. secure parking and changing facilities.

2.19 As with walking the above catchment area does not reflect the inevitable variability in actual trip lengths, but does give a reasonable indication of its extents. This 5km radius area encompasses the centre of Stafford as well as the areas of Hopton,
Parkside and Beaconside MoD Stafford to the north and the areas of Highfileds, Rising Brook and Baswich to the south.

2.20 Cycling is therefore an important journey to work mode that has the potential to perform a more significant role. A review of the area indicates that there are two nationally designated cycle routes within 5 km of the site.

2.21 National Route 5 (NR5) is situated on Beaconside adjacent to the southern perimeter of the site. This section extends between Common Road to the west and Western Road to the east. The cycle route along Beaconside forms a 2m wide traffic free segregated cycle route on the west bound side of the carriageway.

2.22 The Isabel Trail, is an off road, traffic free section of NR5 that extends from Beaconside to the east to the centre of Stafford to the south. This route is a gravel track that passes through both Stafford Common and Doxey Marshes Nature Reserve and is approximately 3 km in length.

2.23 NR55 is located on the western perimeter of Stafford and forms part of the Ironbridge to Preston Route. The section of this route in Stafford is traffic free and can be used to access the local cycle network with Stafford Town Centre.

2.24 In addition to the two National Cycle Routes there are a number of local cycle routes that can be sued to access and egress the centre of Stafford as well as the surrounding local area.

2.25 The topography of the local area and the availability of both local and national cycle routes suggest that these would not be a limiting factor in people choosing to cycle, consequently there is significant potential to increase cycling to and from the site.

Pedestrian Provision

2.26 External site access is good with a combined pedestrian and cycle footway 3.0m wide on the west bound side of Beaconside. This combined footway/cycleway extends between Common Road to the west and Western Road to the east. There is no provision of street lighting.

2.27 There are a number of pedestrian crossing facilities along Beaconside. There is a non signalised dropped kerb crossing across the carriageway west of Sandon Road. There is also a non signalised drop kerb crossing across the junction of Tollgate Drive and a signalised crossing at the junction of Tollgate Business Park.

2.28 There is a pedestrian access point to the Isabel Trail (NR5) located off the
Beaconside. This access is a stepped access that leads directly onto the Isabel Trail. The Isabel Trail forms a gravel track that extends from Beaconside to the east to the centre of Stafford to the south. It is a traffic free route and provides a direct route into the town centre. There are also a number of access points along the route that can be used to access and egress local residential areas along the route.

2.29 This route provides an opportunity for the potential residents of the proposed development to walk or cycle into the centre of town on a traffic free route.

2.30 Sandon Road, south of the site, is largely residential in nature and has 2m wide segregated footways along both sides of the carriageway. The road is well lit and provides a direct route for pedestrians into the centre of Stafford and has a number of bus services that can be accessed from it.

2.31 There is an unsignalised dropped kerb pedestrian crossing at the junction of Sandon Road and Beaconside. There is also a signalised pedestrian crossing prior to the junction of Sandon Road and Bertelin Road.

2.32 Common Road, to the west of the site has a 2m wide segregated footway along the south bound side of the carriageway. The section of road between Beaconside and the Isabel Trail is largely residential in nature with Stafford Common situated on the western edge. The road again provides a direct pedestrian route into the centre of Stafford and has an adequate provision of street lighting.

2.33 Stone Road to the west of the site has a 1.5m wide segregated footways with 1m wide verges along the south bound side of the carriageway. It is a dual carriageway road and has an adequate provision of street lighting. The road provides a direct route for pedestrians into the centre of Stafford and has a number of bus services that can be accessed from it. This road also provides the main pedestrian access route to the secondary school.

2.34 Overall there a number of key pedestrian desire lines from the site located on Beaconside to the surrounding local area, public transport facilities and Stafford Town Centre.

Summary

2.35 The site is physically well related to Stafford and the planned future employment sites. It is within walking and cycling distance of a significant level of employment provision and local services.
2.36 There are 5 bus services in total that operate within a 2 km isochrone of the site. These services provide direct access to Stafford Town Centre as well as the local areas of Hixon, Stone and Mosspit. The 8 and 101 services operate with particularly high frequencies of 12 and 20 minutes respectively.

2.37 The Railway Station provides access to both local and national destinations including Wolverhampton, Crewe, Stoke on Trent, Birmingham, London Euston, Manchester Piccadilly and Liverpool Lime Street. These services have good frequencies of operation with short journey times.

2.38 There is access to two National Cycle Routes (5 and 55). NR5 can be accessed from directly opposite the proposed development and provides a link to the Isabel Trail that extends through the Doxey Marshes Nature Reserve and into the town centre. NR55 can be accessed to the east of the town centre and provides access to a large network of local cycle routes within Stafford.

2.39 Pedestrian access is very good with adequate street lighting and public transport services. The site also benefits from a number of pedestrian desire lines from the site that lead into Stafford Town Centre.

2.40 Whilst the overall transport network in the area is good, public transport past the site itself is limited. Proposals will be required to re-route services past and into the site. This will have benefits to existing residents and businesses located on Beaconside. In addition, the location of the site to the north of Beaconside does present a potential barrier for walking and cycling. It is essential that the development of the site provides high quality linkages to the south of the road to connect to the excellent existing network provision.
3. SUSTAINABLE ACCESS AND TRAVEL STRATEGY

Introduction

3.1 The travel strategy seeks to fully embrace National, Regional and Local Policies on achieving sustainable development with walking, cycling and public transport links to local employment, schools and retail and leisure facilities.

3.2 The proposals will be supported by a comprehensive sustainable travel strategy which includes the provision of dedicated pedestrian and cycle routes to key destinations to and from the site and high quality public transport services providing access between the whole of the development site and Stafford town centre and key employment destinations.

3.3 The Sustainable Travel Strategy aims to interact with all aspects of the development providing an action plan for promoting sustainable travel throughout the site as a whole whilst providing co-ordination between individual site specific travel plans adopted by businesses, schools and the residential development areas.

3.4 The Travel Strategy will manage the development’s travel demands both within the community and to wider destinations, building upon the foundations provided at the design stage of the development.

3.5 The Strategy sets out the individual initiatives to be put into place in order to fill accessibility ‘gaps’ with the aim of making sustainable travel feasible for all those travelling to and from the development.

3.6 The Strategy provides a framework for promotion, management and monitoring to ensure that initiatives achieve their maximum potential and that the following overarching objectives are realised:

3.7 Provide safe and easy, sustainable access for all, increasing awareness of choice of travel modes and promoting social inclusion;

3.8 Encourage healthy lifestyles and a sustainable development;

3.9 Address the causes and potential impacts of climate change through reducing energy use and reducing emissions with the ultimate aim of delivering low-carbon development. The overall Strategy is shown at Appendix C.

Site Access

3.10 It is proposed that the site would take access from A513 Beaconside and from B5066 Sandon Road.
3.11 Access onto the A513 Beaconside would be achieved by the reconfiguration of two existing junctions. At present the junction of A513 Beaconside and Common Road is a priority junction with a ghost island right turn lane. It is proposed that this junction would be converted to a cross road with traffic signal control to minimise conflict and provide for pedestrian movements across A513 Beaconside. As Common Road is one of the main radial routes into Stafford to the north the ability to provide for ahead movements across Beaconside will minimise delay on Beaconside itself.

3.12 In addition, to the access at Common Road, there is scope for a secondary access at the Tollgate Road signal controlled junction. This could take the form of a staggered or conventional cross road layout. There is also the potential to provide alternative layouts such as a roundabout, although traffic signals would provide a consistency along the route and scope for optimisation the progression of vehicles through the junction (green wave). The precise detail will need to be determined but it is clear that there are a number of deliverable options at this location.

3.13 A second main point of access would be provided from Sandon Road, which runs along the eastern edge of the site. The junction with Sandon Road and the A513 is likely to be signalised and further land has been acquired by the highway authority under CPO to accommodate this. A 3m wide footpath / cycleway is envisaged along the road to connect to the existing facility on the A513.

3.14 As part of the development there may be benefit in diverting Sandon Road through the site to improve pedestrian and cycle facilities along the road.

**Sustainable Travel Strategy - Planning Stage**

3.15 The ongoing progression of planning and development of the site will be informed by the sustainable transport strategy. This will set out the principles and objectives required to ensure that the appropriate mix and level of development is provided. It will also set out the level of public transport, walking and cycling infrastructure required to serve the needs to the development.

3.16 In terms of site development mix, at present the masterplan includes for schools, employment and local retail. These will have significant benefits in terms of reducing external trip movements. The mix of uses of the site will be subject to ongoing discussion as the site progression through the planning system. There are other uses which could be incorporated within the site (i.e medical or local services) to
further enhance accessibility. Such uses could also be of significant benefit to existing residents and commercial premises in the vicinity of the site.

**Public Transport Provision**

3.17 The public transport strategy for the development of the site will be designed to maximise accessibility for future residents to key local facilities within Stafford town centre. The overall aim will be to provide a bus service with a 10 to 15 minute frequency throughout the day.

3.18 The site layout will ensure that the majority of households will be within 400 metres walking distance of the bus route through the site. The new bus services and associated bus stops will include the provision of real-time information allowing passengers to see when the next bus is due to arrive.

3.19 The bus services will interchange with rail services from Stafford Station providing residents and employees access to and from the wider area.

3.20 Public transport services will be actively promoted through the workplace travel plans and the residential travel plan.

3.21 Where congestion on the existing network challenges the reliability of journey times of services, bus priority measures will be considered to provide wider improvements to existing bus services on the network.

**Walking and Cycling Trips**

3.22 The Strategy aims through the master planning process to make the majority of journeys within the development feasible on foot or by bicycle.

3.23 The development proposals will provide effective and safe pedestrian linkages between the site and the wider area. The benefits of walking and cycling will be promoted through the individual travel plan initiatives.

**Sustainable Travel Strategy - Development Stage**

3.24 As the site is developed out it is intended that the sustainable travel strategy will act as an overarching document which informs and leads individual / residential travel plans.

3.25 Travel plans will be prepared by individual businesses and other organisations, containing specific initiatives to promote and encourage sustainable travel.

3.26 Measures which aim to directly influence travel behaviour amongst residents will be
set out within a separate residential travel plan. Individual travel plans will benefit from the framework of measures set out in the Strategy as illustrated below and the interaction and monitoring provided by the overall site Travel Plan Coordinator:

3.27 Reference has been made to ‘Making residential travel plans work: good practice guidelines’ published by the Department for Transport in September 2005. This sets out the concept of the ‘Travel Plan Pyramid’. This has been adapted for the purposes of the Sustainable Travel Strategy and is below.
3.28 The design measures implemented at the early stages of the site’s development will effectively underpin the subsequent tiers of the strategy. The provision of primary education, leisure and shopping facilities, alongside employment opportunities within will reduce the need to travel longer distances.

3.29 Furthermore by providing an attractive environment for walking and cycling whilst facilitating integration with existing public transport, alongside new services, the potential for journeys to be made by sustainable means to destinations both within the development and to the wider area will be significantly increased.

3.30 A package of measures will be prepared for the residential development to ensure that sustainable patterns of travel are encouraged from the moment of first occupancy of the site.

3.31 For example, new occupiers will be offered a Welcome Pack, which will include local bus and train timetables, details of local cycle and pedestrian facilities, and will identify the locations of the bus stops nearest to each dwelling. The information pack will also identify notable local destinations, such as medical facilities and town centre shopping facilities and provide information on how to access these facilities from the site.

3.32 Other significant measures will include an estate intranet to publicise and promote residents’ car sharing.
4. TRAFFIC ASSESSMENT

4.1 Traffic modelling has been carried by DTA to inform the development of the masterplan and to ensure that the proposed access strategy would provide sufficient capacity to ensure that the operation of Beaconside would not be adversely affected by the development related traffic. This has informed the preliminary design of the access junctions. These designs are included at Appendix C.

4.2 This modelling made an allowance for traffic growth did not however explicitly take into account the development aspirations of the larger Akzi Nobel site or the synergies with the employment sites being promoted to the north and east of the town.

4.3 DTA has therefore engaged with the local highway authority, SCC, the planning authority (SBC) and other developers promoting sites to the north of Stafford to understand the transport implications and to identify comprehensive solutions that will provide for the future travel demands in the area. A key issue has been operation of Beaconside.

4.4 The operation of this link in the future has been tested by SCC using their traffic assignment model. The model shows that without any improvements to junction capacity, that the performance of the link would degrade during the peak hour periods.

4.5 The development assumptions input into the model are robust as no allowance has been made for internalisation of trips (e.g. what proportion of education trips will be wholly within the site) or sustainable travel initiatives. Nevertheless a number of solutions have been proposed by SCC. These include the potential for new road links between the Stone Road and Beaconside and/or the improvement of Beaconside. These solutions all look to be feasible in principle.

4.6 The preferred option to be agreed with SCC will need to take into account factors including the education and other facilities that are provided on site, the degree of connectivity within the site and confirmation of wide travel patterns. It is envisaged that these considerations would be more apparent at planning application stage and therefore none of the solutions identify is being discounted at this stage.

4.7 The overall scale of the transport improvement works which will also include significant enhancements to public transport, walking and cycling networks. These
will be agreed as part of the ongoing discussions and in the context of any planning application, but it is clear from the current studies that there are no fundamental constraints, in highway and transport terms, to delivering a high quality development which fully meets the accessibility and transport objectives set out in the NPPF and the emerging core strategy.
5. **SUMMARY AND CONCLUSIONS**

5.1 This report has been prepared by David Tucker Associates (DTA) on behalf of Maximus Strategic Land and sets out the Transport Strategy for the development of land immediately to the north of the A513 Beaconside, Stafford.

5.2 There needs to be a fully comprehensive and sustainable transport strategy for development of the northern area in accordance with Government guidance in relation to encouraging travel by public transport, walking and cycling. The package of transport investment should also comprise promotion of more sustainable modes of travel, public transport improvements and smarter travel measures.

5.3 In that context, this Transport Strategy has been prepared in support of the development of land to the north of the A513 Beaconside and to the east of the A34. Transport studies undertaken to date have identified a number of options to adapt the local road network to accommodate the additional traffic generation.

5.4 An overall mitigation strategy will be refined as the proposals are developed in more detail and a fully comprehensive transport assessment will need to be agreed with the local highway authority and the Highways Agency.

5.5 In summary, it is clear that there are no fundamental constraints, in highway and transport terms, to delivering a high quality development which fully meets the accessibility and transport objectives set out in the NPPF and the emerging core strategy.
APPENDIX A
Indicative Masterplan
Land north of Beaconside, Stafford

Maximus

November 2011

Based upon the ORDNANCE SURVEY MAPS with the permission of THE CONTROLLER OF HER MAJESTY'S STATIONERY OFFICE © Crown Copyright AL 100030412

Site Location Plan

Not To Scale

Site

1. Sir Graham Balfour School
2. Western Road High School

2km Radius
5km Radius
Cycle Path
Signed Cycle Route
Path or footway where you must walk your cycle
On-Carriageway Cycle Lane
Employment Area
Town Centre Area
Bus Routes
APPENDIX C
Preliminary Access Designs