1.0 Introduction

ASD Engineering has been instructed by Broom Boats and Norfolk Land Limited (NLL) to undertake a Transport Assessment in respect of a potential mixed use residential-led development on land south of Yarmouth Road in Brundall, Norfolk. The location of the site is indicatively highlighted on Figure 1 below.

Figure 1 – Indicative Site Location

A Transport Assessment was completed in June 2016, which provided a comprehensive assessment of the full traffic and transport implications associated with the proposed development of 192 residential dwellings and a 2,261 sqm convenience retail store.

ASD Engineering has been requested to provide additional information in relation to available walking routes between the proposed development site and local facilities in the village of Brundall to the south. This includes a more detailed review of existing available walking routes in the vicinity of the site and potential walking distances to key nearby facilities accessible by foot.

Figure 2 below provides a visual illustration of the main walking routes in the area, as well as the additional infrastructure being proposed as part of the development.
2.0 Pedestrian Accessibility Review

2.1.1 Proposed Pedestrian Access Strategy

Pedestrian and cycle access into the site will be provided via the site access junctions highlighted above and tie into the existing pedestrian footway network on Berryfields and old Yarmouth Road. Currently, no footways are provided along the northern side of Berryfields, therefore it is proposed to provide a 2m wide footway along the site frontage on the northern side of Berryfields, to link with the site access junctions and enable pedestrians to cross onto the existing footways located on the southern side of Berryfields, which provide wider access to Brundall village centre to the south.

This will be complemented by a proposed pedestrian / cycle link through the development site to link with the proposed retail and commercial premises to the south of old Yarmouth Road. In addition, green pedestrian / cycle link is proposed along the eastern boundary of the site within areas designated for public open space; to provide improved local linkages and permeability. This will ensure that excellent connections to footways on Berryfields / Cucumber Lane or the internal estate roads to the south are provided from all areas of the proposed development, providing pedestrian and cycle access to the village centre. Importantly, it will also direct pedestrian movements through the development and onto dedicated links through public open space, rather than requiring pedestrians to navigate old Yarmouth Road and its junction with the A47 which is not a particularly pleasant pedestrian environment and also does not currently benefit from good pedestrian linkages. In addition, improved pedestrian footway links will be created along Yarmouth Road on the site frontage to connect into existing footway provision.

2.1.2 Existing Accessibility Review

The proposed accessibility strategy outlined above will complement the existing network of footways and footpaths that are located in the vicinity of the development site, ensuring excellent accessibility by foot to the various local amenities located in Brundall.

Numerous existing pedestrian routes and links between the development site and the local amenities are detailed on Figure 2 above. Footways are provided on both sides of Cucumber Lane, and this continues along The Street through Brundall village centre.

There is an existing footway located on the southern side of Berryfields, that bounds the site to the south. This footway connects into existing footway provision on Cucumber Lane to the west as well as footways located on numerous estate roads south of Berryfields, including Lackford Close, Medeswell Close, Greenacre Close and St Lawrence Avenue. These lightly trafficked estate roads and cul-de-sacs provide a pleasant street-lit pedestrian environment, with traffic free footpath links between Greenacre Close and St Lawrence Avenue providing a more direct pedestrian route between the site and The Street.
The development proposal will provide additional pedestrian footways on the northern side of Berryfields and Yarmouth Road, linking with the green lanes and internal footway network proposed as part of the development and the existing network of footways in the existing residential estate to the south.

Although pedestrian amenities are providing on Cucumber Lane, the network of footways in the residential estate to the south provides an alternative and potentially more direct route to the various amenities in Brundall village.

A number of traffic calming 'tables' are provided along The Street and these provide level pedestrian crossing points that also reduce vehicle speeds. These are located in the 20mph zone between the Finch Way and Blofield Road mini roundabouts, which encompasses the main shopping area and primary school access.

Using the travel distances provided below (measured from the centre of the proposed site via the most direct route), and assuming a standard average walking speed of 1.2 metres per second, the walking times from the development site to key local amenities have been calculated as follows:

<table>
<thead>
<tr>
<th>Local Amenity</th>
<th>Approximate Distance</th>
<th>Approximate Walking Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dentist</td>
<td>730m</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Library</td>
<td>820m</td>
<td>11 minutes</td>
</tr>
<tr>
<td>Budgens / Post Office</td>
<td>970m</td>
<td>13 minutes</td>
</tr>
<tr>
<td>Brundall Gardens Rail Station</td>
<td>1.45km</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Doctors</td>
<td>1.3km</td>
<td>18 minutes</td>
</tr>
<tr>
<td>Brundall Primary School</td>
<td>1.5km</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Brundall Rail Station</td>
<td>1.85km</td>
<td>26 minutes</td>
</tr>
<tr>
<td>Blofield (Post Office / Spar / Newsagents / Florists)</td>
<td>1.5km</td>
<td>20 minutes</td>
</tr>
<tr>
<td>Local Convenience Store (The Street)</td>
<td>750</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Broom Boats (local employer and leisure use)</td>
<td>1.9km</td>
<td>26 minutes</td>
</tr>
</tbody>
</table>

Table 1: Walking Times to Local Amenities

Walking is considered the most important mode of travel at the local level and offers the greatest potential to replace car trips, particularly those under 2km. It can be seen that the majority of facilities located on Brundall are located within 1.5km or an accessible 20-minute walk from the site. The
The greatest distance involved in any walking route between the site and facilities in Brundall is just under 2km, or a maximum 26-minute walk.

It is noted that Brundall Primary School is located approximately 1.5km from the development site or a 20-minute walk using the most direct walking routes available.

It should be noted however that the Road Safety GB (formerly LARSOA) document ‘Identification of Hazards and the Assessment of Risk of Walked Routes to School’ details that in accordance with the 1996 Education Act, suitable walking distances to schools are two miles (3.2km) for children under eight and three miles (4.8km) for older children.

Walking the maximum 3.2km distance for a primary school would take approximately 45 minutes, based on typical walking speed. The direct walking route identified above, has highlighted that the 1.5km and 20-minute walk is well within acceptable guidelines for access to local schools.

Additionally, the review of the local highway network has highlighted that excellent pedestrian routes are provided locally, that are generally lit and well maintained and lightly trafficked routes, with dropped kerb provision at crossings, providing suitable walking routes to school.

Of particular note, are the lit, well maintained and surfaced pedestrian links that provide connectivity between the various estate roads to the south of Berryfields. These are located between Greenacre and Medeswell Close and St Lawrence Avenue; whilst a similar link is also provided between Greenacre Close and Cucumber Lane. Additionally, a lit and well maintained surface footpath is provided between Links Avenue and Brundall Memorial Hall, with links provided between this footpath and Lackford Close. Figure 3 below highlights the footpath routing between the residential estate and the Memorial Hall, whilst Figure 4 highlights the pedestrian links provided between the various cul-de-sacs and estate roads.

Following a site visit by ASD Engineering staff, the traffic free footpath route via the Memorial Hall was observed to be a popular pedestrian desire line and well-used route between the residential estate for pupils walking to Brundall Primary School.
Figure 3 – Footpath Residential Estate to Memorial Hall (Direct Route to The Street)

Figure 4 – Footpath Links Through Residential Estate (to Medeswell Close)