

# ACCESS AND TRANSPORTATION STRATEGY

Land at Reepham Road/Holt Road, Norwich

Drayton Farms Ltd/RG Carter Farms Ltd

March 2020

Project no: 48110



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Title: Project: Client: Project No.: ACCESS AND TRANSPORTATION STRATEGY Land at Reepham Road/Holt Road, Norwich Drayton Farms Ltd/RG Carter Farms Ltd 48110

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48110/PP/100A – Ghost Island Access from A140 48110-PP/101A – Priority Access & Roundabout onto Reepham Road 48110-PP/102A – Industrial Access onto Holly Lane

#### 1. INTRODUCTION

- **1.1.** Richard Jackson Ltd have been commissioned by Drayton Farms Ltd / RG Carter Farms Ltd to prepare a Transportation and Access Strategy in support of an allocation for residential development and some commercial development. The location of the site based on an Ordnance Survey midpoint of 620350, 313410 and an approximate postcode of NR6 6QA.
- **1.2.** The site is located to the west of Norwich International Airport and there is a public safety exclusion zone that passes through the site which limits the type of development and the number of people that can work/reside within that zone. The Norwich Northern Distributor Road (NNDR) has changed some of the roads within the vicinity of the site. The NNDR does provide access to the wider northern fringes of Norwich, to the northwest onwards to Fakenham and also the east of Norwich and onwards, to Great Yarmouth via the A47.
- **1.3.** The site is within the Local Authority (LA) area of Broadland District Council who are also the local planning authority for the development. The local highway authority for the development is Norfolk County Council (NCC).
- **1.4.** Our assessment in transportation terms will refer to the following issues:
  - Chapter 2 Pedestrian Access;
  - Chapter 3 Cycle Access;
  - Chapter 4 Routes to Local Schools;
  - Chapter 5 Bus Provision; and
  - Chapter 6 Vehicular Access;
  - Chapter 7 Summary and Conclusions.
- **1.5.** This assessment considers current policy and highway design guidance with regards to access for the development and accessibility issues which are addressed herein.

- 2. PEDESTRI AN ACCESS
- 2.1. To enable people to access the site, readily available access routes for pedestrians is imperative, to enable movement throughout the development and to link to the existing conurbation.
- 2.2. There are currently existing footpath links to the west of the site through Drayton Wood to the A1067, although these are not metalled. Further western footpath links through Canham Hill provide access to Hurn Road and the A1067. There are few other existing footpath links locally, except those along Reepham Road, which are surfaced and have street lighting provision. The footways along Reepham Road provide a very good level of access for pedestrians to local facilities such as schools, the library, shops and employment areas around Norwich Airport via Reepham Road and Middletons Lane.
- 2.3. It is suggested that good internal pedestrian links are provided within the proposed development area, linked via green corridors.
- 2.4. In addition, footway links should be proposed from Holt Road and link south to the existing infrastructure on Holt Road. These links will help provide pedestrian movement to the neighbouring Norwich Airport Industrial Estate, the Airport itself and to multimodal infrastructure, such as the Park & Ride at the Airport.
- 2.5. Further pedestrian links should be incorporated on Reepham Road into the development site.
- 3. CYCLE ACCESS
- **3.1.** The bicycle has become a much more widely used mode of transport in recent years, as promoting the healthier lifestyle and the current economic circumstances that affects the population. From assessing the locations of the facilities locally, many of them are well within the 5.0km cycle distance parameters that are recognised in the industry. In fact, the centre of Norwich is within 5.5km of the centre of the site.
- **3.2.** The majority of the roads in Hellesdon along Reepham Road are within a 30mph speed limit and provide an appropriate network for cycle use in Hellesdon to access local facilities. Further, the new cycleways implemented as part of the Northern Distributor Road to the north of the site are also accessible from the proposed site via the links from Holly Lane, onto cycleways on the eastern side of the A140 Holt Road. From this point, the Northern Distributor Road cycleways can be reached.
- **3.3.** The development is to propose cycleways throughout the development and to the local roads and existing cycleways to encourage cycling. This infrastructure will increase the accessibility of local amenities from the site.
- **3.4.** Using the SUSTRANS website, it appears that the nearest national cycle route is Route 51 and can be accessed via Reepham Road where there is a link adjacent to the NNDR onto Marriotts Way and Sustrans Route 51, which is less than 5.0km from the site, to the north. However, access to this route is along Reepham Road which has a 50mph speed limit.

- 4. ROUTES TO LOCAL SCHOOLS
- **4.1.** The nearest infant school is Arden Grove Infant and Nursery School, located along the southern boundary of the site. The school can be reached via Reepham Road, Cottinghams Drive and then Arden Grove.
- **4.2.** The nearest primary education can be found at Kinsale Junior School and Firside Junior School on Middletons Lane, within an existing established residential area approximately 1.7km from the proposed development. The route between the proposed development site and the school has been considered based on the guidance contained within the Road Safety GB (et al) publication Assessment of Walked Routes to School.
- **4.3.** The route to both schools is similar initially, taking a route along Reepham Road, there is a controlled crossing point on Reepham Road to enable pedestrians to cross should this be required, to the roundabout junction of Middletons Lane.
- **4.4.** Travelling to the Firside Junior School there is a 20mph approach surrounding the school, together with crossing facilities in the centre of Middletons Lane.
- **4.5.** The route to Kinsale Junior School is similar along Middletons Lane and this route has the added benefit of an off road cycle route on the south side towards the school. In addition, there is also a 20mph speed limit in the vicinity of the school.
- **4.6.** Alternatively, Firside Junior School can be reached via the network of residential roads. The route follows Reepham Road, Cottinghams Drive, Gowing Road, Raymond Road, Bush Road and Middletons Lane, crossing the road with pedestrian facilities outside the school.
- **4.7.** With the exception of the side road crossings along Reepham Road and Middletons Lane, both routes to the Junior Schools have a continuous footway or footway/cycleway throughout. Middletons Lane is restricted to 30mph with 20mph speed restrictions when the amber lights are showing within the vicinity of Schools. Due to the road signs and facilities along the routes to school, it is considered that the risk to future residents is low and that the route to school can be considered safe.
- **4.8.** The nearest secondary education facility is along Middletons Lane to the west of the Kinsale Junior School, located approximately 1.8km from the site. Hellesdon High School can be accessed by walking the same route as to the Kinsale Junior School and continuing a little further west. Due to the road signs and the reduced speed limits within the area, it is considered that the risk to future residents is low and that the route to school can be considered safe.

- 5. BUS PROVISION
- 5.1. To establish criteria for public transport provision, guidance was sought from Norfolk County Council on the necessary bus service frequency. A benchmark guide to bus services should be a frequent service within 400m of the majority of the development.

The 'Target level of service' should provide access to public transport for the following;

- Shopping service, five days a week;
- journey to work service;
- **a Saturday** and Sunday service and;
- an evening service;
- **5.2.** The closest stops to the proposed site are 200m but closer stops could be introduced on Reepham Road and Holt Road to ensure the majority of the site is within 400m of a bus service.
- **5.3.** The routes along Aylsham Road and Reepham Road from Norwich to Horsford are advertised as set out below on the First Buses' website:

along Aylsham Road, as far as The Boundary on board any Purple Line bus

up to every 10 minutes Monday to Saturday daytimes

up to every 30 minutes Sundays & Bank Hols

between Hellesdon and the city centre on board Purple Line 36 & 37 buses

up to every 15 minutes Monday to Saturday daytimes

up to every 30 minutes Sundays & Bank Hols

- **5.4.** The buses generally start at 06.30 and continue until approximately 19.00 to 20.00, Monday to Friday with some services until approximately 22.30 from Norwich to Hellesdon, just south of the site. On Saturdays the routes are similar and on Sunday the length of service is also until approximately 22.30 but with slightly less frequency.
- **5.5.** In conclusion the services are frequent and offer good commuting and social travelling facilities to the residents requiring access to them. The accessibility of the buses may also encourage more individuals to use public transport, rather than using their cars. Furthermore, there are sufficient footways to reach the bus stops. Service could be extended into the development and also linked to routes on the Holt Road with additional bus stop facilities within the development and on Holt Road to improve accessibility where necessary.
- **5.6.** Overall, accumulatively, the bus timetables provide a good service to the level expected and could be easily extended or bus stops enhanced as necessary to improve the services to the future residents if required.

#### 6. VEHICULAR ACCESS

- **6.1.** Due to the size of the proposed development site, at least two accesses will be required to facilitate traffic expected to be generated at peak hours. Considering the residential site, it would require an access onto Reepham Road minimising tree loss and also onto Holt Road. In addition, access to the commercial development should be provided from Holly Lane.
- **6.2.** In order to identify the appropriate access required for serving the development the Design Manual for Roads & Bridges (DMRB) CD123 Figure 2.3.1 has been used. The figure allows assessment of the junction type based on the Two Way Trips along the major road where the access will join and the flows from the proposed development site. We used the document produced by Norfolk County Council "Norwich Northern Distributor Road Application for Development Consent Order, document reference 5.6" to obtain the traffic flows, as no data has been collected as yet.
- **6.3.** It has been identified that four key access points may be needed to access the site, for both the residential site and commercial areas.

Access for Reepham Road / Holt Road / Cromer Road

- 6.4. The Reepham Road could serve access for the land to the west and to the east, across to Holt Road. Using the data from the NCC document, the future traffic flows in year 2032 are predicted to be, for Reepham Road, 13,200 two way trips daily, Annual Average Daily Traffic (AADT). In order to calculate the daily two way trips from the proposed development, we assumed three departures and three arrivals per household; this meant that the proposed development would generate approximately 6,000 two way trips per day based on a total of 1000 dwellings over the whole site, depending on finalised house numbers.
- 6.5. The split of traffic, the distribution could be taken as 50/50 to the Reepham Road and Holt Road respectively, which would imply that approximately 3,000 AADT from the development onto each major access point.
- 6.6. Using the Figure 2.3.1 from CD123, a ghost island junction format is likely to be sufficient for the accesses. However, the access from Reepham Road would need to serve both sides of development and thus a roundabout would be deemed more appropriate for the four way access onto Reepham Road. See Drawing 48110-PP-101A for details.
- 6.7. The future year 2032 two way traffic flows for Holt Road / Cromer Road are forecast at 30,400 according to the NCC traffic flow predictions for the Norwich Northern Distributor Road. This may suggest that a roundabout may be needed for the access to the site from Holt Road / Cromer Road according to national design standards. However, to ensure that Holt Road / Cromer Road has a free flow of traffic, which continues along the A140, a Ghost Island Right Turn Lane is likely to be preferred by the Local Highway Authority, which needs to be confirmed. See Drawing 48110-PP-100A for details.
- 6.8. The right turn lane on Holt Road would require some land from the proposed development site in order to facilitate three lanes. There are existing tree hedges in the north eastern corner of the site that may be affected, but steps

should be taken to minimise the amount of trees that are lost to the widened carriageway. The site includes part of the Airport Public Safety Zone and within this zone there is Norwich Airport Landing Light Infrastructure, which is to be avoided when designing the access. It is very likely that the access can be easily implemented without affecting the Landing Light Infrastructure.

- 6.9. The size of the development accessed from Reepham Road is likely to require a second point of access for accessing land to the west. As the majority of the trips taken from this access and vice-versa, travel towards Norwich, it is suggested that a Ghost Island Right Turn Lane junction is not needed and a simple T-junction would suffice instead. See Drawing 48110-PP-101A for details.
- 6.10. Accesses would have to be Type 2 access as stated in the Norfolk Residential Design Guide. However, if the Site and the land north being suggested for commercial uses were brought forward for planning together a good recommendation would be to have a footpath/cycleway and possibly a bus gate connecting the residential land to the commercial land to the north, but **restricting access from cars, vans and HGV's** and alike.

Holly Lane Access

- 6.11. We have assessed the access for the development of the commercial uses from Holly Lane.
- 6.12. The two way traffic flows for Holly Lane (without development) would be below 50 daily because NCC have stopped up Holly Lane, creating a cul-desac in effect, due to the removal of the through road to Holt Road as NNDR highway improvements have altered the layout of the A140/B1149 roundabout junction.
- 6.13. This would mean that the introduction of the simple T-junction with wide kerb radii would be adequate for the access to the northern development area for commercial use. The access proposal and highway amendments are indicated in Drawing 48110-PP-102A. The appropriate access width and radii have been taken from the NCC Industrial Estate Design Guide, with 7.3m carriageway and 15m radii.
- 6.14. **HGV's should be re**-routed from travelling through Hellesdon and should be encouraged to use the NNDR. This is because of the NNDR has the capacity to facilitate high numbers of HGV's.

- 7. SUMMARY AND CONCLUSIONS
- 7.1. We can therefore conclude that there is a possibility of gaining the accesses suitable for the proposed number of dwellings up to 1000 and commercial access based on the data and constraints currently assessed.
- **7.2.** An assessment of the pedestrian, cycle, routes to school, public transport and vehicular access have been made and appear all to be satisfactory.
- 8. LIMITATIONS
- 8.1. This report has been prepared for the sole use of Drayton Farms Ltd / RG Carter Farms Ltd in conjunction with the development of Land at Reepham Road/Holt Road, Norwich. Its contents should not be relied upon by others without the written authority of Richard Jackson Ltd. If any unauthorised third party makes use of this report, they do so at their own risk and Richard Jackson Ltd owes them no duty of care or skill.
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**DRAWINGS** 

Title: Project: Client: Project No.: ACCESS AND TRANSPORTATION STRATEGY Land at Reepham Road/Holt Road, Norwich Drayton Farms Ltd/RG Carter Farms Ltd 48110



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