

# Norfolk Boreas Offshore Wind Farm Orsted Hornsea Project Three Cawston Highway Intervention Scheme

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*Photo: Ormonde Offshore Wind Farm*

Hornsea Project Three  
Offshore Wind Farm



## Hornsea Project Three Offshore Wind Farm

High Street, Cawston – Highway Intervention Scheme

Date: 29<sup>th</sup> March 2019

  
**Hornsea 3**  
Offshore Wind Farm



## High Street, Cawston – Highway Intervention Measures

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Ørsted

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Front cover picture: Kite surfer near a UK offshore wind farm © Orsted Hornsea Project Three (UK) Ltd., 2018.

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Appendix A – Highway Intervention Scheme Plan (pre safety audit)

Appendix B – Stage One Road Safety Audit

Appendix C - Final Highway Intervention Scheme Plan

## Revision History

Version	Date	Author	Context
Rev A	29 <sup>th</sup> March 2019	EC / PZ	Update to reflect NCC safety audit comments

## Abbreviation

Abbreviation	Definition
HOW3	Hornsea Project Three
HE	Highways England
NCC	Norfolk County council
PEIR	Preliminary Environmental Information Report
DCO	Development Consent Order
CTMP	Construction Traffic Management Plan
ATC	Automatic Traffic Count
HGVs	Heavy Goods Vehicles
PIA	Personal Injury Accident

## 1. Introduction

- 1.1 This document with accompanying appendices and plans comprises the intervention measures for the Village of Cawston that are to be undertaken as part of the Hornsea Project Three offshore wind farm (hereafter referred to as Hornsea Three) in response to the concerns raised by the acting Highway Authority Norfolk County Council (NCC) and Cawston Parish Council.
- 1.2 A series of meetings and scheme plans have been discussed with NCC which are summarised in Appendix 27 to Deadline 7 submission - Development of the Cawston Traffic Intervention Scheme and not repeated here.
- 1.3 This Report looks to present the final Cawston Intervention Scheme and supply information on the following;
- Baseline Conditions
  - Cable Corridor Sections 9 / 10 and Hornsea Three Construction Traffic
  - Hornsea Three / Norfolk Vanguard Cumulative Effect
  - Proposed Highway Intervention Scheme
  - Stage One Safety Audit and Designers Response
  - Summary and Conclusions

## 2. Existing Conditions

- 2.1 Cawston is a Village and civil parish in the Broadland District of Norfolk. The Village lies approximately 11 miles (18km) north of Norwich on the B1145. The B1145 is subject to a 30mph speed limit through the Cawston Village centre. There is intermittent footway provision of variable width alternating between the north and south side of the carriageway through the Village.
- 2.2 Through the Village centre there is predominantly private residential dwellings fronting onto the B1145 as well as The Bell public house and All Things Nice café with a One Stop Convenience Store on the eastern side of the Village and the Town Hall on the western side.
- 2.3 There is currently no parking restrictions along the B1145 through the Village centre allowing residents to park outside their properties and customers parking outside the café. The Bell public house does offer an off road car park accessed via the B1145 with space for approximately 19 cars.
- 2.4 A triangular shaped area is also allocated for parking at the junction between the B1145 and Chapel Street which can accommodate in the order of 6 passenger cars.
- 2.5 The Village Hall is located on the Western edge of the High Street and offers parking for a further 15 - 20 vehicles.

### Existing Highways Constraints

- 2.6 There are two bridges on the B1145 on the western side of Cawston which along with bends in the road alignment result in pinch points where it is difficult for two opposing HGVs to pass.
- 2.7 The first is **the bridge where the B1145 crosses over the Marriott's Way public footpath** located approximately 120m north west of the Village Hall. Over the bridge the B1145 carriageway narrows to approximately 4.8m. There is also a sharp western turn in the road alignment on the northern side of the bridge which makes the environment constrained for larger vehicles.
- 2.8 The Bridge wall and fence line on the north western side show signs of recent repair. However, no recent accidents have been recorded at this location.
- 2.9 The Second Bridge is located approximately 600m west of the first bridge and has a wider carriageway width at approximately 5.5m. This bridge is located at a sharp bend on a winding section of the B1145.
- 2.10 As well as the pinch points at the two bridge locations there is potential for pinch points restricting the two-way movement of HGVs throughout Cawston Village centre due to the presence of ad hoc on street parking.
- 2.11 There is also a section of the B1145 on the eastern side of the Village between Chapel Street and New Street which without any on street parking narrows to the point where opposing HGVs struggle to pass simultaneously, partly due to the lack of maintenance of the vegetation and hedgerow on the southern side of the B1145 which forces vehicles to drive further towards the carriageway centre line. In places along this section of the B1145 it is also a perceived lack of carriageway width due to there being no footways and buildings very near to the carriageway edge on both sides.



- 2.12 There is one Primary School in Cawston located on the eastern side of the Village on the southern side of the B1145. This has a vehicular access from the B1145 used mostly by staff and delivery vehicles. Pedestrians can access the school via Norwich Road to the south and a pedestrian cut **through from Howard's Way on the west.**
- 2.13 A site visit carried out by Create Consulting Engineers Ltd on the 7<sup>th</sup> March 2019 to observe the morning drop off of students to the Cawston Church of England Primary School and the impact it had on the local section of the B1145.
- 2.14 During this site visit it was noted that the majority of the children accompanied by parents/guardians walked their children along either the southern footway on the B1145 and then down Howards Way and into the school. Or they walked along the Alysham Road footway setback from the northern side of the B1145 until the point where this footway meets the B1145. At this point the students are assisted by a school crossing person to safely cross the B1145 where they then continue along the Howards Way footway and into the school site.
- 2.15 During the site visit the parents who drove all parked their vehicles off the B1145 and mostly along Alysham Road set off the B1145, where they walked with their children the rest of the way.
- 2.16 The nearest secondary school to Cawston is Reepham High School located approximately 3.3miles (5.3km) to the south west. There is a bus service which picks students up from two locations along the B1145 in Cawston. The first bus pick up is located adjacent to Cawston Cemetery. During the site visit on the 7<sup>th</sup> March 2019 approximately 15 students waited on the pavement outside the cemetery gated access for the bus and did not cause any disruption to the flow of traffic on the B1145.
- 2.17 The second pick up point is located more centrally within Cawston Village near the café All Things Nice. Here the students also wait out of the carriageway, on the footway provided or in the alleyway leading to the back of the café before safely boarding the bus without disruption to the B1145.

#### Existing Traffic Along B1145 Through Cawston

- 2.18 As part of Deadline 5, the Applicant submitted Appendix 6: Transport Assessment Annex 1 [REP5 - 009], which included additional baseline traffic data for 15 highways links, which were previously identified as links of low or negligible sensitivity. Appendix 6 to DL5 assesses the impacts of construction traffic on those highways links.
- 2.19 As part of this exercise, and to determine baseline traffic flows along the B1145 through Cawston, a traffic survey was undertaken by way of an Automatic Traffic Counter (ATC) at two locations within the Village.
- 2.20 The first location (Site 1) is located on the B1145 adjacent to the Village Hall on the western side of the Village and the second (Site 2) at a point on the eastern side of the Village on the B1145 between Chapel Street and Norwich Road. The ATC surveys recorded traffic data over a consecutive 7-day (one-week) period from Monday 11 February 2019 to Sunday 17 February 2019 inclusive.



2.21 A summary of the traffic survey data for the AM peak, PM peak and average 12h and 24h daily traffic of the one-week survey period is set out in Table 2.1.

Table 2.1: Summary of Traffic Flows along B1145 Through Cawston.

	Site 1 Two-way		Site 2 Two-way		Average Two-way		
	Total	HGV	Total	HGV	Total	HGV	% HGVs
AM Peak (0800-0900)	168	16	216	22	192	19	9.9%
PM Peak (1700-1800)	124	8	162	9	143	9	6.3%
12-Hour Daily (07:00-19:00)	2108	189	2674	225	2391	207	8.6%
24-Hour Daily	2455	224	3175	262	2815	243	8.6%

2.22 It is known that agricultural vehicles also travel along Taverham Road, and these are identified within the traffic surveys as Heavy Goods Vehicles (HGVs) (i.e. vehicles with a maximum permissible gross laden weight in excess of 7.5 Tonnes).

2.23 The surveys show that there are typically 207 HGV movements over a 12 hour period of 07:00 to 19:00 (8.6% of all traffic) along the B1145 through Cawston and typically 243 HGV movements over a 24 hour period (8.6% of all traffic) along this road.

2.24 Table 2.1 shows a higher number of HGV movements on the B1145 recorded at Site 2 than Site 1. This is to be expected given the HGV route for the Broadland Wineries Direct operation located on Chapel Street routes HGVs from the east into Cawston along the B1145, which then turn right up Chapel Street to the Winery. From the Winery the HGVs are routed north along Chapel Street and back onto the wider road network via the B1149. Therefore these movements will trigger ATC Site 2 without being recorded at the Site 1 survey location.

2.25 In order to inform the intervention scheme actual traffic speeds along the local section of B1145 through Cawston needed to be determined. To appropriately assess existing traffic speeds on the local section of White House Lane, the Design Manual for Roads & Bridges requires a sample size **of at least 200 vehicles in each direction to comply with TA22/81 “Vehicle Speed Measurement on All Purpose Roads”**.

2.26 The (ATC) surveys undertaken from the 11 - 17 February 2019 during a neutral period outside of school holidays, at two locations within Cawston Village Centre by On Point Surveys Ltd in order to provide an independent indication of vehicle speeds.

2.27 During the 7 days of ATC data the average number of daily two-way vehicles was 2815. Therefore the 7 days of data supplied a more than sufficient sample size in both directions in order to comply **with TA22/81 “Vehicle Speed Measurement on All Purpose Roads”**. Table 2,2 highlights the means and 85th percentile vehicles through Cawston.

Table 2.2: Summary of Traffic Speeds along B1145 Through Cawston.

	Site 1		Site 2		Average Speeds	
	Mean	85 <sup>th</sup> Percentile	Mean	85 <sup>th</sup> Percentile	Mean	85 <sup>th</sup> Percentile
Eastbound (mph)	25.4	29	23.4	28.4	24.4	28.7
Westbound (mph)	27.3	30.8	23	27.7	25.1	29.2

2.28 DfT Circular 01/2013 “Setting Local Speed Limits” States:

*“Mean speed and 85<sup>th</sup>ile speed (the speed at or below which 85% of vehicles are travelling) are the most commonly used measures of actual traffic speed. Traffic authorities should continue to routinely collect and assess both, but, mean speeds should be used as the basis for determining local speed limits.”*

2.29 In summary, the mean speeds and 85th percentile speeds recorded are in line with a 30mph speed limit and show little evidence of being exceeded.

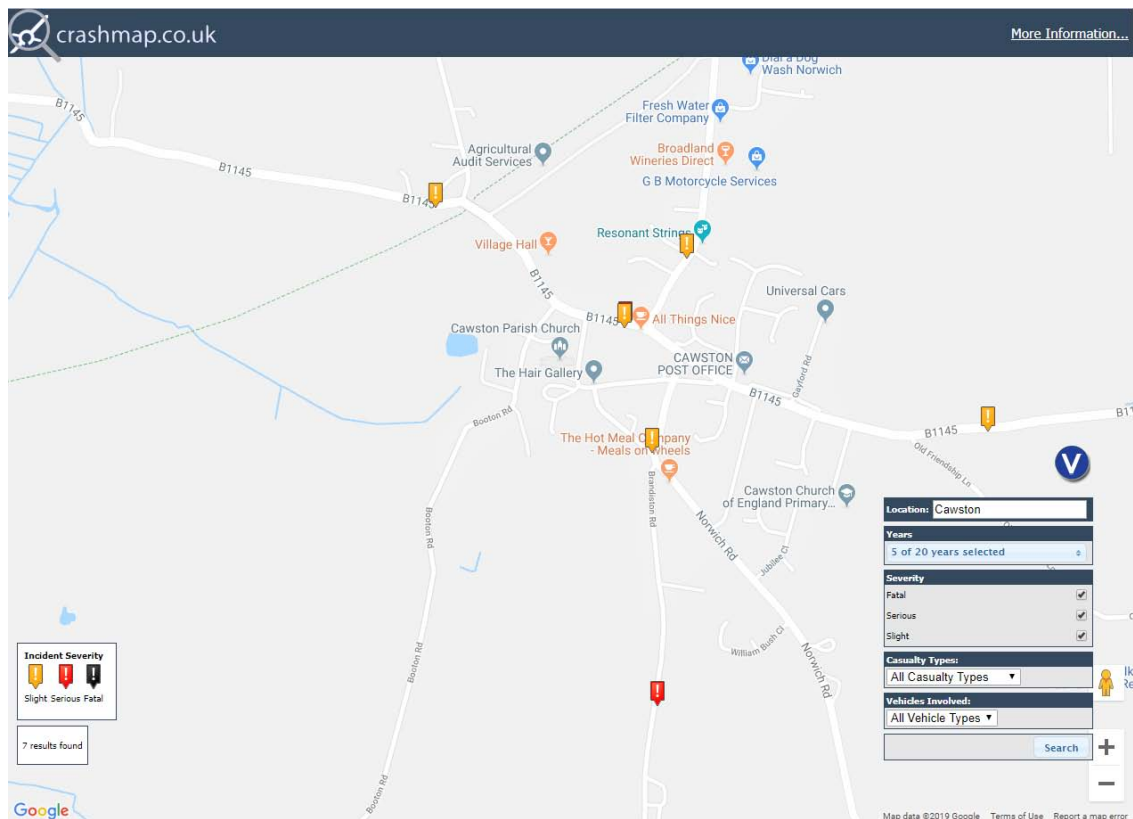
Personal Injury Accident Data

2.30 A review of local highway safety has been undertaken utilising personal injury accident data obtained using the “Crash Map” database.

2.31 The Crash Map database includes information collected by the police relating to road traffic incidents where there has been a “Personal Injury Accident”. This data is approved by the National Statistics Authority and reported on by the Department for Transport.

2.32 The current Crash Map database includes incidents from 1999 up to 2018 and data outputs extracted from Crash Map for the most recent five year period to date are presented on the schematic diagram below:

Figure 2.1 Accident Records (source: Crashmap.co.uk)



- 2.33 The data presented in Figure 2.1 identifies that a total of four recorded personal injury highway incidents have occurred along the relevant section of the B1145 within the five year period from 2014-2018 (and one more occurring during the same period of time along Chapel Street).
- 2.34 Three of these accidents were considered “Slight” with one recorded as “Serious” in severity. The first of which occurred on the 24 October 2014, approximately 130m east of the junction with Old Friendship Lane, involving 2 vehicles and 2 casualties. The second incident was recorded on 16 July 2015, approximately 50m west of the bridge over The Marriott’s Way, involving 3 vehicles resulting in 2 casualties. The third accident was recorded approximately 30m west of All Things Nice on the 12 July 2016 involving 2 vehicles and led to 1 casualty.
- 2.35 The fourth accident which was recorded as ‘Serious’ in severity also occurred approximately 30m west of All Things Nice on the 12 of November 2017 involving 2 vehicles and resulted in two casualties.
- 2.36 It should also be noted that none of the above recorded accidents involved pedestrians or cyclists.
- 2.37 No other incidents have been recorded along the B1145 through the Village of Cawston over the five years shown and furthermore **only one additional ‘Slight’ accident has** been recorded over the 10 year period (from 2009 up until the end of 2018), clearly indicating there are no ongoing safety issues along this road and in general it would appear road users are aware of the road conditions through the centre of Cawston.

- 2.38 The analysis of highway accident data on the Crashmap website presented above suggests there are no prevailing road safety issues on the highway network along the B1145 in the vicinity of Cawston Village centre that should prevent the development from going ahead.

### 3. Proposed Construction Traffic

3.1 Construction Traffic predicted by Hornsea Three are set out fully in the following documents;

- Appendix 31 to Deadline 2- Transport Assessment [REP1-162];
- Appendix 7 to Deadline 4 - HGV Haul Road Reduction Report [REP4 -028];
- Appendix 28 to Deadline 7 - Cumulative Link Impact Assessment relating to Traffic: Oulton and Cawston

3.2 Therefore, in summary, for link ID 89: B1145 through Cawston the traffic flow levels as set out in Table 3.1 are predicted for Hornsea Three and Norfolk Vanguard.

Table 3.1: Summary of Daily Two Way Traffic Movements at Oulton and Cawston

Hornsea Three Link	2022 Base		HOW03 Construction		Norfolk Vanguard		HOW03+NV Percentage Increase	
	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs
Link ID 89: B1145 in Cawston	3,477	127	370	127	322	168	19.9%	232%

3.3 **It has been agreed in as part of the noise and vibration assessment to ‘cap’ the maximum cumulative construction traffic flows for in the event both schemes are progressing with their maximum peak traffic movements simultaneously.** The agreed max peak daily traffic levels in an event of both scheme progressing simultaneously have been agreed as shown below in Table 3.2.

Table 3.2 Summary of Daily Two Traffic Movements at Cawston – Maximum Cumulative

Hornsea Three Link	2022 Base		HOW03 Construction		Norfolk Vanguard		Maximum Cumulative Traffic	
	Total	HGVs	Total	HGVs	Total	HGVs	Total	HGVs
Link ID 89: B1145 in Cawston	3,477	127	370	127	322	168	668	271

## 4. Proposed Highway Intervention Scheme

- 4.1 Following the consultations with NCC and CPC set out in Chapter 1 of this Report, alterations have been made to the scheme proposed at Deadline 7 and the final highway intervention scheme (1554/03/320F & 1554/03/322C) is presented at Appendix A.
- 4.2 The proposed final highway intervention scheme has taken on board the concerns raised by NCC during a meeting on Wednesday 20<sup>th</sup> March 2019 and during the site walk over on the 08 March 2019. Drawing 1554/03/322C shows the expanded scheme including the proposed new locations for the 20mph speed limit with new Village designed gateway features at either end of the Village. Also showing the location of the start of the 20mph speed limit changes, with Vehicular Activated Signage and localised footway upgrades to be agreed with NCC.
- 4.3 Drawing 1554/03/320F focuses on the mitigation scheme within Cawston Village Centre in more detail. This updated final scheme proposes that at the point where the B1145 narrows between Norwich Road and New Street on the eastern side of Cawston. The Applicant has committed to cut back the existing overgrown vegetation within highway land to ensure the maximum possible usable carriageway width is available at this location, to minimise the risk of conflict.
- 4.4 Further West the along the B1145 between Chapel Street and Norwich Road is already noted that two way passing of HGVs is difficult and therefore single way priority working and associated signage is proposed. This has enabled the design to build out the southern footway along this stretch of the B1145 improving pedestrian amenity.
- 4.5 By introducing the widened footway, vehicles approaching the Village from the east further to the right hand side of the carriageway, which in turn improves forward visibility through the bend adjacent to Chapel Street reducing traffic conflict. Along this section of road is road maintenance surface works are planned in accordance with the requirements of NCC, this is proposed to extend throughout the Village centre to just beyond the Village Hall.
- 4.6 The section of the B1145 through the Village centre between Chapel Street and Church Lane will see footway widening where required, along the south side of the carriageway. Four demarcated parking spaces will be provided on the southern side of the B1145 extending west from the All Things Nice café frontage. Seven more demarcated parking spaces are proposed on the northern side of the carriageway and the bus stop is shown to be relocated along the northern footway with a contribution towards a new shelter to be provided in agreement with NCC.
- 4.7 The scheme between Church Lane and the western end of the Village includes footway widening on the northern side of the carriageway outside the residential dwellings numbered 14, 16 & 18 where currently the footway is very narrow and unusable in places for people with mobility issues. Also outside these three houses 5 demarcated parking spaces are to be provided.
- 4.8 It has been recognised that the carriageway narrows to the west of Booton Road and to address this single way priority working and signage is planned in agreement with NCC.

### School Crossing

- 4.9 One of the concerns raised by the members of Cawston Parish Council was the existing school crossing arrangements for the Primary School.



- 4.10 Therefore, a site visit was carried out by Create Consulting Engineers Ltd on the 7<sup>th</sup> March 2019 to observe the morning drop off of students to the Cawston Church of England Primary School and the impact it had on the local section of the B1145.
- 4.11 During this site visit it was noted that the majority of the children accompanied by parents/guardians walked their children along either the southern footway on the B1145 and then down Howards Way and into the school. Or they walked along the Alysham Road footway setback from the northern side of the B1145 until the point where this footway meets the B1145. At this point the students are assisted by a school crossing person to safely cross the B1145 where they then continue along the Howards Way footway and into the school site.
- 4.12 During the site visit the parents who drove all parked their vehicles off the B1145 and mostly along Alysham Road where they walked with their children the rest of the way.
- 4.13 The conclusions of this site visit therefore was that the existing arrangement is safe and will not be altered by the additional traffic generated by the Hornsea Three proposals. Therefore, a formal crossing point is not considered to be necessary as part of this highway intervention scheme.

Swept Path Analysis

- 4.14 Tracking has been carried out using the AutoCAD bolt on software AutoTRACK to demonstrate a maximum legal HGV travelling through Cawston Village centre with the proposed highway intervention scheme. This is shown on Create drawing reference 1554/03/332C included in Appendix A.
- 4.15 This plan demonstrates that although there are sections through Cawston along the B1145 where only one HGV can be accommodated at time there are gaps in the parking layout provided which allow for opposing HGVs to pull into in order to let another HGV pass.
- 4.16 These passing places are located adjacent to the Church Close junction on the western side of Cawston and adjacent to the triangle of existing parking in the centre of Cawston.
- 4.17 The swept path analysis also demonstrates that with the mitigation proposed in drawing 1554/03/320F that two HGVs would be able to pass alongside the Old School House on the eastern side of the Village.

## 5. Stage One Safety Audit and Designers Response

- 5.1 A road safety audit (RSA) was undertaken on 21<sup>st</sup> March 2019 by Beth Newiss, who was appointed by Create consulting Engineers LTD (Create) on behalf of Ørsted in order to demonstrate that the provision of the proposed mitigation measures did not create any concerning safety implications for the existing traffic on the B1145 and adjoining roads through Cawston Village, or any future construction traffic generated by Hornsea Three.
- 5.2 The Road Safety Auditors were provided with drawings 1554\_03\_320E, 1554\_03\_332B and 1554\_03\_322C containing details of the proposed mitigation measures and swept path analysis.
- 5.3 The road safety audit report is included as part of Appendix B of this report and is also summarised below.

### RSA Summary

- 5.4 The Road Safety Audit report raised a number of comments a summary of which is shown in table 5.1 below.

Table 5.1: Summary of the Safety Audit comments.

Comment	Problem
1.1	<u>Summary:</u> The drawings provided makes no reference to signage or road markings, existing drainage tie-in following footway widening and/or visibility splays maintenance programmes.
1.2	<u>Summary:</u> On-street parking was observed throughout Cawston Village centre without waiting restrictions. In this instance, and due to reduced carriageway width, a vehicle was to park out of line this could obstruct the High Street, preventing the two way passage of HGV through the Village centre.
1.3	<u>Summary:</u> Existing parking on High Street / Booton Road junction may present an obstruction for larger vehicles or reduce visibility from junction.
2.1	<u>Summary:</u> Narrow footways leading to potential pedestrian conflict with HGVs.

### Designer's Response to RSA

- 5.5 Having reviewed the RSA comments presented in table 5.1 a Designer Response to road safety audit has been prepared by Create on behalf of Ørsted and is presented in table 5.2 below.

Table 5.2: Summary of the Designer Response

Comment Ref.	Agree/Disagree	Reasons/Proposals
1.1	Agree	These are largely issues that have been suitably covered in the design of the proposed intervention scheme but will be confirmed at detail design stage.
1.2	Agree	<p>It is acknowledged that vehicles do park outside of the demarcated bays proposed as part of the highway intervention scheme this could potentially obstruct the high street. However, it is believed the number of demarcated spaces proposed will sufficiently cater for the needs of the Village during the hours of HGV operation and therefore there would be no cause for vehicles to park outside of the bays provided. Also the HGV passing locations (shown on drawing 1554_03_332C) are located at sections where parking would be undesirable/impossible due to driveways and the Church Road/Chapel Street junctions.</p> <p>We will be guided by NCC as to whether further parking restrictions are required to enforce the parking outside of the demarcated bays.</p>
1.3	Agree	The parking at this junction will be monitored in agreement with NCC and the need for parking restrictions will be reviewed and agreed with NCC.

2.1	Agree	<p>It is noted that there are existing substandard sections of footway throughout Cawston Village Centre. Therefore this scheme has set out to increase the provision of footways throughout the Village where possible. It should however be noted that HGV movements currently occur through Cawston and that the online service Crashmap.co.uk does not show any accidents involving pedestrians in the Village centre dating back 20 years of data from 2018. This scheme should therefore be considered to adequately improve pedestrian amenity in a location with no existing pedestrian safety concerns.</p> <p>Footway works are planned at the most restricted locations, including widening works and driver awareness measures, which aligned with the 20mph limit is considered to offer a marked improvement to the existing street environment.</p>
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## 6. NCC Preliminary Design Comments

6.1 Parallel to the Road Safety Audit being undertaken, preliminary safety audit comments have been present to the Applicant from NCC.

6.2 Initial comments from NCC were as follows:

- Comment 1. Whilst in principle they support the idea of wider footways, the track shown in drawing 1554\_03\_332C runs through The Street (between Booton Rd and Chapel Street) past the on street parking look very tight and it looks very likely that car sideswipes or kerb strikes will occur. It may be necessary to remove parked cars or omit some of the footway improvements.
- Comment 2. They are little confused by the build-out opposite Booton Rd on High Street. This narrows the carriageway at a point just prior to a section where HGV's could pass, which they think makes it unnecessary.
- Comment 3. **Most of the kerb build outs commence quite abruptly making pronounced 'dog legs' in the kerblines.** This will make them prone to being struck when parked cars are not present. Some road markings may help guide traffic past the build outs.
- Comment 4. A footway build out could usefully be constructed at the eastern radii of Booton Road to improve footway width and slow turning speeds.
- Comment 5. The length of High Street opposite Chapel Street also looks very tight for 2 way use with the 2 parking bays either end of the on street parking on the south side looking particularly vulnerable.
- Comment 6. It is unclear where the relocated bus stops can be accommodated.

6.3 In response to Comment 1, the marked parking bays proposed should emphasise the available road space and should encourage parking within the marked bays, however, as mentioned as part of the **designer's response, we will be guided by NCC as to whether further parking restrictions are required** to enforce the parking outside of the demarcated bays.

6.4 In response to Comments 2 and 3, Create highlight that no kerb build outs are planned. This was agreed in a meeting with NCC dated 6<sup>th</sup> February 2019. The area shown in grey (and noted in the key) is planned to be a different surface texture finish to assist with the demarcation of the parking bays. However the surface markings adjacent to 20 High Street have been removed.

6.5 Comment 4 This was discussed at the meeting with NCC on 6<sup>th</sup> February and during the Stakeholder walkover on Tuesday 12<sup>th</sup> March. It was discussed and felt retaining this area for residents parking would be preferential to increasing the footway width. However in light of comments from NCC, the footway has been widened.

6.6 In relation to Comment 5 by implementing the planned scheme and defining onstreet parking bays is a significant improvement to the existing situation where adhoc parking at present occurs along the full length of the High Street within the Village Centre., The Autotrack runs presented with the proposed scheme, confirm the movement of larger vehicles can be accommodated..

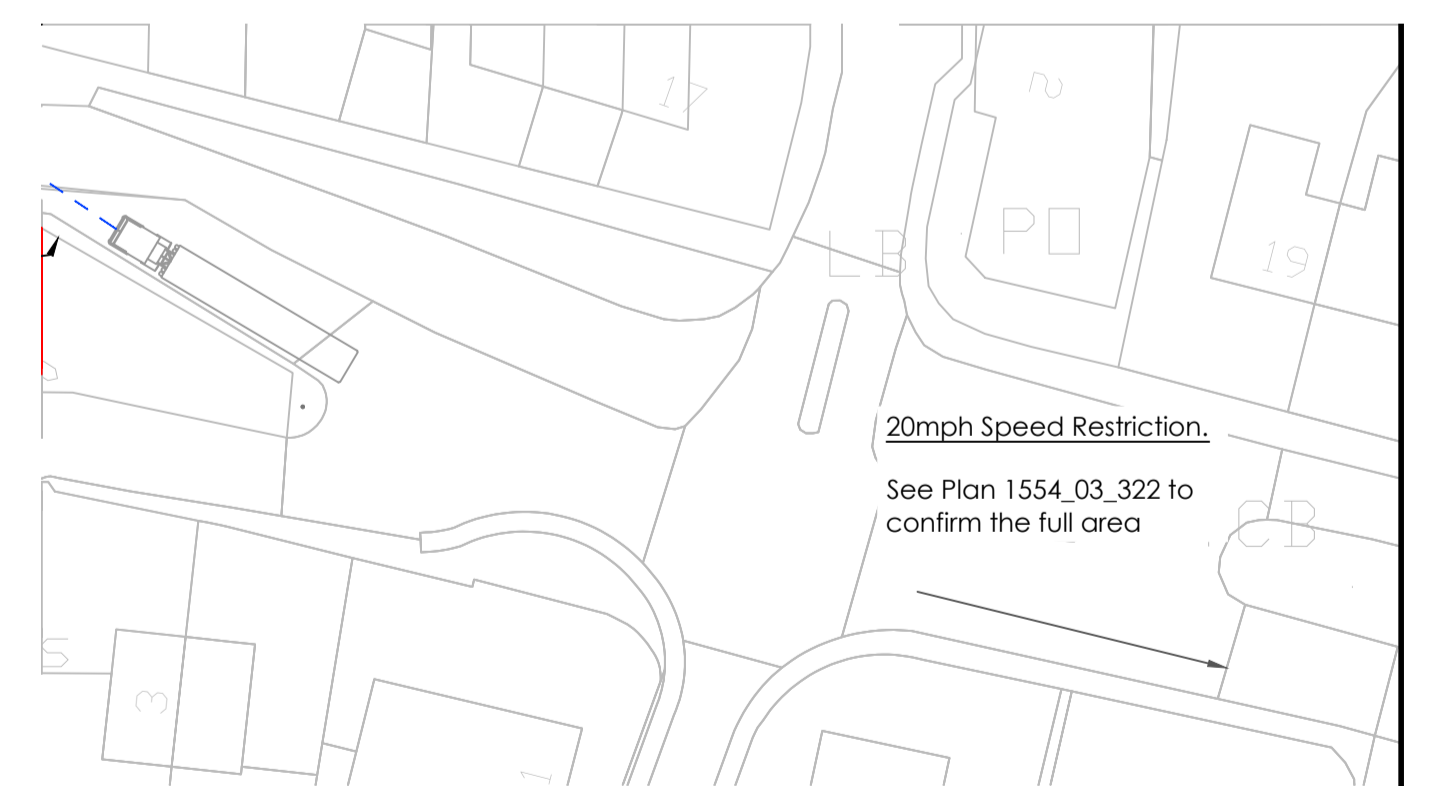
- 6.7 NCC Comment 6 Create consider to be a detailed points and the Safety Audit comment is noted for further investigation.
- 6.8 As a result, minor changes have been made to the Cawston High Street intervention scheme as shown in drawings 1554\_03\_320G, 1554\_03\_332D and 1554\_03\_322C provided in Appendix C.




## 7. Summary and Conclusions

- 7.1 This document with accompanying appendices and plans comprises the intervention measures for the Village Of Cawston.
- 7.2 As part of this exercise, and to determine baseline traffic flows along the B1145 through Cawston, a traffic survey was undertaken by way of an Automatic Traffic Counter (ATC) at two locations within the Village.
- 7.3 The first location (Site 1) is located on the B1145 adjacent to the Village Hall on the western side of the Village and the second (Site 2) at a point on the eastern side of the Village on the B1145 between Chapel Street and Norwich Road. The ATC surveys recorded traffic data over a consecutive 7-day (one-week) period from Monday 11 February 2019 to Sunday 17 February 2019 inclusive.
- 7.4 The ATC surveys also confirmed the mean and 85<sup>th</sup> percentile speeds of vehicles do not currently exceed the 30mph speed limit and there is no evidence of excessive speeding through the Village Centre.
- 7.5 The data presented in Figure 2.1 identifies that a total of four recorded personal injury highway incidents have occurred along the relevant section of the B1145 within the five year period from 2014-2018.
- 7.6 A road safety audit was undertaken in order to demonstrate that the provision of the proposed mitigation measures did not have any significant concerning safety implications for the existing traffic on the B1145, or any future traffic generated by Hornsea Three, as a result minor changes have been made.
- 7.7 The highway intervention scheme as set out on Create Drawings 1554\_03\_320G, 1554\_03\_332D and 1554\_03\_322C in Appendix C are considered to be acceptable and fully address the comments from the commissioned safety audit contained in Appendix B and preliminary safety audit comments from NCC.

## Appendix A– Highway Intervention Scheme Drawings



PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 29.01.19	DRAWING STATUS INFORMATION		
	SCALE(S)	DESIGNED EC	DRAWN EC	
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME	AS SHOWN	CHECKED PZ	APPROVED PZ	
	JOB No 1554			
CLIENT ORSTED	DRAWING No 03/320	REVISION F		

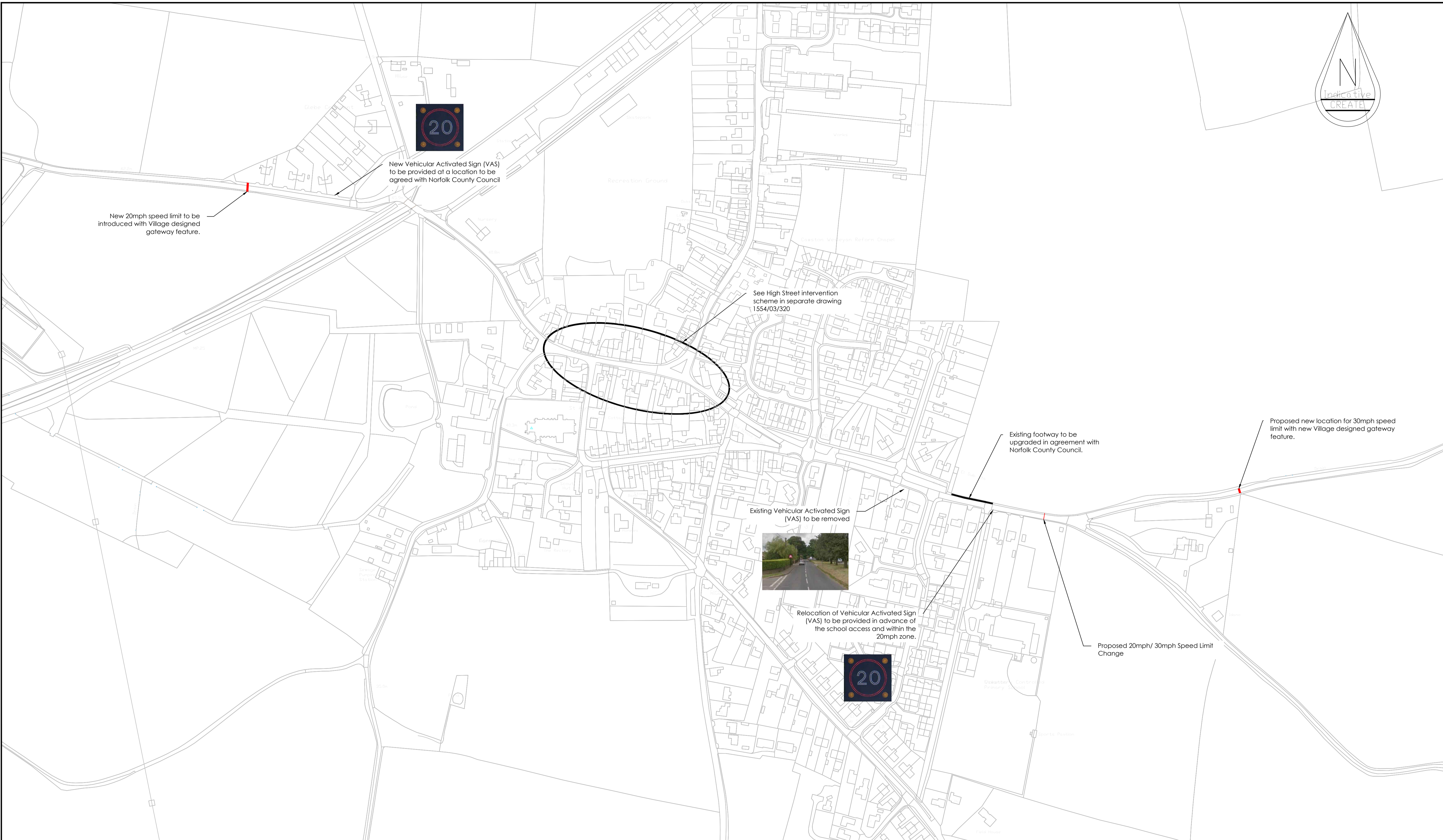
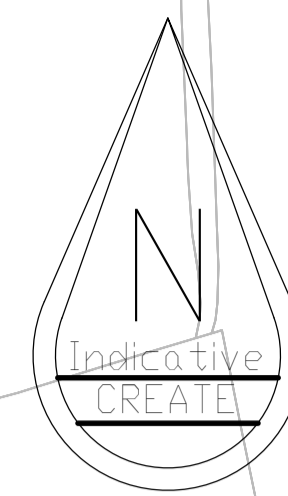
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APPROVED

[www.createconsultingengineers.co.uk](http://www.createconsultingengineers.co.uk)

DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape





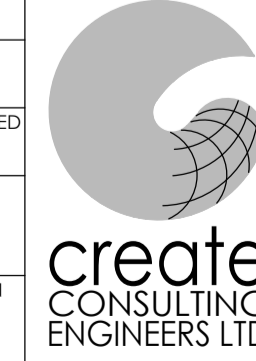
**GENERAL NOTES:**

1. THE DRAWING IS BASED ON DIGITAL OS MAPPING.
2. SERVICES ARE TO BE PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT STATUTORY AUTHORITIES.
3. TO BE READ IN CONJUNCTION WITH ALL OTHER LAYOUT AND DETAIL DRAWINGS.
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6. ALL MEASUREMENTS IN METRES UNLESS OTHERWISE STATED.

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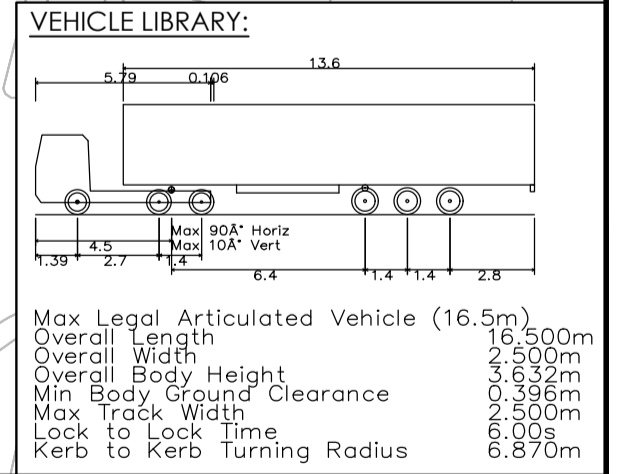
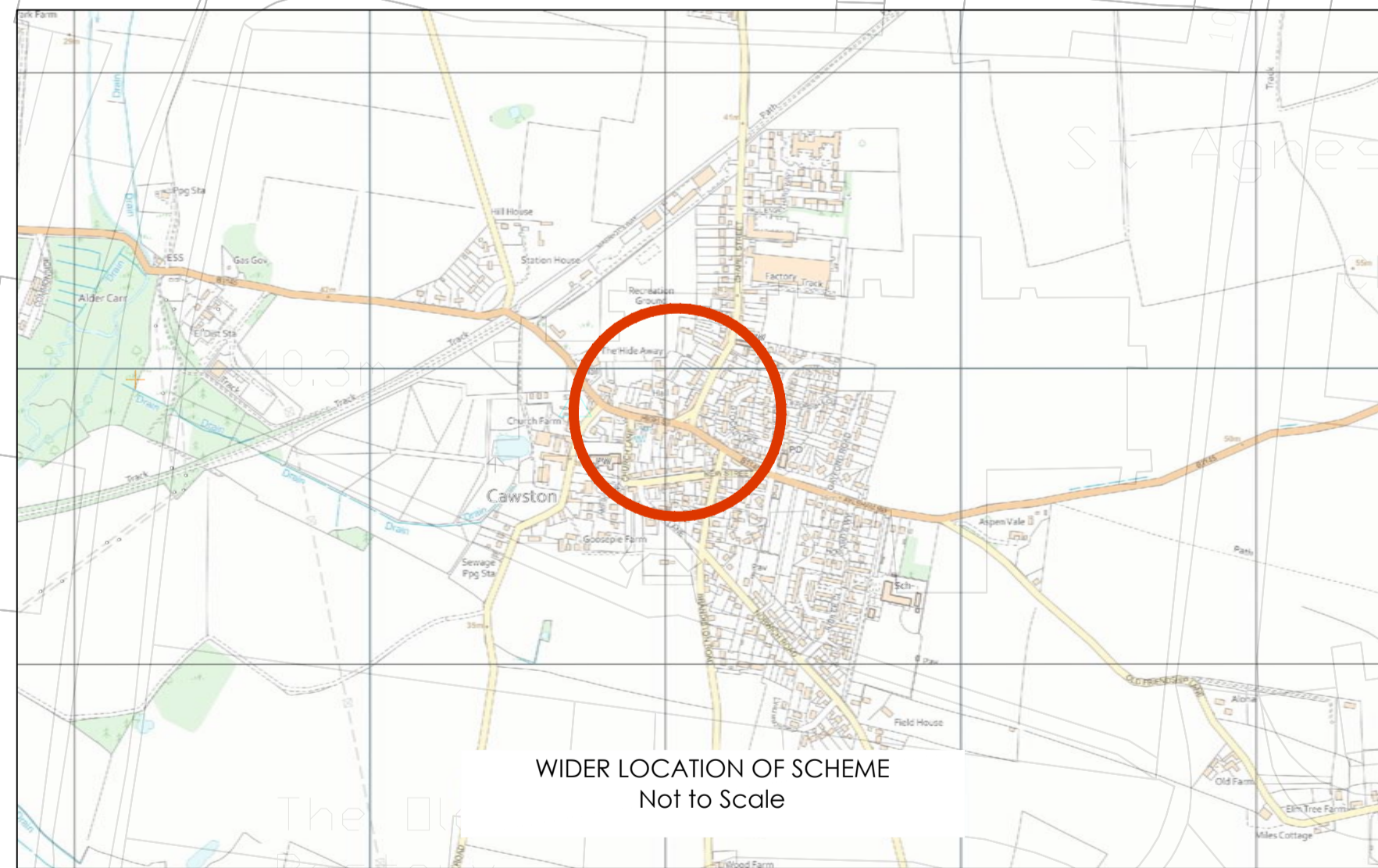
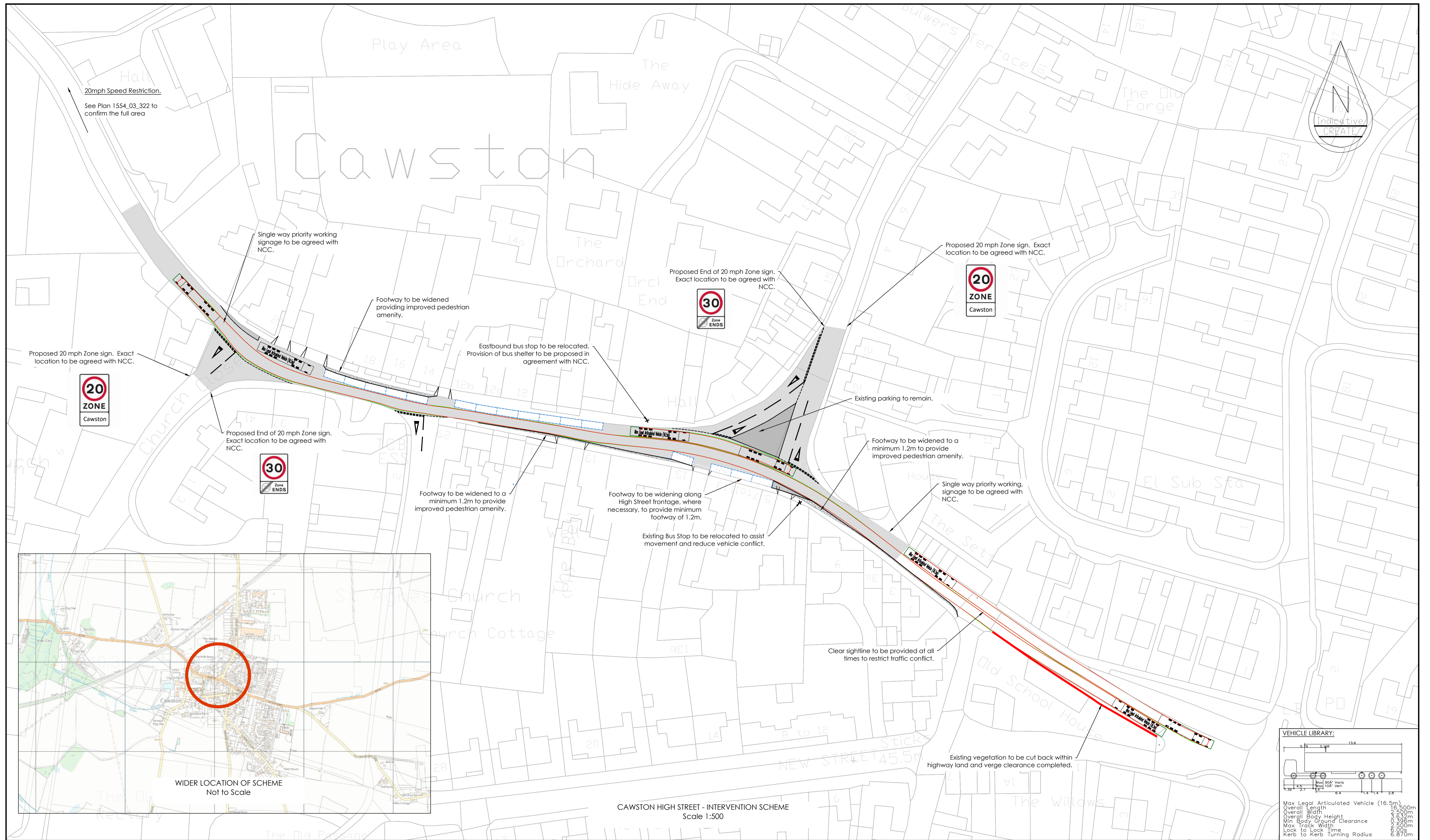
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REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
C	13.03.19	SCHEME DESIGN REVISED FOLLOWING SITE WALKOVER WITH CAWSTON PC WORKING GROUP	AF	PZ
B	07.09.19	AMENDMENTS FOLLOWING MEETING WITH NCC ON 06.03.19	EC	PZ
A	05.02.19	VAS RELOCATED AND DWG REFERENCE ADDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 29.01.19	DRAWING STATUS INFORMATION	
	SCALE(S)	DESIGNED EC	DRAWN EC
DRAWING TITLE APPROACH DRIVER AWARENESS WORKS ON B1145 CAWSTON	1:1,000	CHECKED PZ	APPROVED PZ
	JOB No 1554	REVISION C	
CLIENT ORSTED	DRAWING No 03/322		

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CAWSTON HIGH STREET - INTERVENTION SCHEME  
Scale 1:500

- GENERAL NOTES:**
1. THE DRAWING IS BASED ON DIGITAL OS MAPPING.
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- KEY:**
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  - ROAD SURFACE MAINTENANCE WORKS TO BE COMPLETED TO HIGH STREET IN AGREEMENT WITH NCC

**DRAFT**

THE VEHICLE TRACKS SHOWN WERE PRODUCED USING AUTOTRACK VERSION 11.0.0.0 AND ARE INDICATIVE OF THE MOVEMENTS ACHIEVABLE FROM THE VEHICLE TYPE SHOWN. NO GUARANTEE IS GIVEN THAT THE TRACK RUNS SHOWN ARE ACTUALLY ACHIEVABLE BY ALL INDIVIDUAL MAKES AND MODELS OF SIMILAR TYPES VEHICLES USING THE ILLUSTRATED ROUTES.

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REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
C	22.03.19	SURFACE TEXTURE CHANGE FOLLOWING CONSULTATION WITH NCC 20.3.19	AF	PZ
B	13.03.19	SCHEME AMENDED	AF	PZ
A	11.03.19	SWEPT PATH AMENDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 07.03.19	DRAWING STATUS INFORMATION	
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME HGV - HGV PASSING POINTS	SCALE(S) AS	DESIGNED AF	
CLIENT ORSTED	SHOWN AS	CHECKED PZ	
JOB No 1554	DRAWING No 03/332	APPROVED PZ	REVISION C

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DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape



## Appendix B– Road Safety Audit (RSA)





BETH NEWISS & ASSOCIATES

**ROAD SAFETY AUDIT  
STAGE 1**

**PROPOSED MITIGATION SCHEME –  
HORNSEA 3 OFFSHORE WINDFARM**

**HIGH STREET,  
CAWSTON, NORFOLK**

REPORT REF: BN/CC/19-115

Beth Newiss & Associates  
ROAD SAFETY CONSULTANTS  
Captiva  
19a Grange Hill, Coggeshall,  
Essex, CO6 1RE  
TEL: [REDACTED]  
Email: bethnewissandassociates@gmail.com

**ROAD SAFETY AUDIT  
STAGE 1**

**PROPOSED MITIGATION SCHEME-  
HORNSEA 3 OFFSHORE WINDFARM**

**HIGH STREET,  
CAWSTON, NORFOLK**

**March 2019**

**REPORT REF: BN/CC/19-115**

**CLIENT:** Create Consulting Engineers  
15 Princes Street  
Norwich  
NR3 1AF

**Report Prepared By:**

[REDACTED]

Beth Newiss MCIHT MSoRSA

**Checked By:**

[REDACTED]

Jason Bown MICE MSoRSA

NB: This report was produced for *Create Consulting Engineers*, for the specific purpose of documenting the Stage 1 Road Safety Audit process undertaken under the principles of GG119.

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## CONTENTS

1.0	INTRODUCTION	2
2.0	PREVIOUS ROAD SAFETY AUDIT(S)	5
3.0	ITEMS RAISED AT THIS STAGE 1 AUDIT	6
4.0	AUDIT TEAM STATEMENT	8

## APPENDICES

1.0	LOCATION PLAN	
2.0	PLANS/INFORMATION SUBMITTED FOR AUDIT	
	1554_03_320E – B1145 Centre of Cawston Mitigation Scheme	
	1554_03_332B - B1145 Centre of Cawston Mitigation Scheme HGV Passing Points	
	1554_03_322C- Approach Driver Awareness Works on B1145 Cawston	

## 1.0 INTRODUCTION

- 1.1 This report results from a Road Safety Audit (RSA) carried out on a Proposed Mitigation Scheme in connection with the Hornsea 3 Offshore Windfarm Project. The scheme is located through the village of Cawston, Norfolk. The audit was requested by Create Consulting Engineers on behalf of Orsted.
- 1.2 The Audit Team are as follows:  
Beth Newiss MCIHT MSoRSA  
Beth Newiss & Associates  
Captiva 19a Grange Hill, Coggeshall, Essex, CO6 1RE  
TEL: 07962349262 Email: [bethnewissandassociates@gmail.com](mailto:bethnewissandassociates@gmail.com)
- Jason Bown PGDipMS IEng FIHE MICE MSoRSA  
Beth Newiss & Associates  
Captiva 19a Grange Hill, Coggeshall, Essex, CO6 1RE  
TEL: 07962349262 Email: [bethnewissandassociates@gmail.com](mailto:bethnewissandassociates@gmail.com)
- 1.3 The Design Organisation:  
Create Consulting Engineers  
15 Princes Street Norwich NR3 1AF
- 1.4 The Overseeing Organisation Project Sponsor:  
Ørsted  
5 Howick Place  
London  
SW1P 1WG
- 1.5 The Adopting Authority: Norfolk County Council.
- 1.6 The audit was undertaken in accordance with procedures laid out in GG119 (Formerly HD 19/15). The audit comprised an examination of the drawings presented to the Audit Team and listed within the contents. All comments are further detailed on a location plan as detailed under Appendix 1.
- 1.7 Cawston is a Village and civil parish in the Broadland District of Norfolk. The Village lies approximately 11 miles (18km) north of Norwich on the B1145. The B1145 is subject to a 30mph speed limit through the Cawston Village centre. There is intermittent footway provision of variable width alternating between the north and south side of the carriageway through the Village.

- 1.8 The proposals presented for audit include:
- 20mph zone along the High Street.
  - Footway widening along the High Street.
  - Single way priority working signage at both ends of the High Street.
  - Relocated Bus Stop.
  - New Vehicle Activated Signs.
- 1.9 A site visit was undertaken on the 21<sup>st</sup> March 2019. During the site visit the weather was unsettled, cold and dry. The surrounding road surfaces were dry. There was minimal traffic observed during the site visit. Pedestrians, including young children were noted. No cyclists nor equestrians were observed. During the site visit parking was noted along the length of the High Street and along Booton Road. Parking was also noted in Chapel Street within a triangular shaped area within the centre of the junction.
- 1.10 The Audit Team were present with ATC data which showed that ‘the mean speeds and 85th percentile speeds recorded are in line with a 30mph speed limit’. On site observation would not dispute this.
- 1.11 The Audit Team have not been notified of any Departures to Design Standards.
- 1.12 The Audit Team were provided with collision data for this site. The collision information had been extracted from the CrashMAP database for the most recent five-year period to date. It was noted that during this period there had been 5 collisions recorded. Having obtained full collision data it was noted that 2 of the 5 collisions recorded were on the High Street. A ‘slight’ collision in 2016 involving a parked vehicle and a ‘serious’ collision in 2017 resulting in a head on collision.
- 1.13 The Audit Team have examined and reported only on highway safety implications of the scheme as presented and have not examined or verified the compliance of the designs to any other criteria.
- 1.14 Road Safety Audit is not a technical check that the design conforms to Standards and/or best practice guidance. Design Organisations are responsible for ensuring that their designs have been subjected to the appropriate design reviews (including, where applicable, Walking, Cycling & Horse Riding Assessment & Review) prior to Road Safety Audit.

Road Safety Audit is not a check that the scheme has been constructed in accordance with the design.

Whilst reference is made to certain design standards, where safety may be compromised by a reduction in standard, this report is not intended to provide a design check. The Auditors

have only reported on matters that might have an adverse effect on road safety in the context of the chosen design. No attempt has been made to comment on the justification of the scheme or the appropriateness of the design. Consequently, the Auditors accept no responsibility for the design or construction of the scheme.

- 1.15 The Overseeing Organisation response to the RSA should be formally recorded and reported to the Designer and the RSA Team so that a record of the Audit process is contained in the As Built design pack to be provided and retained by the Overseeing Organisation on final completion.

**2.0 PREVIOUS ROAD SAFETY AUDIT(S)**

2.1 The Audit Team have not been made aware of any previous Road Safety Audit(s).

### 3.0 SAFETY ISSUES RAISED AT THIS STAGE 1 ROAD SAFETY AUDIT

*As a result of an examination of the drawings and documents supplied by the Create Consulting Engineers and the site visit undertaken on the 21st March 2019, the problems highlighted in Section 3.0 were identified. The recommended course of action that should be taken in respect of each problem was also indicated, and the locations are shown on the drawings in Appendix 1.*

#### 3.1 GENERAL

##### 3.1.1 PROBLEM

The drawing provided makes no reference to the following:

- Signage or Road Markings - No specific details have been provided as to the locations of the signs and any road markings.
- Drainage. Proposals detail widened footway, but no details as to how existing drainage will tie-in.
- Maintenance programmes – all visibility splays and proposed signage to be kept clear of vegetation.

**RECOMMENDATION: It is recommended that the information should be provided to the Audit Team. Full details should be provided for the detailed design of the Stage 2 Road Safety Audit.**

##### 3.1.2 PROBLEM

Location: A – High Street

**Summary: Reduced carriageway width and existing parking may present an obstruction for larger vehicles.**

Detail: The drawings provided detail the widening of the existing footway along the High Street. Whilst this is welcomed, by increasing the footway width the carriageway width will be reduced. The High Street is heavily parked, and the Auto Tracking provided shows that the available road space is restricted. If just one car was to park badly this could prevent a large vehicle manoeuvring successfully resulting in an obstruction to the High Street.

**RECOMMENDATION: It is recommended that marked parking bays are introduced to emphasise the available road space and to encourage parking within.**





### 3.1.3 PROBLEM

Location: B – Booton Road

**Summary: Existing parking may present an obstruction for larger vehicles or reduce visibility from junction.**

Detail: Whilst on site it was observed that the junction with High Street/Booton Road is heavily parked. On street parking could prevent a large vehicle manoeuvring successfully resulting in an obstruction to the High Street.

Parking near the junction may also reduce the visibility for drivers exiting the junction resulting in failure to give way type collisions.



**RECOMMENDATION: It is recommended that a review of the existing parking is undertaken and if deemed necessary waiting restriction introduced.**

## 3.2 WALKING, CYCLING AND HORSE RIDING

### 3.2.1 PROBLEM

Location: C – High Street

**Summary: Narrow footway will increase risk to pedestrians being struck by passing large vehicles.**

Details: Whilst on site it was noted that the footway along both sides of the High Street is narrow. The perception of the width of the footway is decreased by the proximity of the houses and their railings/walls to the footway edge, which effectively reduces the width. Pedestrians will walk approx. 200mm away from the edge of the houses (and the carriageway), effectively reducing the footway by an additional 400mm. With an increasing number of larger vehicles travelling through the village pedestrians will be at a higher risk of striking from HGVs.

It has been noted that the footway is to be widened in sections along the High Street.

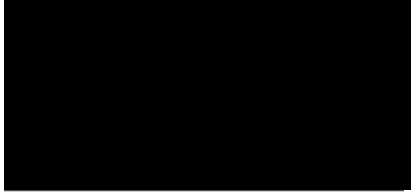
**RECOMMENDATION: It is recommended that further details are provided to the widening proposed and the dimensions of both the footway and carriageway. Details to be provided at Stage 2 Detailed Design.**

#### 4.0 AUDIT TEAM STATEMENT

4.1 We certify that this audit has been undertaken in accordance with the principles of GG119.

Audit Team Leader

Beth Newiss MSoRSA



Date: 27<sup>th</sup> March 2019

Audit Team Member

Jason Bown



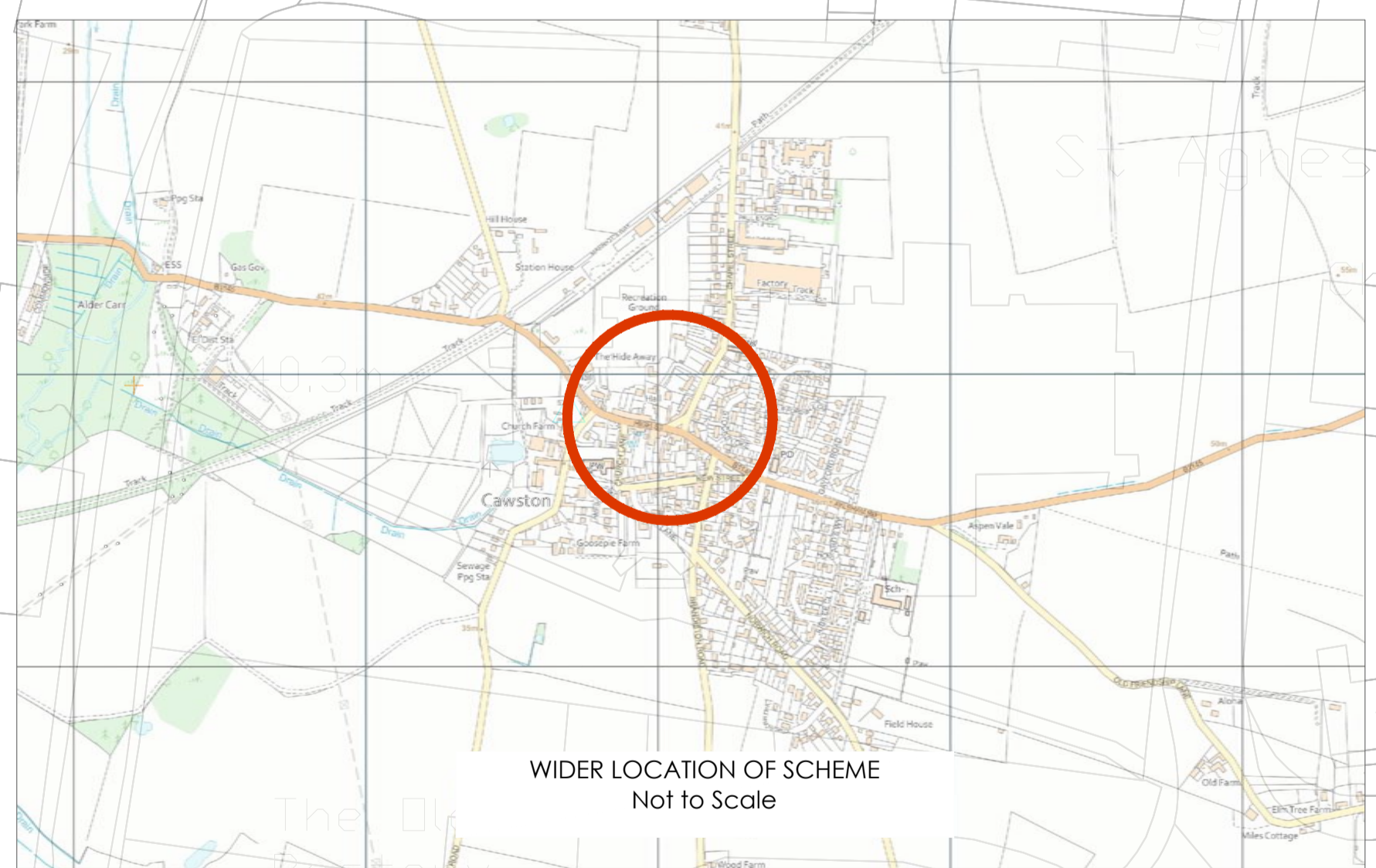
Date: 27<sup>th</sup> March 2019

# APPENDIX 1



## **APPENDIX 2**





CAWSTON HIGH STREET - INTERVENTION SCHEME  
Scale 1:500

- GENERAL NOTES:**
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- KEY:**
- SURFACE TEXTURE CHANGE TO DEFINE ON STREET PARKING AREA
  - SURFACE TEXTURE TO ROAD SURFACE SUBJECT TO AGREEMENT BY NCC
  - FORWARD VISIBILITY

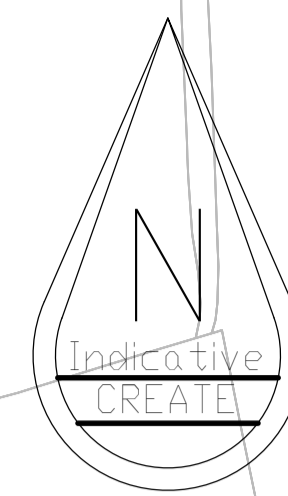
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REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
E	13.03.19	AMENDMENTS FOLLOWING STAKEHOLDER CONSULTATION	AF	PZ
D	11.03.2019	PARKING RELOCATED	EC	PZ
C	07.03.19	AMENDMENTS FOLLOWING MEETING WITH NCC ON 06.03.19	EC	PZ
B	04.03.19	AMENDED SCHEME TO NCC COMMENTS	EC	PZ
A	05.02.19	PARKING ADDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 29.01.19	DRAWING STATUS INFORMATION	
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME	SCALE(S)	DESIGNED EC	
CLIENT ORSTED	AS SHOWN	CHECKED PZ	
	JOB No 1554	APPROVED PZ	
	DRAWING No 03/320	REVISION E	

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New Vehicular Activated Sign (VAS) to be provided at a location to be agreed with Norfolk County Council

New 20mph speed limit to be introduced with Village designed gateway feature.

See High Street intervention scheme in separate drawing 1554/03/320



Existing footway to be upgraded in agreement with Norfolk County Council.

Proposed new location for 30mph speed limit with new Village designed gateway feature.

Existing Vehicular Activated Sign (VAS) to be removed



Relocation of Vehicular Activated Sign (VAS) to be provided in advance of the school access and within the 20mph zone.



Proposed 20mph/ 30mph Speed Limit Change

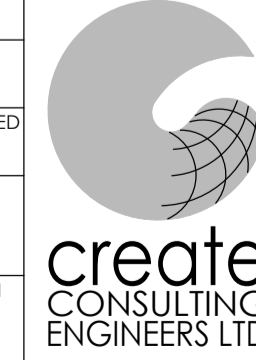
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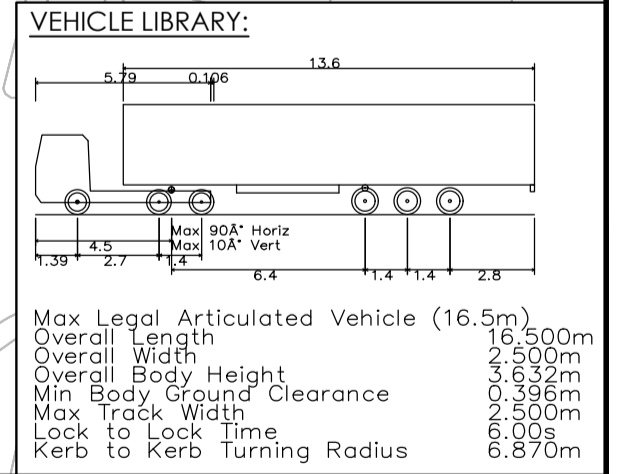
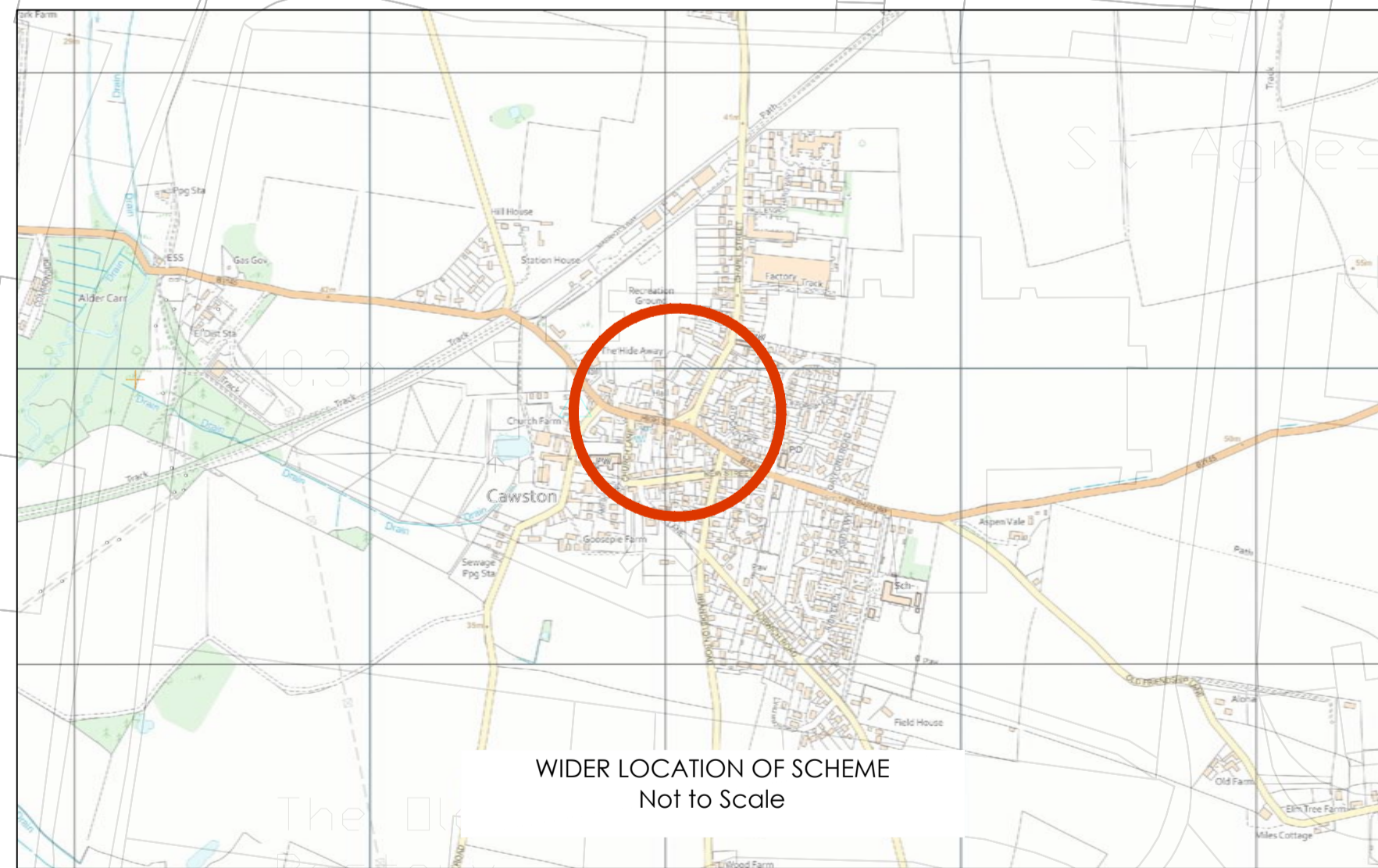
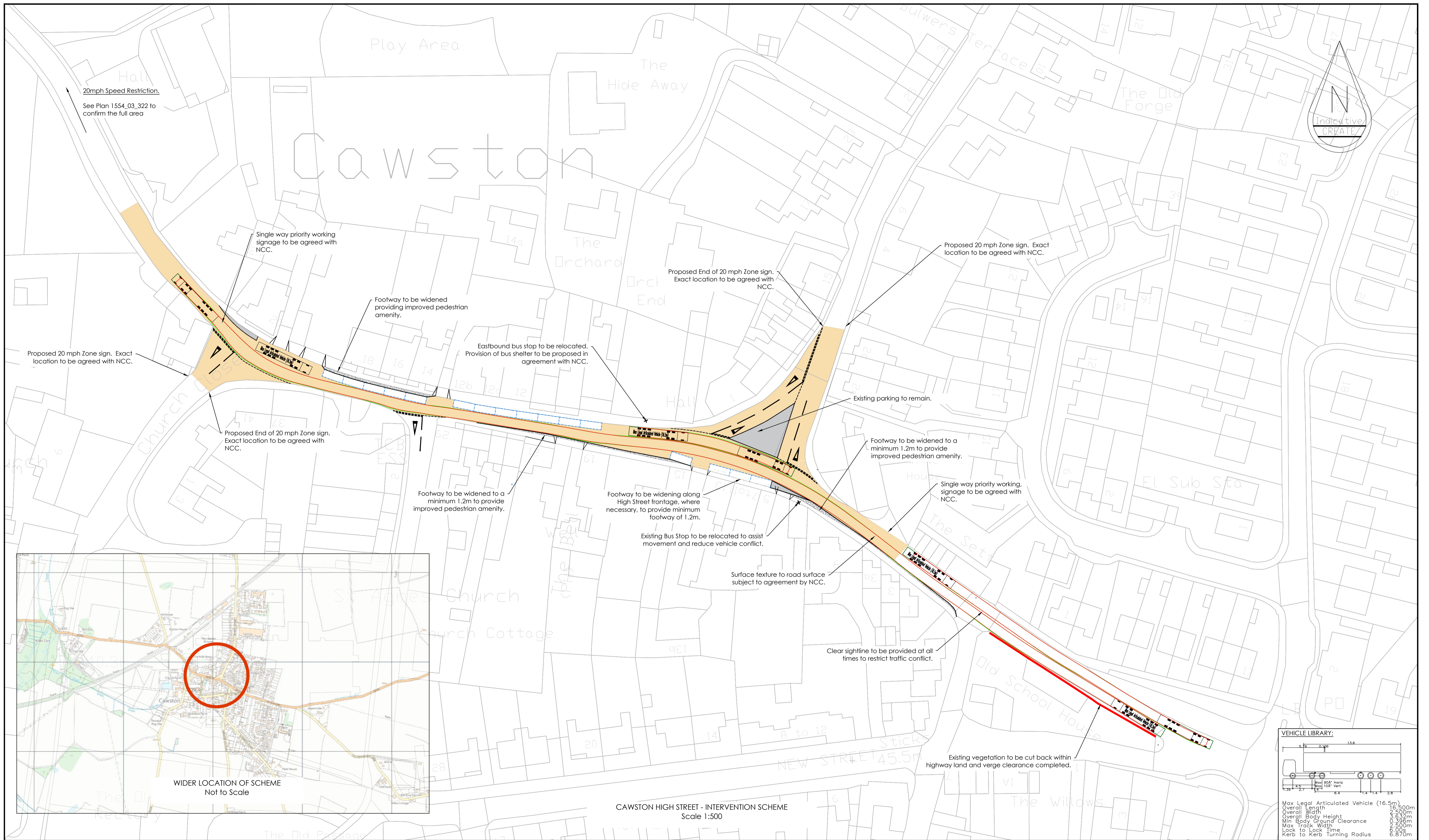
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B	07.09.19	AMENDMENTS FOLLOWING MEETING WITH NCC ON 06.03.19	EC	PZ
A	05.02.19	VAS RELOCATED AND DWG REFERENCE ADDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 29.01.19	DRAWING STATUS INFORMATION	
	SCALE(S) 1:1,000	DESIGNED EC	DRAWN EC
DRAWING TITLE APPROACH DRIVER AWARENESS WORKS ON B1145 CAWSTON	CHECKED PZ	APPROVED PZ	 create CONSULTING ENGINEERS LTD
	JOB No 1554	REVISION C	
CLIENT ORSTED	DRAWING No 03/322		

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CAWSTON HIGH STREET - INTERVENTION SCHEME  
Scale 1:500

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**DRAFT**

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REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
B	13.03.19	SCHEME AMENDED	AF	PZ
A	11.03.19	SWEPT PATH AMENDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 07.03.19	DRAWING STATUS INFORMATION	
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME HGV - HGV PASSING POINTS	SCALE(S) AS	DESIGNED AF	
CLIENT ORSTED	SHOWN AS	CHECKED PZ	
	JOB No 1554	APPROVED PZ	
	DRAWING No 03/332	REVISION B	

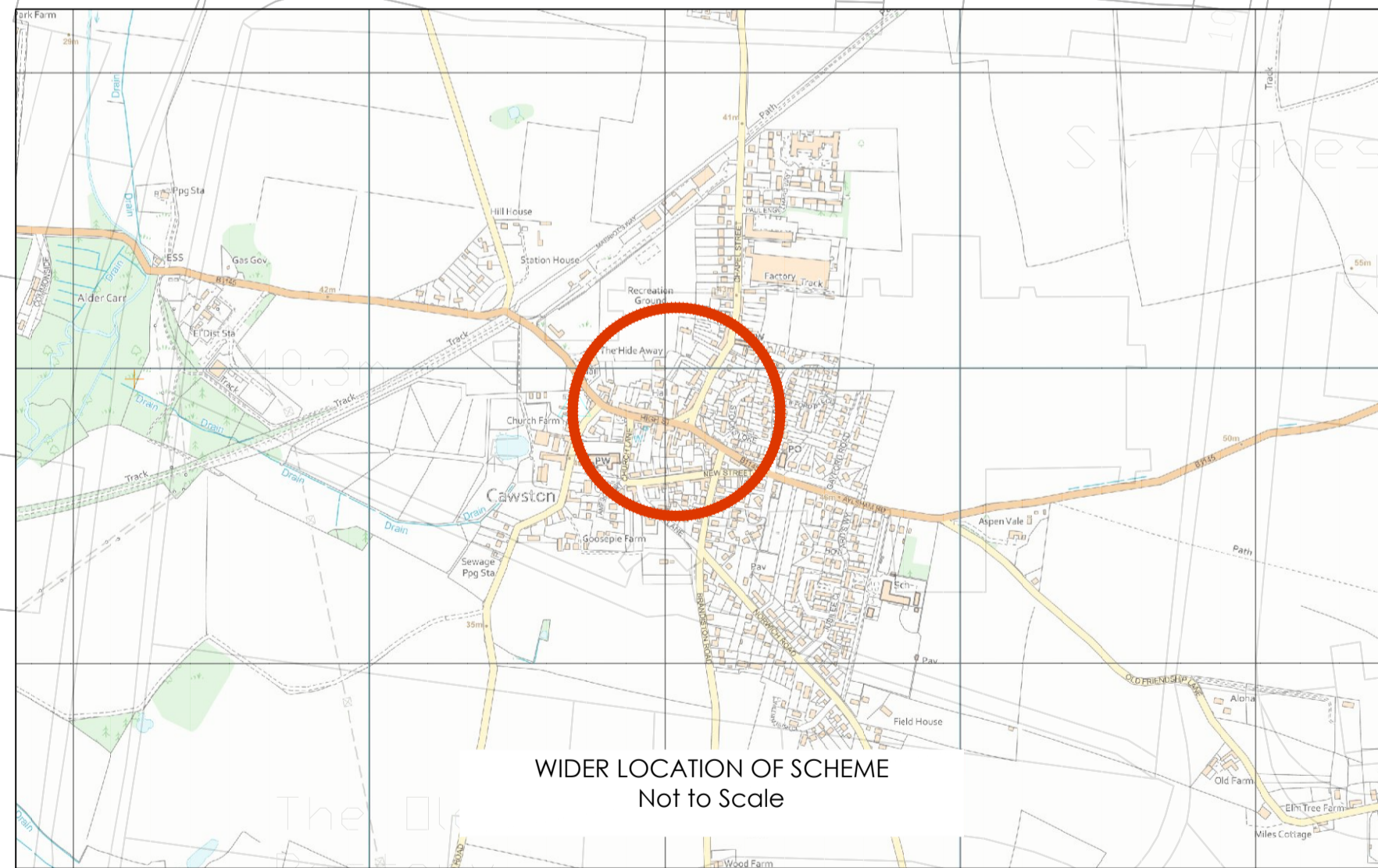
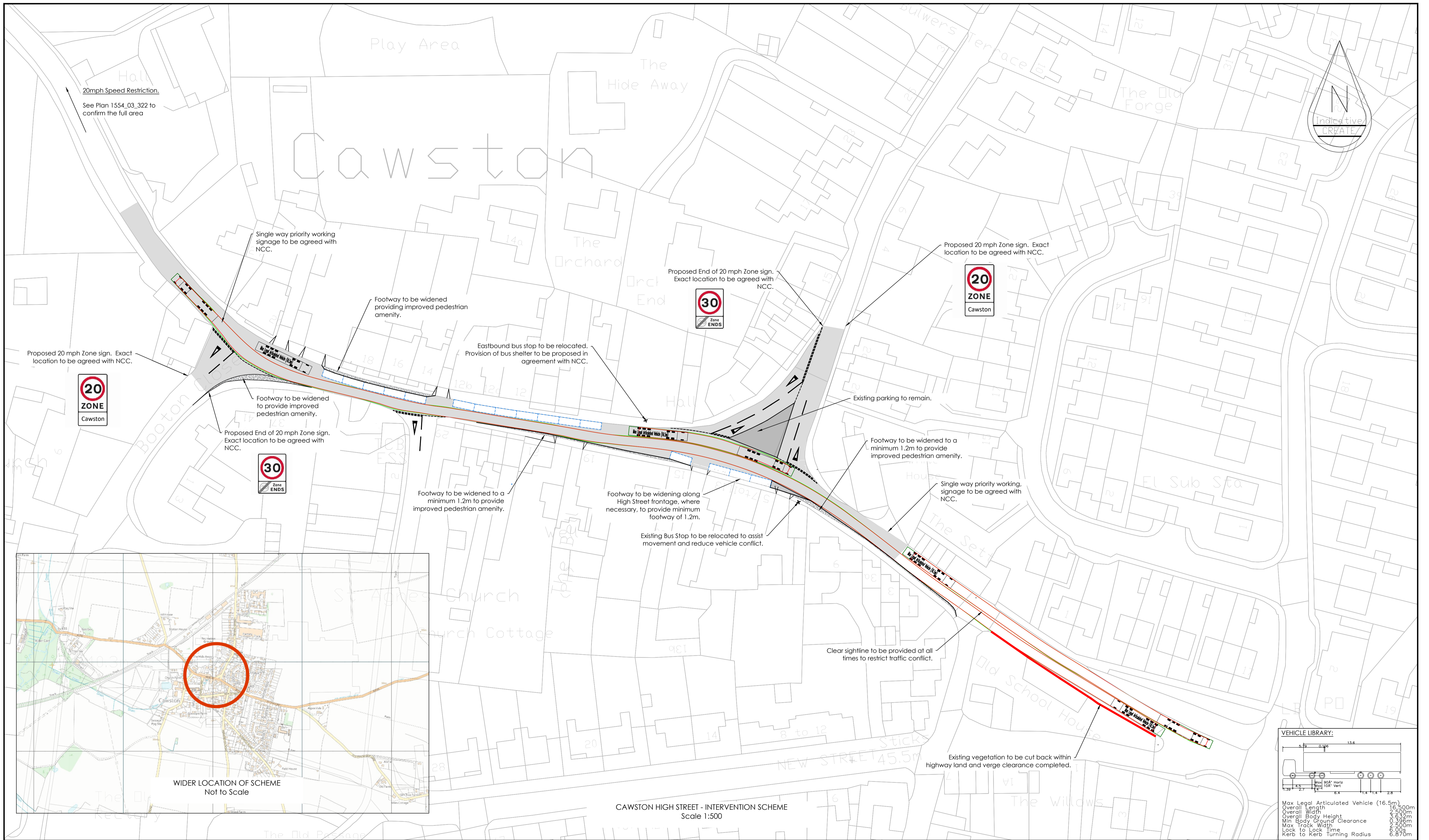
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DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape



## Appendix C – Revised Highway Intervention Scheme Drawings





**VEHICLE LIBRARY:**

Max Legal Articulated Vehicle (16.5m)	16.500m
Overall Length	2.500m
Overall Width	2.550m
Min Body Ground Clearance	0.300m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.570m

CAWSTON HIGH STREET - INTERVENTION SCHEME  
Scale 1:500

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**DRAFT**

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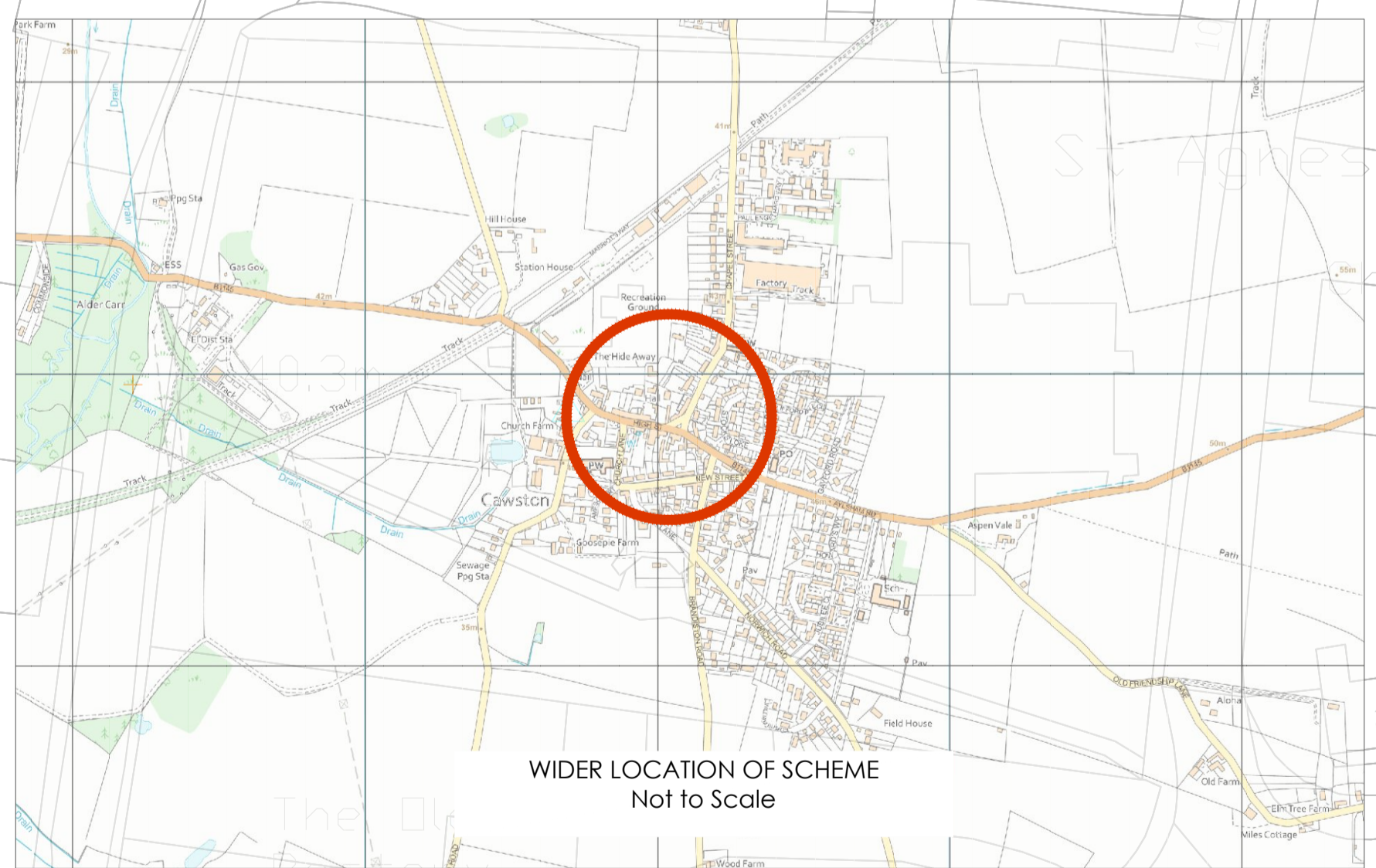
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B	13.03.19	SCHEME AMENDED	AF	PZ
A	11.03.19	SWEPT PATH AMENDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 07.03.19	DRAWING STATUS INFORMATION	<p>create CONSULTING ENGINEERS LTD</p>
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME HGV - HGV PASSING POINTS	SCALE(S) AS	DESIGNED AF	
CLIENT ORSTED	SHOWN PZ	CHECKED PZ	
JOB No 1554	DRAWING No 03/332	APPROVED PZ	
		REVISION D	

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DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape





CAWSTON HIGH STREET - INTERVENTION SCHEME  
Scale 1:500

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  5. ROAD MARKINGS AND ROAD SIGNS ARE TO BE IN ACCORDANCE WITH THE SI DOCUMENT "TRAFFIC SIGNS REGULATIONS AND GENERAL DIRECTIONS, 2016".
  6. ALL MEASUREMENTS IN METRES UNLESS OTHERWISE STATED.

- KEY:**
- SURFACE TEXTURE CHANGE TO DEFINE ON STREET PARKING AREA
  - ROAD SURFACE MAINTENANCE WORKS TO BE COMPLETED TO HIGH STREET IN AGREEMENT WITH NCC
  - FORWARD VISIBILITY

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REV	DATE	AMENDMENT DETAILS	DRAWN	APPROVED
G	29.03.2019	AMENDMENTS FOLLOWING NCC COMMENTS ON 28.03.19	EC	PZ
F	21.03.19	SURFACE TEXTURE CHANGE FOLLOWING CONSULTATION WITH NCC 20.3.19	EC	PZ
E	13.03.19	AMENDMENTS FOLLOWING STAKEHOLDER CONSULTATION	AF	PZ
D	11.03.2019	PARKING RELOCATED	EC	PZ
C	07.03.19	AMENDMENTS FOLLOWING MEETING WITH NCC ON 06.03.19	EC	PZ
B	04.03.19	AMENDED SCHEME TO NCC COMMENTS	EC	PZ
A	05.02.19	PARKING ADDED	AF	PZ

PROJECT HORNSEA 3 OFF-SHORE WIND FARM	DATE 29.01.19	DRAWING STATUS INFORMATION	
	SCALE(S)	DESIGNED EC DRAWN EC	
DRAWING TITLE B1145 - CENTRE OF CAWSTON MITIGATION SCHEME	AS SHOWN	CHECKED PZ APPROVED PZ	
	JOB No	1554	
CLIENT ORSTED	DRAWING No 03/320	REVISION G	

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DO NOT SCALE ORIGINAL SHEET SIZE - A1 Landscape



The Planning Inspectorate  
Room 3/13  
Temple Quay House  
2 The Square  
Temple Quay  
Bristol  
BS1 6PN

Your Ref: EN010079  
Date: 1 April 2019

My Ref: 8/1/18/0078  
Tel No.: 01603 223231  
Email: john.r.shaw@norfolk.gov.uk

Dear Sir/ Madam

**Application by Orsted Hornsea Project Three (UK) Ltd for an order Granting  
Development Consent for the Hornsea Project Three Offshore Wind Farm**

**Final closing statement of the Local Highway Authority  
NCC Identification No: 20020350.**

I refer to my e-mail of 26 March 2019, in which I indicated there were two matters outstanding in relating to the highway assessment. This letter sets out Norfolk County Councils closing statement in relation to those matters.

**1. Assessment conclusions - Cawston**

We received the Stage 1 Road Safety Audit this morning and must advise there are several points identified by the auditors that still need to be addressed. In addition, the County Council's own auditors have reviewed the proposed intervention scheme and raised several points of their own.

Whilst in principle we support the idea of wider footways, the track runs through The Street (between Booton Road and Chapel Street) past the on-street parking look very tight and it seems very likely that car sideswipes or kerb strikes will occur.

**To overcome this point, it may be necessary to omit some of the footway improvements. Whilst the footway at certain points would then remain narrow, nevertheless pedestrians would be protected to some extent by parked cars. This point needs further investigation.**

No specific details have been provided as to the locations and nature of the road signs and road markings.

**Full details of signage and road markings will be needed for the detailed design; however, dependent upon the above, we believe some of the signage already indicated on the drawings may need to be omitted.**

The High Street is heavily parked, and the track runs show the available road space is restricted. The Applicants auditors indicate that if just one car was to park badly, this could prevent a large vehicle manoeuvring successfully resulting in an obstruction to the High Street.

**Both the Applicants auditors and the County Councils officers recommend the applicants explore the necessity for introducing some associated waiting restrictions. The applicant's auditors also recommend that the parking bays are physically marked out to emphasise the road space.**

Drainage is not indicated

**We need to see details of how the existing drainage will tie in.**

The drawings also indicate a need to re-locate bus stops, however no details are provided to indicate where they will be moved to.

**We believe there are several options available, however the point is not yet resolved.**

Allied to the above, we note the applicants have indicated a commitment within the outline CTMP to explore the opportunity of making a greater use of Heydon Road.

**Norfolk County Council fully support this commitment and we believe it would be possible to develop an access strategy that makes better use of Heydon Road**

**In conclusion** – Norfolk County Council believe a suitable access strategy can be produced that mitigates impact however... the intervention scheme drawings and proposal before us are very much currently “work in progress”. In short, the scheme needs several changes, but they will be amendments rather than a complete re-think. NCC note the Applicant's commitment within the outline CTMP to continued engagement with NCC, Broadland District Council and Cawston Parish Council in respect to this ongoing development of the mitigation scheme.

## **2. Cumulative Effects & Outline CTMP**

The Cumulative Impact Assessment indicates a significant volume of traffic from both Hornsea 3 and Vattenfall will all have to pass through the centre of Horsford village.

Horsford is a large village comprising of ribbon development either side of the B1149. In turn, the B1149 contains several sensitive receptors including (but not limited to) Horsford infant school; a pre-school nursery; and comprises part of the walking route to Horsford Junior School. During the morning peak, traffic leaving the village is at times stationary between the village and the A1270 Norwich Northern Distributor Route (NDR).

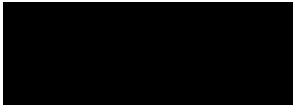
The applicant's route assessment indicates traffic from both Hornsea 3 and Vattenfall will travel west along the NDR for approximately 1mile past the A140, before heading north along the B1149.

Norfolk County Council requests the route be amended to show traffic heading north along the A140 for approximately 3.75 miles before heading west for approximately 2m along C245 Shortthorn Road before picking up the B1149 north of Horsford (some 2.75 miles north of its junction with the NDR).

Whilst the County Council would not normally allow traffic to be diverted from a “B class” road onto a “C class” road, in this instance the C245 Shortthorn Road is by far a more suitable route. Shortthorn Road has suitable width to accommodate the proposed volume of traffic and has good alignment. The junctions at either end of Shortthorn Road conform to standard and both have dedicated right turn lanes sufficient to accommodate the predicted traffic. Whilst there is some frontage development, nevertheless it is significantly less than experienced along the B1149 through Horsford. The Applicant has indicated that although in principle, they have no objection to the use of Shortthorn Road as an alternative, an assessment of the acceptability of potential impacts would be undertaken as part of the routing work for the detailed CTMP in consultation with the relevant stakeholders. NCC note that the Applicant’s Outline CTMP commits to agreement of HGV routing with the relevant highway authority (in this case NCC) as part of the detailed CTMP, to ensure that all routes remain appropriate and are agreed for use.

**Subject to the above route amendment and resolution of the Cawston intervention measures, Norfolk County Council is in agreement to the CTMP.**

Yours sincerely

A solid black rectangular box used to redact the signature of the Senior Engineer.

Senior Engineer - Highways Development Manager  
for Executive Director for Community and Environmental Services