# PROPOSED ANAEROBIC DIGESTION PLANT

# LAND WEST OF RANGELL GATE, SPALDING, LINCOLNSHIRE

# TRANSPORT STATEMENT

**August 2024**
**jgv/24016/TS/v1**

**Northern Transport Planning Ltd**

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# LAND WEST OF RANGELL GATE, SPALDING, LINCOLNSHIRE

**Document Status – Final**

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|---|---|---|---|---|
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| Approved by: | - - - - - | John Vernon | Date: | 05 August 2024 |

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# 1 TRANSPORT STATEMENT

## 1.1 Introduction

1.1.1 Northern Transport Planning Ltd has been appointed to provide advice on the transport implications of proposals for an Anaerobic Digestion (AD) renewable energy plant on land west of Rangell Gate in Spalding, Lincolnshire.

1.1.2 This report provides a Transport Statement to support a planning application for the proposed development.

## 1.2 Development Site and Location

1.2.1 The proposed development site is located west of Rangell Gate, approximately 2.0km southeast of the centre of Spalding. The geographical location of the site is identified on **Plan 01**, **Plan 02** and **Plan 03**. The site is bounded to the east by Rangell Gate, to the south by agricultural land, to the west by the A16 and to the north by a recently constructed factory. The site is currently used for agriculture.

## 1.3 Development Proposals

1.3.1 The proposed development comprises an AD renewable energy plant as shown on the drawing provided as **Appendix A**. Imported food waste is converted into biogas, liquid biofertiliser, solid biofertiliser and carbon dioxide (CO2). The biogas is injected into the local National Grid gas network. The liquid and solid biofertiliser is transported off-site and used by local farmers on their fields. The CO2 gas produced as a by-product of the process is processed into liquid CO2 which is transported for use off-site.

1.3.2 The site has been selected due to its proximity to the gas network, good highway connections and appropriate distance from sensitive receptors. Access to the proposed development site would be provided via a new simple priority junction with Rangell Gate.

## 1.4 Accessibility by Sustainable Modes of Transport

1.4.1 By using the journey to work 2011 census data for people who work in the area surrounding the proposed development site (the workplace zone is E02005471: South Holland 007 – data provided within **Appendix B**) the following modal split for trips to the proposed development are estimated:

| Mode Type | Modal Split |
|---|---|
| Walking | 9.9% |
| Cycling | 6.1% |
| Public Transport and Taxi | 2.5% |
| PTW | 0.7% |
| Passenger in a Car or Van | 10.3% |
| Driver of a Car or Van | 70.5% |
| **Total** | **100.0%** |

**Table 1.01: National Census Weekday Modal Split**

1.4.2 It is generally accepted that walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2.0km, and that cycling has the potential to substitute for short car trips, particularly those under 5.0km, and to form part of a longer journey by public transport. It is recognised that for public transport to be an attractive alternative mode of transport to the private car it needs to be easily accessible on foot – ideally bus users should not have to walk more than 400m to their nearest bus stop

1.4.3 Within the site, footways, footpaths and areas of shared surface will be available providing links between the buildings, tanks and other elements of the facility and the car park, as shown on the site layout plan.

1.4.4 Covered and secure cycle parking spaces will be provided close to the entrance to the facility as part of the proposed development. Shower and changing facilities will be available.

1.4.5 Rangell Gate does not benefit from footways or footpaths and street lighting is not available. No specific facilities are apparent in the vicinity of the site to assist pedestrians to cross any of the major roads, although there are dropped kerbs on the footways and splitter islands to assist crossing at the nearby roundabout junction with the A16. It is therefore anticipated that few trips to the site would be made on foot.

1.4.6 Notwithstanding the above, a 2.0km walking radius, representing approximately a 25 minute walking distance (walking at 5kph/3mph), is identified on **Plan 04**. Having regard to the availability of pedestrian infrastructure and the alignment of links for walking and barriers to movement, a reasonable residential built-up area where future members of staff might live lies within a 2.0km walk from the site.

1.4.7 No facilities to assist cyclists are evident in the area close to the site, but on-site observations reveal cycling to be a relatively popular mode of transport for commuting. A 5.0km cycling radius, representing approximately a 15 minute cycle distance (cycling at 20kph/12mph), is identified on **Plan 05**. Having regard to the alignment of the links for cyclists and barriers to movement, a good built-up area where future staff members might live lies within a 5.0km cycle ride from the site, including the whole of Spalding.

1.4.8 The nearest bus stops to the site are located on Halmer Gate, approximately an 1,200m walk from the site, which is somewhat further than ideal.

## 1.5 Travel Plan

1.5.1 Although it is not intended to operate a formal Travel Plan as part of the proposed development, the site operator will implement measures to assist staff to travel to and from the site without having to rely on the use of a single occupancy private car. Measures which will be considered include:

- Encourage cycling as a mode of transport;
- Encourage car sharing;
- Encourage the use of Electric Vehicles (EVs); and
- The use of a minibus to collect/drop-off staff at locations within nearby conurbations such as Spalding, Holbeach, Moulton and Weston – the precise locations would be dependent on demand.

## 1.6 Site Access

1.6.1 Access to the proposed development site would be via a simple priority junction with Rangell Gate at the northern end of the site as shown on the site layout plan. Suitable visibility splays of 2.4m x 120m would be provided in accordance with the 40mph speed limit on Rangell Gate. The satisfactory manoeuvre of Heavy Goods Vehicles (HGVs) at the site access junction is identified on the drawing provided as **Appendix C**.

## 1.7 The Local Highway Network

1.7.1 The local highway network consists of Rangell Gate and the site access road. The local highway network is identified on **Plan 03**.

1.7.2 Rangell Gate is a 'B' classified road (the B1165) which is an adopted highway. The road is roughly aligned north-south and provides a connection between the A16 (and onwards to the centre of Spalding) to the northwest of the site, and the commercial premises, houses, farms and fields to the east and southeast of the site.

1.7.3 Rangell Gate has a single carriageway approximately 6.0m in width and is subject to a 40mph speed limit. In the vicinity of the site access there are no footways and the road is flanked by verges. The road does not benefit from street lighting.

1.7.4 Rangell Gate provides direct access to a number of industrial units, private dwellings, farms, fields and a School of Dance.

1.7.5 In the vicinity of the proposed development site access, on-street parking is permitted on both sides of Rangell Gate, but on-site observations indicate this does not occur.

## 1.8 Highway Safety

1.8.1 Personal Injury Accident (PIA) data provided on the 'Crashmap' website for the five year period 01/01/18 to 31/12/22 in the vicinity of the proposed development site (see **Appendix D**) reveals:

- No PIAs recorded along the Rangell Gate site frontage.
- A PIA, recorded as 'slight', occurred at the junction of Rangell Gate/Fulney Lane South on 19/09/2018. The PIA involved a car turning right impacting with a car driving straight ahead in daylight hours with fine weather and dry surface.
- A PIA, recorded as 'slight', occurred at the junction of Rangell Gate/Fulney Lane South on 10/02/2021. The PIA involved a single car impacting with a tree in daylight hours during snowing weather and snowy road surface.
- A PIA, recorded as 'slight', occurred on Rangell Gate west of Fulney Lane South on 30/09/2020. The PIA involved an HGV impacting the rear of an LGV in daylight hours during raining weather and wet surface.
- A PIA, recorded as 'slight', occurred on Rangell Gate west of Fulney Lane South on 14/01/2019. The PIA involved a car impacting the rear of a pedal cycle in hours of darkness with fine weather and a dry surface.

1.8.2 There is nothing revealed by the PIA data to suggest that the local highway network has any particular safety issues relating to highway design, junction design or traffic volumes.

## 1.9 Existing Traffic Flows

1.9.1 The level of existing weekday peak period traffic using the local highway network has been determined from a manual classified traffic survey undertaken at the junction of Rangell Gate/Fulney Lane South on Tuesday 2nd July 2024 from 07:00 to 09:00 hours. The traffic flow data is provided as **Appendix E**. A consideration of the data reveals the observed AM peak to be 07:30 to 08:30 hours.

1.9.2 The peak observed traffic flows at Rangell Gate/Fulney Lane South are summarised in the table below:

| Highway Link | Traffic Flow 07:30 - 08:30 hours | | | | | | |
|---|---|---|---|---|---|---|---|
| | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV |
| Fulney Lane South | 93 | 19 | 0 | 0 | 8 | **120** | 15.8 |
| Rangell Gate north of Fulney Lane South | 694 | 30 | 3 | 0 | 9 | **736** | 4.5 |
| Rangell Gate south of Fulney Lane South | 609 | 11 | 3 | 0 | 1 | **624** | 2.2 |

**Table 1.02: Peak Observed Traffic Flows at Rangell Gate/Fulney Lane South**

1.9.3 It can be seen that a two-way traffic flow of up to 736 vehicles per hour (vph) was observed on Rangell Gate, with around 5% of these being classified as HGVs or buses.

## 1.10 Carriageway Widths and Highway Capacity

1.10.1 The existing capacity of Rangell Gate has been assessed by making reference to advice provided by TA 79/99 Amendment No.1 – Traffic Capacity of Urban Roads.

1.10.2 By reference to Table 2 of TA 79/99, for a 6.1m carriageway UAP4 (the lowest standard of highway) the two-way capacity is 1,250vph (i.e. 750vph = 60%, 500vph = 40%). This capacity assumes an HGV percentage of up to 15%.

1.10.3 The estimated capacity of Rangell Gate of 1,250vph can be compared with the existing observed peak flow of up to 736vph, i.e. the highway link is currently operating well within capacity.

## 1.11 Committed Highways Schemes and Traffic Management Schemes

1.11.1 We are not aware of any committed highways schemes or traffic management schemes which will significantly affect traffic conditions in the vicinity of the site and need to be considered as part of this Transport Statement.

## 1.12 Committed Development

1.12.1 Committed development which needs to be considered as part of this Transport Statement consists of the permitted food processing factory (Naylor Nutrition) on Rangell Gate located immediately north of the proposed development site. From on-site observations the factory appears to be almost complete, but is not yet operational. The Transport Statement submitted with the planning application for the proposed factory forecast traffic generation associated with the site, using TRICS data, of up to 17vph during the peak periods, and up to 169 vehicles per day (vpd).

## 1.13 Traffic Associated with Existing Development

1.13.1 The proposed development site is currently used for agriculture and generates an insignificant level of traffic.

## 1.14 Proposed Development Traffic Generation

1.14.1 The proposed development comprises the construction of an AD plant. The AD plant will convert food waste into biogas, liquid biofertiliser, solid biofertiliser and CO2.

1.14.2 The traffic generation of the proposed development has been calculated from first principles by considering the traffic associated with the different elements of the production process under the following sub-headings:

- Staff Trips;
- Servicing and Maintenance Trips;
- Input Material Trips; and
- Output Material Trips.

1.14.3 The calculations for traffic generation use specific information which has been provided by the future operator of the AD plant.

**Staff Trips**

1.14.4 52 members of staff would typically work on-site on a weekday. Jobs undertaken by staff include operation of the AD plant itself (4 members of staff working 2 x 12 hour shifts), unpacking the food waste feedstock (10 members of staff, 2 x 8 hour shifts), processing the outputs (10 members of staff, 2 x 8 hour shifts) and working on the weighbridge (2 members of staff, 2 x 8 hour shifts). The operator of the site will have full control of shift patterns, which will be timed to ensure the efficient use of the car park in terms of vehicle movements and parking accumulation.

1.14.5 An estimate of a typical daily shift pattern is provided below:

| Time Period | | | Staff | | Staff Accumulation | Staff Movements |
|---|---|---|---|---|---|---|
| | | | Arrive | Depart | | |
| 24.00 | to | 01.00 | | 10 | 4 | 10 |
| 01.00 | to | 2.00 | | | 4 | 0 |
| 2.00 | to | 3.00 | | | 4 | 0 |
| 3.00 | to | 4.00 | | | 4 | 0 |
| 4.00 | to | 5.00 | | | 4 | 0 |
| 5.00 | to | 6.00 | 12 | | 16 | 12 |
| 6.00 | to | 7.00 | 4 | | 20 | 4 |
| 7.00 | to | 8.00 | 10 | 4 | 26 | 14 |
| 8.00 | to | 9.00 | | | 26 | 0 |
| 9.00 | to | 10.00 | | | 26 | 0 |
| 10.00 | to | 11.00 | | | 26 | 0 |
| 11.00 | to | 12.00 | | | 26 | 0 |
| 12.00 | to | 13.00 | | | 26 | 0 |
| 13.00 | to | 14.00 | 12 | | 38 | 12 |
| 14.00 | to | 15.00 | | 12 | 26 | 12 |
| 15.00 | to | 16.00 | 10 | | 36 | 10 |
| 16.00 | to | 17.00 | | 10 | 26 | 10 |
| 17.00 | to | 18.00 | | | 26 | 0 |
| 18.00 | to | 19.00 | 4 | | 30 | 4 |
| 19.00 | to | 20.00 | | 4 | 26 | 4 |
| 20.00 | to | 21.00 | | | 26 | 0 |
| 21.00 | to | 22.00 | | | 26 | 0 |
| 22.00 | to | 23.00 | | 12 | 14 | 12 |
| 23.00 | to | 24.00 | | | 14 | 0 |
| **Totals:** | | | **52** | **52** | | **104** |

**Table 1.03: Typical Weekday Shift Pattern**

1.14.6 By applying the national census car/van driver factor from **Table 1.01** (i.e. 0.7054) to the staff movements the daily traffic generation associated with staff movements is calculated as follows:

| Time Period | | | Staff Vehicles | | Staff Vehicle Accumulation | Staff Vehicle Movements |
|---|---|---|---|---|---|---|
| | | | Arrive | Depart | | |
| 24.00 | to | 01.00 | | 7 | 4 | 7 |
| 01.00 | to | 2.00 | | | 4 | 0 |
| 2.00 | to | 3.00 | | | 4 | 0 |
| 3.00 | to | 4.00 | | | 4 | 0 |
| 4.00 | to | 5.00 | | | 4 | 0 |
| 5.00 | to | 6.00 | 8 | | 12 | 8 |
| 6.00 | to | 7.00 | 3 | | 15 | 3 |
| 7.00 | to | 8.00 | 7 | 3 | 20 | 10 |
| 8.00 | to | 9.00 | | | 20 | 0 |
| 9.00 | to | 10.00 | | | 20 | 0 |
| 10.00 | to | 11.00 | | | 20 | 0 |
| 11.00 | to | 12.00 | | | 20 | 0 |
| 12.00 | to | 13.00 | | | 20 | 0 |
| 13.00 | to | 14.00 | 8 | | 28 | 8 |
| 14.00 | to | 15.00 | | 8 | 20 | 8 |
| 15.00 | to | 16.00 | 7 | | 27 | 7 |
| 16.00 | to | 17.00 | | 7 | 20 | 7 |
| 17.00 | to | 18.00 | | | 20 | 0 |
| 18.00 | to | 19.00 | 3 | | 22 | 3 |
| 19.00 | to | 20.00 | | 3 | 20 | 3 |
| 20.00 | to | 21.00 | | | 20 | 0 |
| 21.00 | to | 22.00 | | | 20 | 0 |
| 22.00 | to | 23.00 | | 8 | 11 | 8 |
| 23.00 | to | 24.00 | | | 11 | 0 |
| **Totals:** | | | **37** | **37** | | **74** |

**Table 1.04: Typical Weekday Staff Traffic Generation**

1.14.7 It can be seen that the staff associated with the proposed development would generate up to 10vph and 74vpd. There would be a car park accumulation of up to 28 vehicles which would occur between 13:00 and 14:00 hours at the change of shift.

**Servicing and Maintenance Trips**

1.14.8 We understand that the vast majority of servicing and maintenance of the AD plant would be carried out by the permanent members of staff. There would inevitably be occasional trips to the site by specialists associated with servicing and maintenance, but this element of site operation will not consistently generate a significant level of traffic.

**Input Material Trips**

1.14.9 The AD plant will consume approximately 80,000t of food waste feedstock per year. The food waste will be delivered with an amount of packaging, which is estimated to weigh an additional 3,000t per annum. The 83,000t of food waste with packaging will be delivered to the AD plant 365 days per year using HGVs carrying 28t loads from sources within a 50 mile radius of the site. The delivery of feedstock will therefore generate a 2-way HGV traffic flow of 16.2vpd ((83,000/28)/365)*2 throughout the year.

**Output Material Trips**

1.14.10 The AD plant produces gas which will be injected into the local National Grid gas network; this element of the process therefore generates no traffic.

1.14.11 The AD plant would produce around 11,300t per year of carbon dioxide which will be liquified and removed off-site using tankers carrying 20t loads. The removal of CO2 will therefore generate a 2-way HGV traffic flow of 3.1vpd ((11,300/20)/365)*2 throughout the year.

1.14.12 The AD plant will produce approximately 51,600t of liquid biofertiliser per year, which will be removed off-site using HGVs carrying 28t loads. The removal of liquid biofertiliser will therefore generate a 2-way HGV traffic flow of 10.1vpd ((51,600/28)/365)*2 throughout the year.

1.14.13 The AD plant will produce approximately 16,600t of solid biofertiliser per year, which will be removed off-site using HGVs carrying 28t loads. The removal of solid biofertiliser will therefore generate a 2-way HGV traffic flow of 3.2vpd ((16,600/28)/365)*2 throughout the year.

1.14.14 Finally, the 3,000t of packaging material which is delivered with the feedstock each year will be removed off-site using HGVs carrying 28t loads. The removal of packaging material will therefore generate a 2-way HGV traffic flow of 0.6vpd ((3,000/28)/365)*2 throughout the year.

1.14.15 It should be noted that there is the potential for backhauling some material, i.e. using the same HGV which delivers feedstock to the AD plant to subsequently remove biofertiliser off-site, however the practicality of this is currently unknown and therefore the traffic generation estimates presented above represent a 'worst case scenario'.

1.14.16 The proposed development traffic generation is summarised in the table below:

| **Activity** | **2-Way Traffic** | |
|---|---|---|
| | Car/van | HGV |
| Staff | 73 | 0 |
| Servicing and Maintenance | 0 | 0 |
| Feedstock and Packaging Delivery | 0 | 16.2 |
| Carbon Dioxide Removal | 0 | 3.1 |
| Liquid Biofertiliser Removal | 0 | 10.1 |
| Solid Biofertiliser Removal | 0 | 3.2 |
| Packaging Removal | 0 | 0.6 |
| **Totals** | **73** | **33.2** |

**Table 1.05: Daily Two-Way Vehicle Trips Associated with the Proposed Development**

1.14.17 It can be seen, therefore, that the proposed development would generate up to 73 car/van movements and 33 HGV movements per day. In the peak hour there would be around 10 car/van movements (from **Table 1.04**) and around 3 HGV movements (assuming a 12 hour working day).

## 1.15 Traffic Distribution and Assignment

1.15.1 All HGV movements associated with the site would be via Rangell Gate to/from the roundabout junction with Low Road/A16. It is likely that the majority of HGV movements would subsequently be via the A16. The developer would be willing to agree with the Local Highway Authority on the route used via a Delivery Management Plan, which could be Conditioned.

1.15.2 The majority of car/LGV movements associated with the site are also likely to be via Rangell Gate to/from the roundabout junction with Low Road/A16, though any staff who live locally would travel via Rangell Gate south of the site.

## 1.16 Car Parking

1.16.1 A total of 40 car parking spaces are proposed. Based on the traffic generation forecasts this will be sufficient to cater for the proposed demand by staff including over shift-change times, and to accommodate a number of visitors to the site.

## 1.17 Traffic Impact

1.17.1 It is generally accepted that an increase of over 30 vehicles per hour, i.e. one vehicle every two minutes, is a useful ‘rule of thumb’ for considering materiality and triggering a requirement for a formal assessment.

1.17.2 The proposed development would generate up to 10 car/van movements and 3 HGV movements per hour in the peak periods. Having regard to the suitable design of the site access junction, the low levels of traffic generation and the modest levels of traffic currently using Rangell Gate, there is no reason to consider that the site access arrangements will not operate safely or within capacity.

1.17.3 There is no reason to consider that such an increase in traffic would have any implications for highway capacity or road safety on the local highway network beyond the site access junction, even allowing for the traffic associated with committed development in the area.

## 1.18 National Planning Policy Framework

1.18.1 Paragraph 111 of the NPPF states:

*"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

1.18.2 The following comment is relevant in relation to the above:

- Impact of development – the analysis provided within this Transport Statement demonstrates that the traffic generated by the proposed development would not have a severe impact on the operation of the local highway network.

## 1.19 Overall Conclusion

1.19.1 Having regard to the above it is concluded that the proposed development is satisfactory from a transport policy, traffic and highways viewpoint.

# PLANS

Plan 01 - Site Location

Key:

Site Location -

**Northern Transport Planning Ltd**
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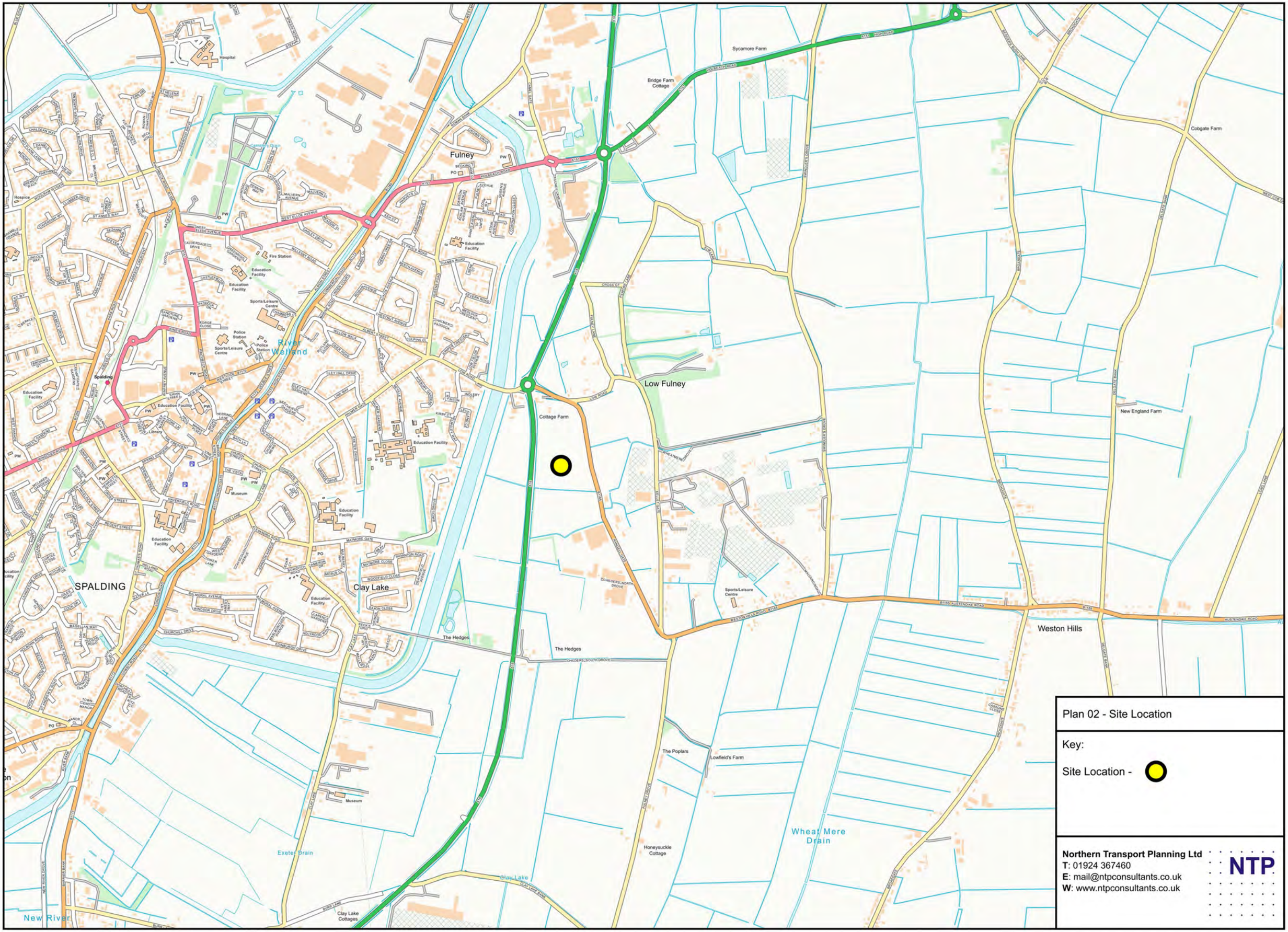
NTP

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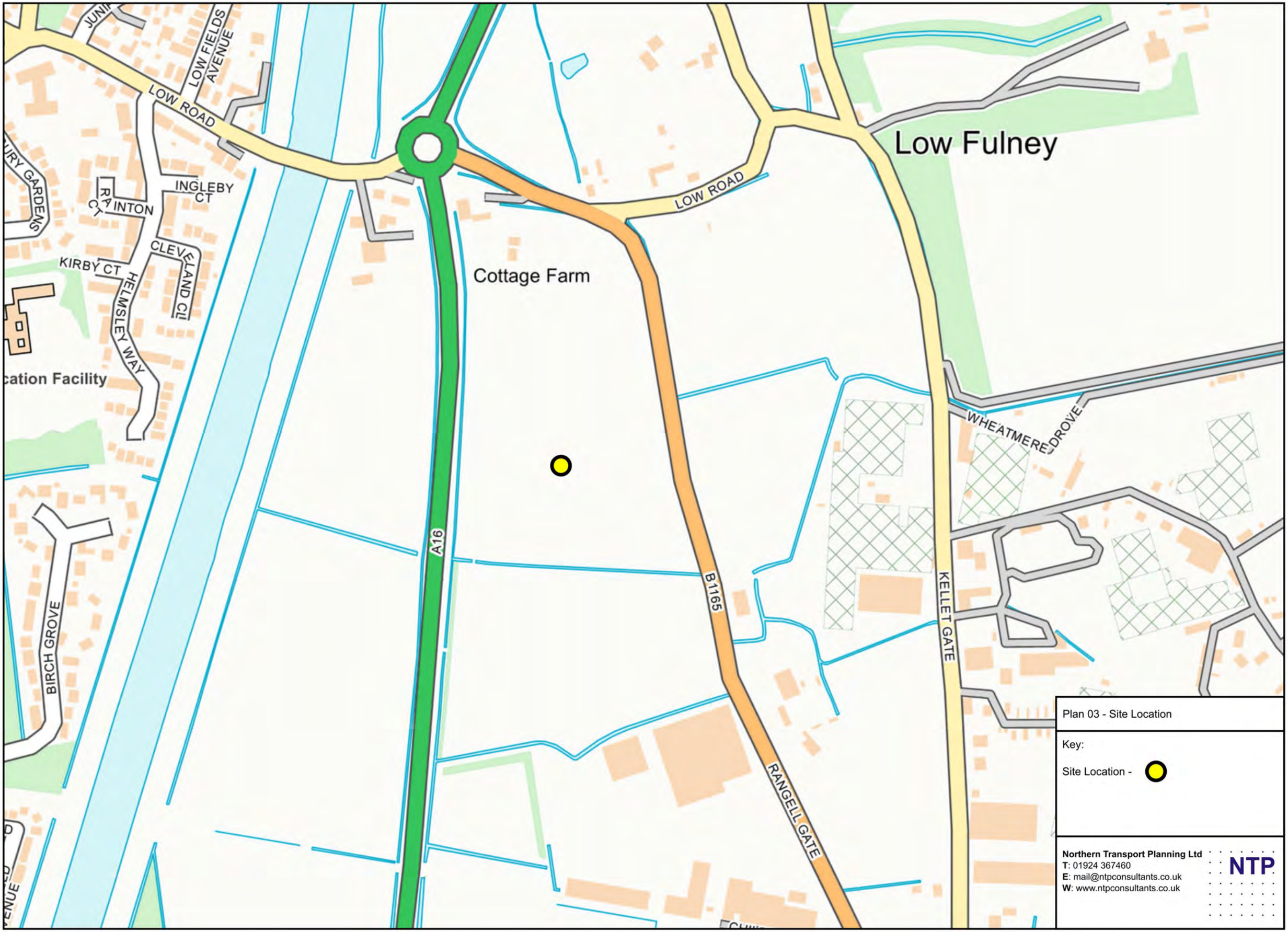
LOW ROAD
LOW FIELDS AVENUE
INGLEBY CT
RAVINTON CT
CLEVELAND CL
KIRBY CT
HELMSLEY WAY
cation Facility
Cottage Farm
LOW ROAD
Low Fulney
WHEATMERE DROVE
A16
B1165
RANGELL GATE
KELLET GATE
BIRCH GROVE
Plan 03 - Site Location
Key:
Site Location -
Northern Transport Planning Ltd
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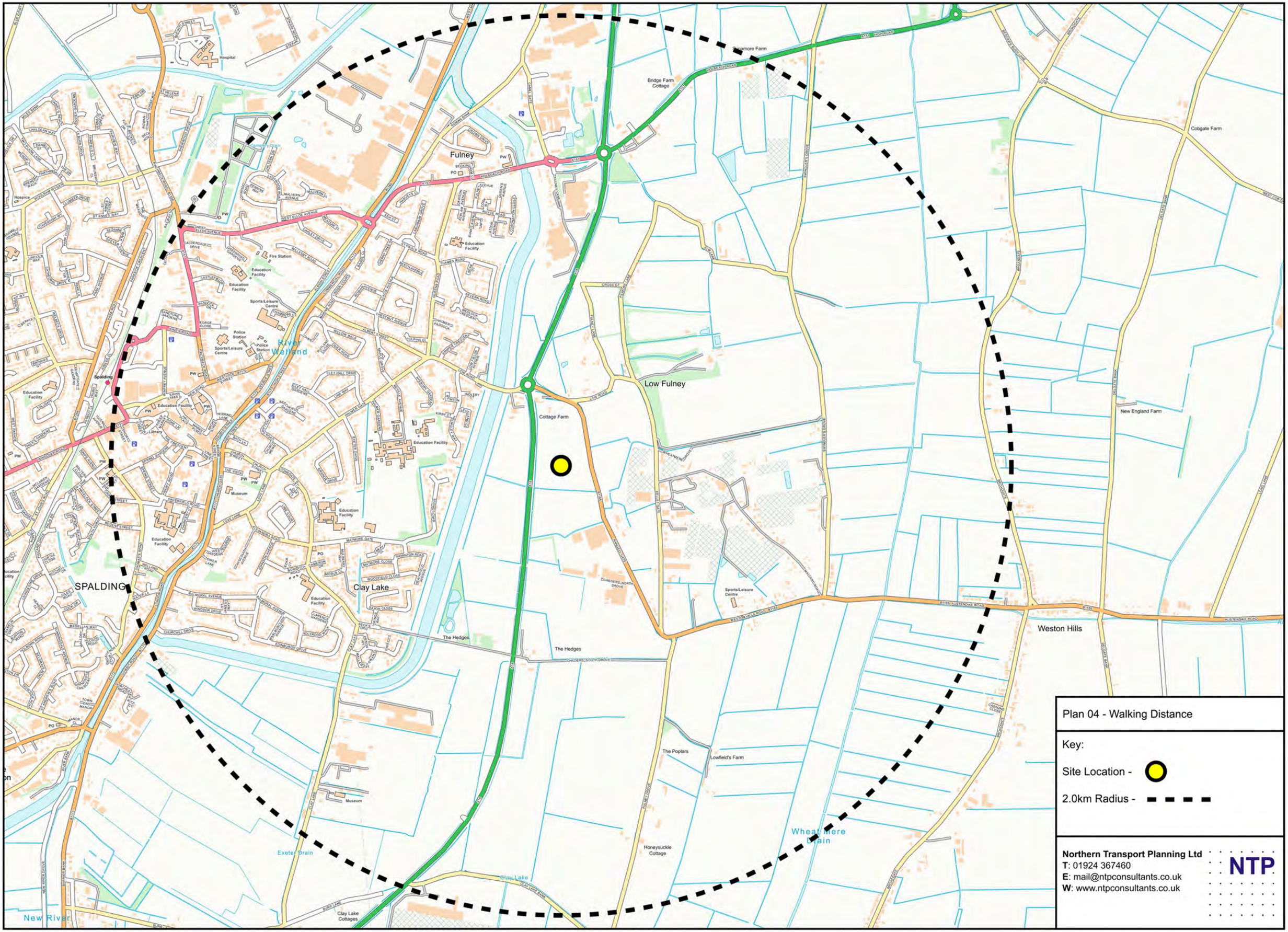
W: www.ntpconsultants.co.uk
NTP


Fulney
Low Fulney
Cottage Farm
Bridge Farm Cottage
Cobgate Farm
New England Farm
Weston Hills
SPALDING
Clay Lake
Spalding
Hospital
River Welland
Education Facility
Fire Station
Police Station
Sports/Leisure Centre
Library
Museum
The Hedges
The Poplars
Lowfield's Farm
Honeysuckle Cottage
Clay Lake Cottages
Exeter Drain
Wheat Mere Drain
New River
A151
A16
B1356 AUSTENDIKE ROAD
Plan 04 - Walking Distance
Key:
Site Location -
2.0km Radius -
Northern Transport Planning Ltd
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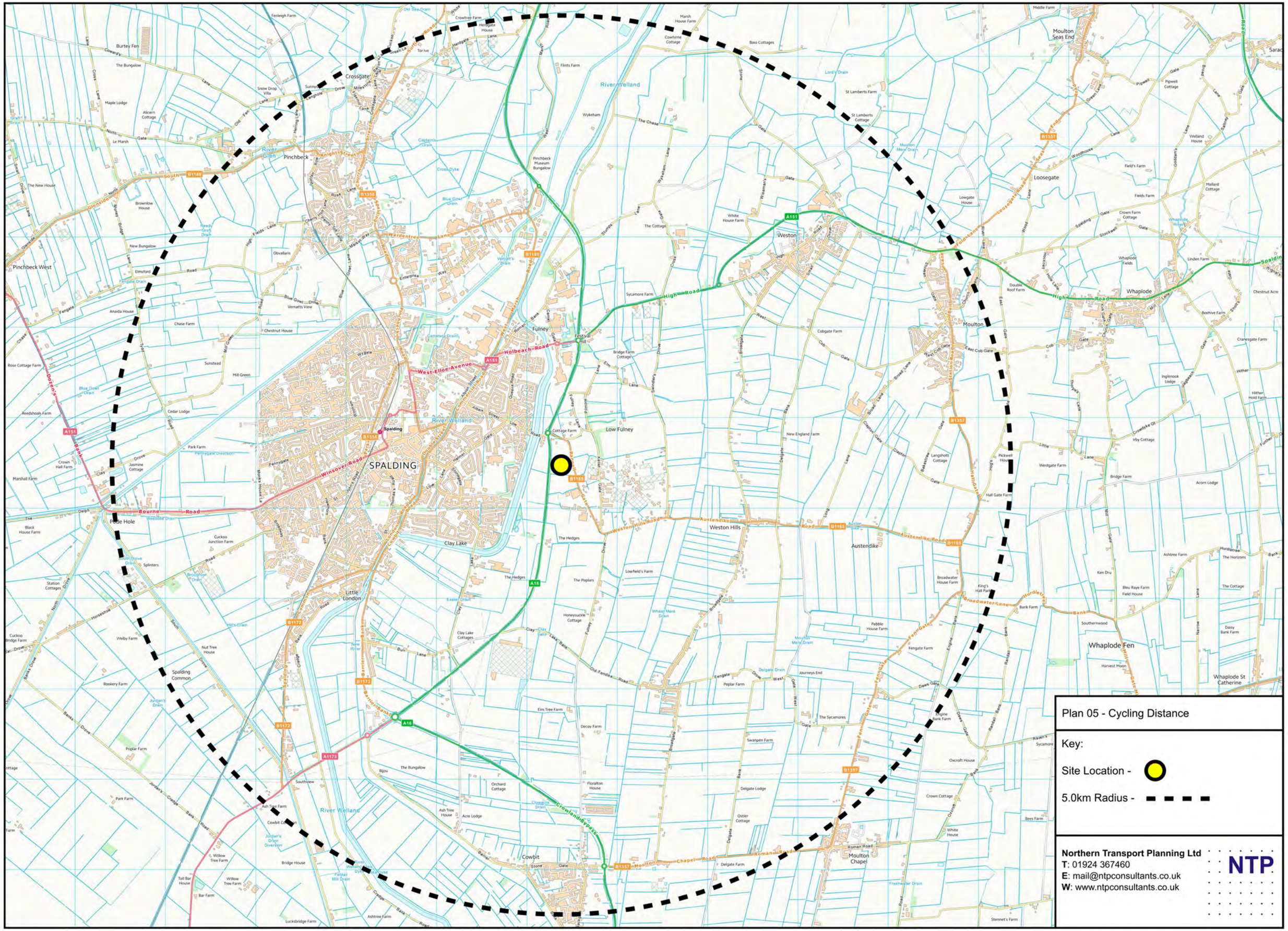
E: mail@ntpconsultants.co.uk
W: www.ntpconsultants.co.uk
NTP


Plan 05 - Cycling Distance
Key:
Site Location -
5.0km Radius -
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SPALDING
Pinchbeck
Crossgate
Pinchbeck West
Fulney
Low Fulney
Weston
Weston Hills
Moulton
Moulton Seas End
Whaplode
Whaplode Fen
Loosegate
Austendike
Moulton Chapel
Clay Lake
Spalding Common
Little London
Pode Hole
River Welland
River Glen
A151
A16
A1175
B1356
B1357
B1180
B1165
B1168
B1172
B1173
Holbeach Road
Winsover Road
Bourne Road
Weston Hills Road
Austendike Road
Broadwater Lane
Hurdletree Bank
Fen Gate
Roman Road
Chapel Road
Crowland Bypass
High Road
Doctors Bank
Barrier Bank
Knight Street
Church Street
Spalding Common
Old Fendyke Road
Whaplode Fen
Whaplode St Catherine

# APPENDIX A

NOTES

This drawing has been issued in support of a planning application and must NOT be used for construction purposes.



Red Line Boundary - 56,534sqm
Area inside Bund - 28,382sqm
Area including Bund - 36,274sqm

Coronation Channel
CR
ED 6dy
Drain
Riomar
Modena
Graewin
Cottage Farm
Tank
Tank
Reservoir
A 1 6
L O W R O A D
Four Winds
F U L N E Y R O A D S O U T H
The Lodge
Drain
Drain
Factory
Attenuation Pond
2.4M X 120M VISIBILITY SPLAY
Allotment Gardens
R A N G E L L G A T E
AD PLANT
ATTENUATION POND
2.4M X 120M VISIBILITY SPLAY
Drain
Drain
Drain
Tank
Tank

B 02/08/24 Red line ammended

A 25/07/24 Access widened in accordace with highways consultant comments

0 50 100
SCALE 1:1000

N

Project
**PROPOSED AD PLANT**

Address
NAYLOR FARMS
RANGELL GATE, SPALDING
LINCOLNSHIRE

Client
NAYLOR FARMS

Drawing
PROPOSED
SITE PLAN - VISIBILITY SPLAY

| Date | Scale | |
|---|---|---|
| FEB 2024 | 1:1000 @ A1 - 1:2000 @ A3 | |
| Project No. | Drawing No. | Revision |
| 3899B | P05 | B |

P&R ARCHITECTS
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# APPENDIX B

## WP703EW - Method of travel to work (2001 specification) (Workplace population)



| | |
|---|---|
| population | All usual residents aged 16 to 74 in employment in the area the week before the census |
| units | Persons |
| area type | 2011 super output areas - middle layer |
| area name | E02005471 : South Holland 007 |

| **Method of travel to work** | **2011** |
|---|---|
| All categories: Method of travel to work (2001 specification) | 4,328 |
| Work mainly at or from home | 362 |
| Underground, metro, light rail or tram | 2 |
| Train | 11 |
| Bus, minibus or coach | 79 |
| Taxi | 5 |
| Motorcycle, scooter or moped | 27 |
| Driving a car or van | 2,789 |
| Passenger in a car or van | 408 |
| Bicycle | 242 |
| On foot | 391 |
| Other method of travel to work | 12 |

| | | |
|---|---|---|
| Walking | 391 | 9.89% |
| Cycling | 242 | 6.12% |
| Public Transport and Taxi | 97 | 2.45% |
| PTW | 27 | 0.68% |
| Passenger in a Car or Van | 408 | 10.32% |
| Driving a Car or Van | 2,789 | 70.54% |
| | 3,954 | 100.00% |

# APPENDIX C

NOTES

This drawing has been issued in support of a planning application and must NOT be used for construction purposes.



Drain

A 1 6

R A N G E L L G A T E

6m High Bund With planting

Secure Gate

Car Park
40 Spaces

Gate control

Grid Entry Unit

Cycle stores

Weigh bridge

Digestate Processing
(80x62m)

Odour Control Systems

Waste Transfer
(60x40m)

Waste water treatment plant

Woodland and Meadows

Hard standing

Decanter

Bio Gas Upgrading

CO2 Liquefaction Unit

Access

Control Unit

Heating Unit

02 Generator

Natural Gas CHP

Cabin

Access

Storage Tank

Storage Tank

Storage Tank

Buffer Tanks

Prestorage Tank

Pasteurisation Tanks

Prestorage Tank

Primary Digester

Primary Digester

Prestorage Tank

Secondary Digester

Thin Fraction Storage

Flare

Attenuation pond

Woodland and Meadows

| | | |
|---|---|---|
| F<br>02/08/24 | Red line ammended | |
| E<br>25/07/24 | Access widened in accordace with highways consultant comments | |
| D<br>11/07/24 | 'visibility splay' ommited from drawing name | |
| C<br>11/06/24 | General arrangement changes | |
| B<br>15/05/24 | Decanter added | |
| A<br>07/03/24 | Tree and attentuation pond revised<br>Site entrance now on Rangell Gate | |

Red Line Boundary - 57,124sqm
Area inside Bund - 28,382sqm
Area including Bund - 36,274sqm

0 25 50

SCALE 1:500

N

Project
**PROPOSED AD PLANT**

Address
NAYLOR FARMS
RANGELL GATE, SPALDING
LINCOLNSHIRE

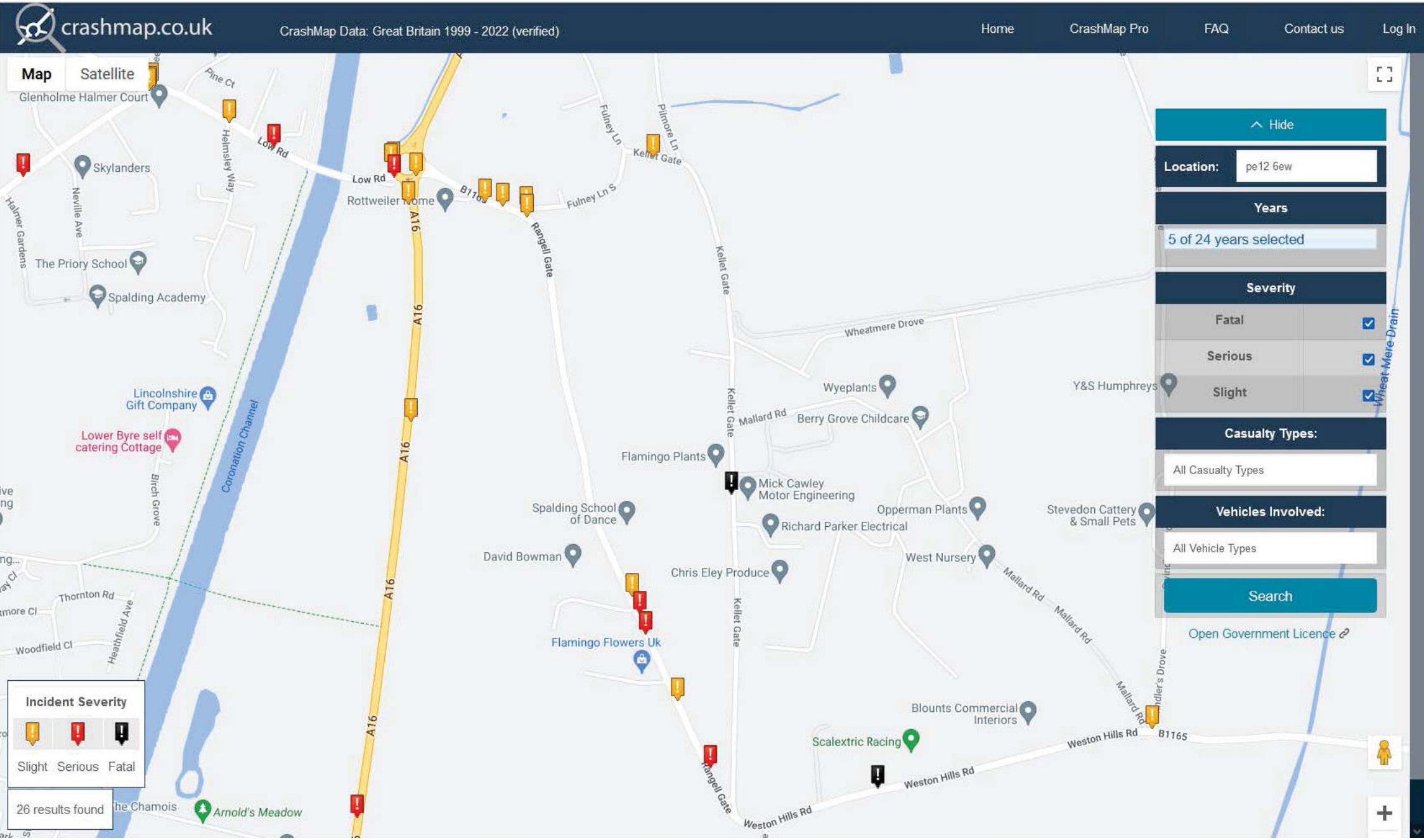
Client
NAYLOR FARMS

Drawing
PROPOSED
SITE PLAN

| Date | Scale | |
|---|---|---|
| FEB 2024 | 1:500 @ A1 - 1:1000 @ A3 | |
| Project No.<br>3899B | Drawing No.<br>P01 | Revision<br>F |

P&R ARCHITECTS
Portess and Richardson Limited
193 Lincoln Road, Peterborough PE1 2PL
T. 01733 568116. E. p-r@portessarchitect.com
www.portessarchitect.com

# APPENDIX D


crashmap.co.uk
CrashMap Data: Great Britain 1999 - 2022 (verified)
Home
CrashMap Pro
FAQ
Contact us
Log In
Map
Satellite
Hide
Location:
pe12 6ew
Years
5 of 24 years selected
Severity
Fatal
Serious
Slight
Casualty Types:
All Casualty Types
Vehicles Involved:
All Vehicle Types
Search
Open Government Licence
Incident Severity
Slight
Serious
Fatal
26 results found
Glenholme Halmer Court
Skylanders
Halmer Gardens
Neville Ave
Helmsley Way
Pine Ct
Low Rd
Rottweiler Home
B1165
Fulney Ln
Fulney Ln S
Pilmore Ln
Kellet Gate
Rangell Gate
A16
The Priory School
Spalding Academy
Lincolnshire Gift Company
Lower Byre self catering Cottage
Coronation Channel
Birch Grove
Wheatmere Drove
Wyeplants
Y&S Humphreys
Mallard Rd
Berry Grove Childcare
Flamingo Plants
Mick Cawley Motor Engineering
Spalding School of Dance
Richard Parker Electrical
Opperman Plants
Stevedon Cattery & Small Pets
David Bowman
Chris Eley Produce
West Nursery
Thornton Rd
Heathfield Ave
Woodfield Cl
Flamingo Flowers Uk
Blounts Commercial Interiors
Scalextric Racing
Weston Hills Rd
Chandler's Drove
Wheat Mere Drain
The Chamois
Arnold's Meadow

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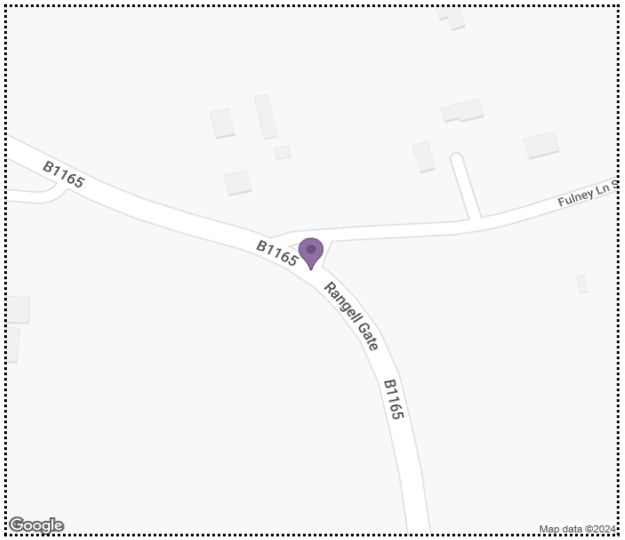
**Validated Data**

| | | | | | |
|---|---|---|---|---|---|
| **Highest Injury Severity:** | Slight | **Road Number:** | B1165 | **Casualties:** | 1 |
| **Highway Authority:** | Lincolnshire | | | **Vehicles:** | 2 |
| **Local Authority:** | South Holland | | | **OS Grid Reference:** | 526441 322746 |
| **Weather Description:** | Fine without high winds | | | | |
| **Road Surface Description:** | Dry | | | | |
| **Speed Limit:** | 40 | | | | |
| **Light Conditions:** | Daylight: regardless of presence of streetlights | | | | |
| **Carriageway Hazards:** | None | | | | |
| **Junction Detail:** | T or staggered junction | | | | |
| **Junction Pedestrian Crossing:** | No physical crossing facility within 50 metres | | | | |
| **Road Type:** | Single carriageway | | | | |
| **Junction Control:** | Give way or uncontrolled | | | | |




For more information about the data please visit: www.crashmap.co.uk/home/faq

To subscribe to unlimited reports using CrashMap Pro visit: www.crashmap.co.uk/home/premium_services

## Vehicles Involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Car (excluding private hire) | 15 | Male | 56 - 65 | Vehicle is in the act of turning right | Front | Unknown | None | None |
| 2 | Car (excluding private hire) | 6 | Female | 46 - 55 | Vehicle proceeding normally along the carriageway, not on a bend | Offside | Unknown | None | None |

## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
|---|---|---|---|---|---|---|---|
| 2 | 1 | Slight | Driver or rider | Female | 46 - 55 | Unknown or other | Unknown or other |

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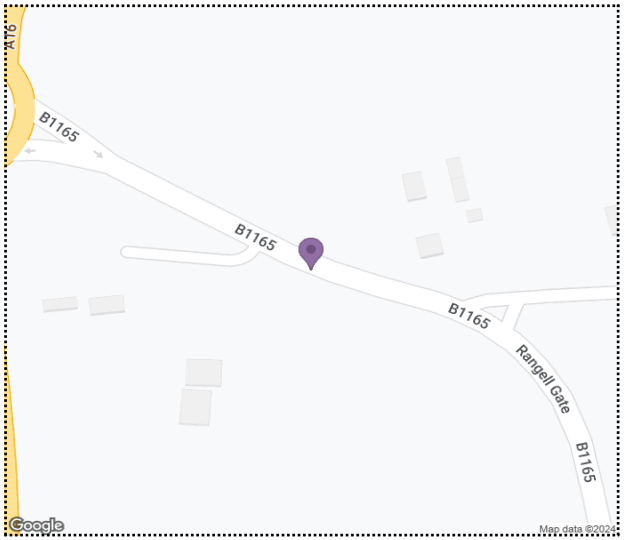
**Validated Data**

| | | | | | |
|---|---|---|---|---|---|
| **Crash Date:** | Monday, January 14, 2019 | **Time of Crash:** | 06:10:00 | **Crash Reference:** | 2019320020722 |
| **Highest Injury Severity:** | Slight | **Road Number:** | B1165 | **Casualties:** | 1 |
| **Highway Authority:** | Lincolnshire | | | **Vehicles:** | 2 |
| **Local Authority:** | South Holland | | | **OS Grid Reference:** | 526368 322770 |
| **Weather Description:** | Fine without high winds | | | | |
| **Road Surface Description:** | Dry | | | | |
| **Speed Limit:** | 40 | | | | |
| **Light Conditions:** | Darkness: no street lighting | | | | |
| **Carriageway Hazards:** | None | | | | |
| **Junction Detail:** | Not at or within 20 metres of junction | | | | |
| **Junction Pedestrian Crossing:** | No physical crossing facility within 50 metres | | | | |
| **Road Type:** | Single carriageway | | | | |
| **Junction Control:** | Not Applicable | | | | |




For more information about the data please visit: www.crashmap.co.uk/home/faq

To subscribe to unlimited reports using CrashMap Pro visit: www.crashmap.co.uk/home/premium_services

**Crash Date:** Monday, January 14, 2019 **Time of Crash:** 06:10:00 **Crash Reference:** 2019320020722

## Vehicles Involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Car (excluding private hire) | 16 | Male | 56 - 65 | Vehicle proceeding normally along the carriageway, on a left hand bend | Front | Unknown | None | None |
| 2 | Pedal cycle | -1 | Male | 16 - 20 | Vehicle proceeding normally along the carriageway, not on a bend | Back | Journey as part of work | None | Entered ditch |

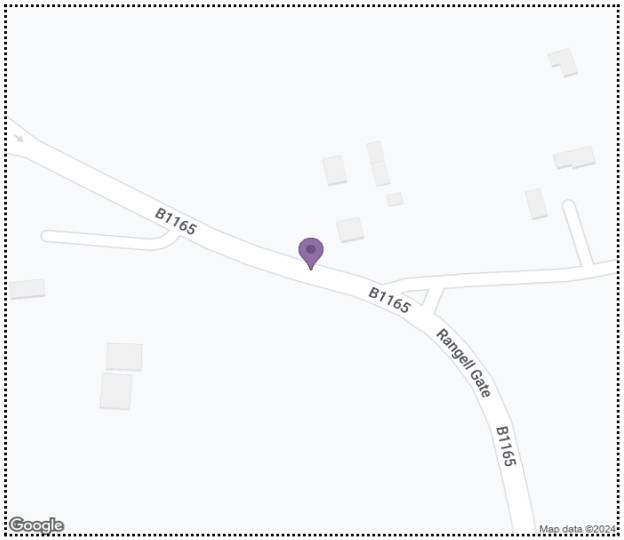
## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
|---|---|---|---|---|---|---|---|
| 2 | 1 | Slight | Driver or rider | Male | 16 - 20 | Unknown or other | Unknown or other |

crashmap.co.uk

**Validated Data**

| | | | | | |
|---|---|---|---|---|---|
| **Highest Injury Severity:** | Slight | **Road Number:** | B1165 | **Casualties:** | 1 |
| **Highway Authority:** | Lincolnshire | | | **Vehicles:** | 2 |
| **Local Authority:** | South Holland | | | **OS Grid Reference:** | 526398 322764 |
| **Weather Description:** | Raining without high winds | | | | |
| **Road Surface Description:** | Wet or Damp | | | | |
| **Speed Limit:** | 30 | | | | |
| **Light Conditions:** | Daylight: regardless of presence of streetlights | | | | |
| **Carriageway Hazards:** | None | | | | |
| **Junction Detail:** | Not at or within 20 metres of junction | | | | |
| **Junction Pedestrian Crossing:** | No physical crossing facility within 50 metres | | | | |
| **Road Type:** | Single carriageway | | | | |
| **Junction Control:** | Not Applicable | | | | |




For more information about the data please visit: www.crashmap.co.uk/home/faq

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## Vehicles Involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Goods vehicle 7.5 tonnes mgw and over | 1 | Male | 46 - 55 | Vehicle proceeding normally along the carriageway, not on a bend | Front | Journey as part of work | None | None |
| 2 | Goods vehicle over 3.5 tonnes and under 7.5 tonnes mgw | -1 | Male | 36 - 45 | Vehicle proceeding normally along the carriageway, not on a bend | Back | Journey as part of work | None | None |

## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
|---|---|---|---|---|---|---|---|
| 2 | 1 | Slight | Driver or rider | Male | 36 - 45 | Unknown or other | Unknown or other |

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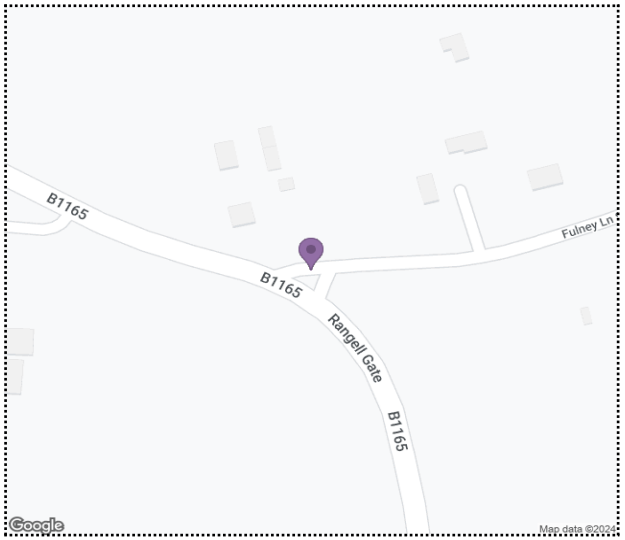
**Validated Data**

| | | | | | |
|---|---|---|---|---|---|
| **Highest Injury Severity:** | Slight | **Road Number:** | U0 | **Casualties:** | 1 |
| **Highway Authority:** | Lincolnshire | | | **Vehicles:** | 1 |
| **Local Authority:** | South Holland | | | **OS Grid Reference:** | 526439 322759 |
| **Weather Description:** | Snowing without high winds | | | | |
| **Road Surface Description:** | Snow | | | | |
| **Speed Limit:** | 40 | | | | |
| **Light Conditions:** | Daylight: regardless of presence of streetlights | | | | |
| **Carriageway Hazards:** | None | | | | |
| **Junction Detail:** | T or staggered junction | | | | |
| **Junction Pedestrian Crossing:** | No physical crossing facility within 50 metres | | | | |
| **Road Type:** | Single carriageway | | | | |
| **Junction Control:** | Give way or uncontrolled | | | | |




For more information about the data please visit: www.crashmap.co.uk/home/faq

To subscribe to unlimited reports using CrashMap Pro visit: www.crashmap.co.uk/home/premium_services

## Vehicles Involved

| Vehicle Ref | Vehicle Type | Vehicle Age | Driver Gender | Driver Age Band | Vehicle Maneouvre | First Point of Impact | Journey Purpose | Hit Object - On Carriageway | Hit Object - Off Carriageway |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Car (excluding private hire) | 8 | Male | 26 - 35 | Vehicle proceeding normally along the carriageway, not on a bend | Front | Journey as part of work | None | Tree |

## Casualties

| Vehicle Ref | Casualty Ref | Injury Severity | Casualty Class | Gender | Age Band | Pedestrian Location | Pedestrian Movement |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Slight | Driver or rider | Male | 26 - 35 | Unknown or other | Unknown or other |

# APPENDIX E

Traffic survey at Fulney Lane South jw Rangell Gate

Rangell Gate S/B Straight Ahead to Rangell Gate

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 67 | 3 | 0 | 1 | 0 | 71 | 4.2% | 73 |
| 07:30 | 70 | 0 | 0 | 0 | 0 | 70 | 0.0% | 70 |
| 07:45 | 77 | 1 | 0 | 0 | 0 | 78 | 1.3% | 79 |
| 08:00 | 67 | 2 | 0 | 0 | 0 | 69 | 2.9% | 71 |
| 08:15 | 57 | 0 | 0 | 0 | 0 | 57 | 0.0% | 57 |
| 08:30 | 71 | 1 | 0 | 0 | 1 | 73 | 1.4% | 73 |
| 08:45 | 60 | 1 | 1 | 0 | 0 | 62 | 3.2% | 64 |
| 09:00 | 61 | 0 | 0 | 0 | 0 | 61 | 0.0% | 61 |
| **07:00-09:00** | **530** | **8** | **1** | **1** | **1** | **541** | **1.7%** | **549** |
| **07:30-08:30** | **272** | **4** | **0** | **0** | **1** | **277** | **1.4%** | **280** |

Traffic survey at Fulney Lane South jw Rangell Gate

Rangell Gate S/B Left to Fulney Lane South

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 28 | 0 | 0 | 0 | 1 | 29 | 0.0% | 28 |
| 07:30 | 17 | 2 | 0 | 0 | 3 | 22 | 9.1% | 22 |
| 07:45 | 26 | 2 | 0 | 0 | 5 | 33 | 6.1% | 31 |
| 08:00 | 20 | 2 | 0 | 0 | 1 | 23 | 8.7% | 24 |
| 08:15 | 12 | 5 | 0 | 0 | 2 | 19 | 26.3% | 22 |
| 08:30 | 9 | 3 | 0 | 0 | 0 | 12 | 25.0% | 15 |
| 08:45 | 10 | 1 | 0 | 0 | 0 | 11 | 9.1% | 12 |
| 09:00 | 12 | 3 | 0 | 0 | 1 | 16 | 18.8% | 18 |
| **07:00-09:00** | **134** | **18** | **0** | **0** | **13** | **165** | **10.9%** | **173** |
| **07:30-08:30** | **67** | **12** | **0** | **0** | **8** | **87** | **13.8%** | **93** |

Traffic survey at Fulney Lane South jw Rangell Gate

Fulney Lane South Right to Rangell Gate

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 1 | 2 | 0 | 0 | 0 | 3 | 66.7% | 5 |
| 07:30 | 9 | 3 | 0 | 0 | 0 | 12 | 25.0% | 15 |
| 07:45 | 8 | 1 | 0 | 0 | 0 | 9 | 11.1% | 10 |
| 08:00 | 8 | 2 | 0 | 0 | 0 | 10 | 20.0% | 12 |
| 08:15 | 1 | 1 | 0 | 0 | 0 | 2 | 50.0% | 3 |
| 08:30 | 5 | 3 | 0 | 0 | 0 | 8 | 37.5% | 11 |
| 08:45 | 9 | 2 | 0 | 0 | 0 | 11 | 18.2% | 13 |
| 09:00 | 10 | 3 | 0 | 0 | 0 | 13 | 23.1% | 16 |
| **07:00-09:00** | **51** | **17** | **0** | **0** | **0** | **68** | **25.0%** | **85** |
| **07:30-08:30** | **22** | **7** | **0** | **0** | **0** | **29** | **24.1%** | **36** |

Traffic survey at Fulney Lane South jw Rangell Gate

Fulney Lane South Left to Rangell Gate

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 07:30 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 07:45 | 1 | 0 | 0 | 0 | 0 | 1 | 0.0% | 1 |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 08:15 | 1 | 0 | 0 | 0 | 0 | 1 | 0.0% | 1 |
| 08:30 | 1 | 0 | 0 | 0 | 0 | 1 | 0.0% | 1 |
| 08:45 | 1 | 1 | 0 | 0 | 0 | 2 | 50.0% | 3 |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| **07:00-09:00** | **4** | **1** | **0** | **0** | **0** | **5** | **20.0%** | **6** |
| **07:30-08:30** | **3** | **0** | **0** | **0** | **0** | **3** | **0.0%** | **3** |

Traffic survey at Fulney Lane South jw Rangell Gate

Rangell Gate N/B Right to Fulney Lane South

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 07:30 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 07:45 | 1 | 0 | 0 | 0 | 0 | 1 | 0.0% | 1 |
| 08:00 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 08:15 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 08:30 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 08:45 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| 09:00 | 0 | 0 | 0 | 0 | 0 | 0 | #DIV/0! | 0 |
| **07:00-09:00** | **1** | **0** | **0** | **0** | **0** | **1** | **0.0%** | **1** |
| **07:30-08:30** | **1** | **0** | **0** | **0** | **0** | **1** | **0.0%** | **1** |

Traffic survey at Fulney Lane South jw Rangell Gate

Rangell Gate N/B Straight Ahead to Rangell Gate

| 15 mins ending | Car/ LGV | HGV | Bus/ Coach | M/C | P/C | Total | %HGV | PCU |
|---|---|---|---|---|---|---|---|---|
| Tuesday 02/07/24 | | | | | | | | |
| 07:15 | 59 | 0 | 0 | 0 | 0 | 59 | 0.0% | 59 |
| 07:30 | 57 | 3 | 0 | 0 | 0 | 60 | 5.0% | 63 |
| 07:45 | 76 | 4 | 0 | 0 | 0 | 80 | 5.0% | 84 |
| 08:00 | 92 | 1 | 0 | 0 | 0 | 93 | 1.1% | 94 |
| 08:15 | 87 | 0 | 0 | 0 | 0 | 87 | 0.0% | 87 |
| 08:30 | 78 | 2 | 3 | 0 | 0 | 83 | 6.0% | 88 |
| 08:45 | 81 | 5 | 1 | 1 | 0 | 88 | 6.8% | 93 |
| 09:00 | 70 | 4 | 0 | 0 | 0 | 74 | 5.4% | 78 |
| **07:00-09:00** | **600** | **19** | **4** | **1** | **0** | **624** | **3.7%** | **646** |
| **07:30-08:30** | **333** | **7** | **3** | **0** | **0** | **343** | **2.9%** | **353** |