# TECHNICAL DESIGN NOTE

Hydrock

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|---|---|---|---|
| Project name | Green Farm Solar Development | | |
| Design note title | Transport Statement Addendum | | |
| Document reference | 16421-HYD-XX-XX-RP-TP-1001-P1 | | |
| Author | Sophie Gittins BSc (Hons) | | |
| Checked | Chris Peachy BA (Hons)/ Sam Denby BA (Hons), MSc, CMILT | | |
| Revision | P1 - Final | | |
| Date | 16 March 2021 | Approved | ✓ |

## 1. INTRODUCTION

### 1.1 Overview

1.1.1 This Transport Statement Addendum [TSA] has been prepared to provide a response to feedback received from the consultation process relating to Planning Application No. 20/01182/FUL.

1.1.2 Planning Application No. 20/01182/FUL proposes the installation of a solar farm with a 49.9MW output for a period of up to 40 years, including battery storage units, associated infrastructure, permanent grid connection hub and environmental enhancements on a circa 74-hectare site.

1.1.3 Hydrock have produced a Transport Statement (dated 15th October) in support of Planning Application No. 20/01182/FUL for reference.

1.1.4 The development is situated approximately 1.7km north of Barkestone Village, approximately 3.3km, north east of Plungar and approximately 3km south east of Granby. Jericho Lane borders the site to the south west and Belvoir Road to the north east. The development is accessed via Flawborough Lane, located off Plungar Road.

1.1.5 The comments received from the consultation process are summarised as follows:

- *Concerns over the applicant's submissions on traffic and access (vehicle routeing); and*
- *Concerns on the submitted evidence on HGV movements as set out in Hydrock's Transport Statement.*

1.1.6 This TSA has been prepared to address the aforementioned feedback received from the consultation process and to demonstrate that the proposed Green Farm development can be accommodated and accessed without detriment to the local highway network.

## 2. HGV HIGHWAYS ROUTEING

2.1.1 As previously stated, the comments received from the consultation process highlighted initial concerns over the applicant's submissions on traffic and access (vehicle routeing) to the site.

2.1.2 The previous routeing strategy proposed all construction traffic to be routed from the west via Granby village.

2.1.3 Following discussions with Nottinghamshire County Council [NCC] Highways, clarification was received that the proposed routeing through Granby village is not possible as it would extend via an Environmental weight limit [EWL]. A copy of the NCC highways response can be found in Appendix A.

2.1.4 The feedback received from the consultation process also highlighted the following:

*" The proposed means of access from the A52 to the development site to be unsuitable* for *the following reasons:*

- *(i) it requires all HGVs to enter and exit through a 7.5T weight limit either side of Granby village, presumably in violation of the relevant Order;*
- *(ii) Flawborough Lane (aka Gypsy Lane) over some 1.8km (1.2miles) and being a narrow, unmade BOAT shared with pedestrian and equestrian users, is unsuitable for the extensive construction traffic to the development (notwithstanding the marginal 'mitigation' proposed).*"

2.1.5 Therefore, taking the above comments into consideration, the HGV routeing has been reconsidered based on the environmental constraints across the local highway network, including consideration into the environmental weight restrictions either side of Granby Village.

2.1.6 The revised HGV routeing strategy includes the decanting of larger HGV vehicles at the substation location which is situated off Castleview Road, to the north east of the site. It is proposed that HGVs will access the substation via the A52 Bottesford Bypass from the east and west and then turning south onto Castleview Road.

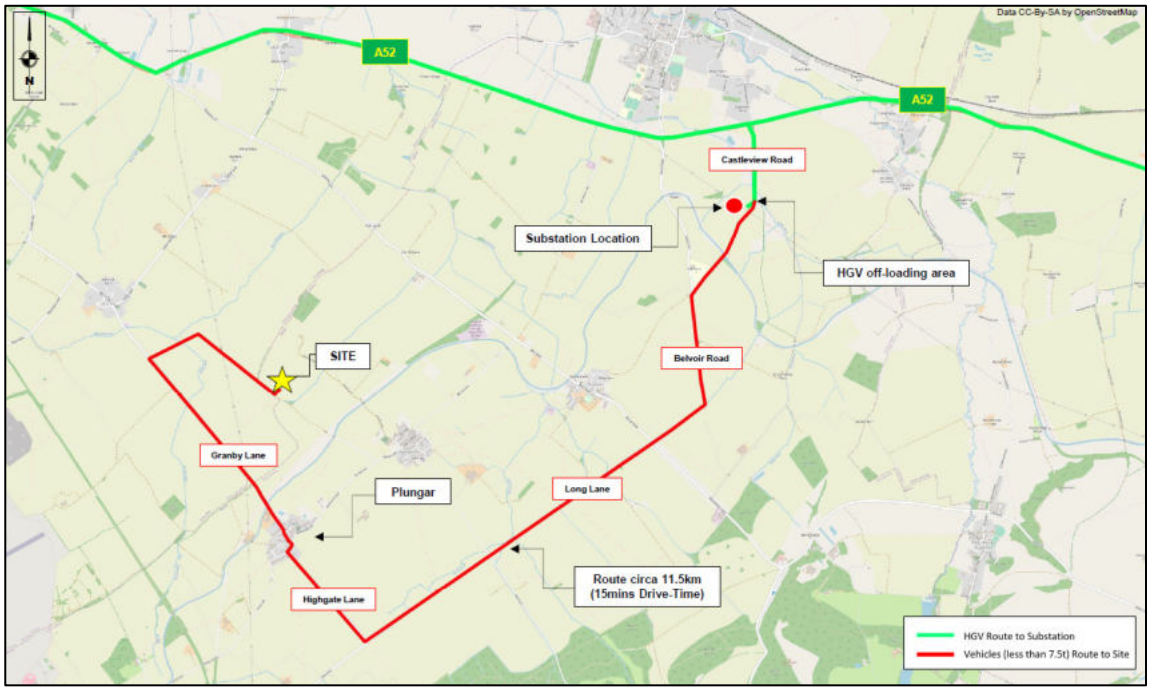
2.1.7 The HGVs are proposed to extend in a southerly direction on Castleview Road for circa 750m whereby the vehicles would off-load at the substation and transfer loads to smaller vehicles such as the 11.5m rigid truck. The smaller vehicles would then travel in a south westerly direction to the proposed Green Farm development for a circa 15-minute drive-time.

2.1.8 All construction vehicles will enter and exit the site in forward gear. A construction compound will be provided within the substation site, where vehicles will be able to turn. Within the fields of the substation, temporary access tracks may be laid to enable the support of the loading of HGVs and plant. Any temporary access track will be removed upon completion of the construction phase.

2.1.9 This revised routeing is deemed appropriate as HGVs over 7.5t will not enter the aforementioned 7.5T environmental weight limit restrictions. In addition, the A52 Bottesford Bypass/ Castleview Road T-Junction comprises large visibility envelopes to the east and west, with a 29.0m wide bell mouth and junction radii of 14.0m to the east and west.

2.1.10 Figure 2.1 below illustrates the proposed HGV routeing plan, which can also be found in Appendix B for reference.

Figure 2.1: Proposed Revised HGV Routing via Substation




*Source: OpenStreetMaps©*

## 2.2 Summary

2.2.1 In summary, Hydrock feel the use of the substation location off Castleview Road as a decanting area for larger vehicles to off-load onto smaller vehicles (less than 7.5t) satisfies the comments received from the consultation process and would not breach the EWRs across the local highway network. Therefore, Hydrock feel this comment has been satisfied.

# 3. HGV VEHICLE MOVEMENTS

## 3.1 Overview

3.1.1 The justification for Hydrock's total HGV vehicle movements was extracted from a similar Solar Farm development in Uttoxeter Aston House Farm, Derbyshire Dales (Planning Ref: 14/00450/FUL). This solar farm development was based on a 45-hectare site with a 20MW size.

3.1.2 Taking into account the comments received from the consultation process and the comparable examples discussed below, the following section of this TSA presents a revised trip generation methodology, providing justification that even with increased total HGV movements, the impact on the local highway network would remain immaterial and the conclusions unchanged.

## 3.2 Consultation Feedback

3.2.1 Feedback from the consultation process has highlighted concerns on the submitted evidence on HGV movements in and out of the proposed development.

3.2.2 It has been commented that in comparison to projects of a similar scale and size to the proposed Green Farm development, the number of HGV movements predicted for the proposed Green Farm development is lower for both the delivery of Solar Panels and Mounting Frames and total HGV trips.

3.2.3 Contained in the comments from the consultation process was a table of comparisons as supportive evidence of the total HGVs required for the construction of solar farms of a similar size and scale to the proposed development.

## 3.3 Hydrock's Response

3.3.1 Hydrock have extracted and examined three of closest comparable solar farm developments that were provided as comparable evidence in the feedback from the consultation process. These three solar farm sites are illustrated in **Table 3.1** below.

Table 3.1 Comparison with other solar farms

| Site | LPA Area | LPA App Ref | Area (has) | Size (Mw's) | HGV Panels | HGV Frames | HGVs Total | Const'tion Period |
|---|---|---|---|---|---|---|---|---|
| Grange Farm, Inkersall | Newark/S DC | 19/01165 | 79.5 | 49.9 | 170 | 100 | 1240 | 25 Weeks |
| The Grange, Hawton | Newark/ S DC | 19/01408 | 102.9 | 49 | 170 | 100 | 1240 | 26 Weeks |
| White Cross, Sleaford | N Kesteven DC | 19/0863 | 50.3 | 32 | 167 | 128 | 1264 | 20 Weeks |
| Proposed Development (Green Farm) | Melton BC | 20/01182 | 74 | 49.9 | 115 | | 482 | 6 Weeks |

### *Average Daily HGV Movements*

3.3.2 Contained in the associated transport documentation for the aforementioned three comparable solar farm developments, there is also an average anticipated number of HGV movements per day provided within each report.

3.3.3 Within the Transport Statement produced by Hydrock, there is confirmation that all deliveries for the proposed Green Farm development will arrive within a six-week period. This equates to, on average, around eight deliveries (16 movements) per day by the largest vehicle.

3.3.4 Hydrock have undertaken a further calculation of the number of anticipated vehicular trips **per day** for the three comparable sites by using the anticipated length of construction period and associated operational hours, as illustrated in **Table 3.2** below.

Table 3.2: Anticipated HGV vehicular trips per day - Comparable Sites

| Site | Construction Period | Operating Hours | Operating Days | Total HGVs | HGV trips per Day provided in accompanying documents (Average) | Hydrock's Calculated provision of HGV trips per day (Average) |
|---|---|---|---|---|---|---|
| Grange Farm, Inkersall | 25 weeks | Monday to Friday 08:00-18:00hrs<br>Saturday 08:00-13:00hrs | 5.5 | 1240 | 15 deliveries per day (30 HGV movements) | **9 HGV movements** |
| The Grange, Hawton | 26 weeks | Monday to Friday 08:00-18:00hrs<br>Saturday 08:00-13:00hrs | 5.5 | 1240 | 15 deliveries per day (30 HGV movements) | **9 HGV movements** |
| White Cross, Sleaford | 20 weeks | Monday to Saturday 08:00-18:00 | 6 | 1264 | 20 deliveries per day (40 HGV movements) | **10 HGV movements** |
| Proposed Development (Green Farm) | 6 weeks | Monday to Friday 07:00-19:00 | 5 | 482 | 8 deliveries per day (16 HGV movements) | **16 HGV movements** |

3.3.5 The calculation undertaken to produce Hydrock's anticipated HGV vehicular trips per day is as follows:

$$\frac{Total\ HGVs}{(Construction\ Period\ x\ Operating\ Days)}$$

3.3.6 On this basis, Hydrock would assert that the daily vehicle trip generation associated with the proposed Green Farm development, in comparison to the above solar farm developments is not deemed to be inaccurate as the comparable examples range between 9-10 average HGV movements per day over a longer construction period and the proposed Green Farm Development is an average of 16 HGV movements.

### *Total HGV Movements*

3.3.7 In addition to the above, feedback received from the consultation process also included the following:

*"It seems likely that there could be at total of some 800+ HGV deliveries involved in the construction of the Barkestone proposal (x 2 for total movements)."*

3.3.8 Therefore, taking into account the above comment, Hydrock have undertaken further calculations to emphasise that even if the vehicle trip generation were to triple to the recommended 1600 total HGV movements suggested in the comment above, the development would still not have a material impact on the local highway network.

3.3.9 In addition, it is evident, with reference to the aforementioned three comparable sites, that the construction period for this scale of solar farm is circa 25 weeks.

3.3.10 Therefore, the revised calculation for the increase in total HGV vehicle trips and construction period is illustrated in **Table 3.3** below.

Table 3.3: Revised Total HGV Movements

| Proposed Development | Construction Period | Operating Hours | Operating Days | Total HGVs | HGV trips per Day (Average) |
|---|---|---|---|---|---|
| Green Farm | 25 weeks | Monday to Friday 07:00-19:00 | 5 | 1600 | 13 HGV movements |

3.3.11 As illustrated in **Table 3.3** above, if the construction period of the proposed Green Farm development is consistent with the aforementioned comparable solar farm applications of 25 weeks, the number of daily average HGV movements is a modest 13 movements per day.

3.3.12 While Hydrock understand that any type of disruption to the local highway network would be unwelcomed, it is felt that a balance between a modest increase in traffic for 25 weeks to facilitate 40 years of renewable energy, is a reasonable trade-off.

# 4. SUMMARY AND CONCLUSION

## 4.1 Summary

4.1.1 In summary, this TSA has illustrated that in comparison to the other solar farms, the daily impact of the proposed Green Farm development on the local highway network is very similar to the comparable solar farm developments that was highlighted in the feedback received from the consultation process.

4.1.2 Hydrock feel that the initial HGV movements outlined in the Transport Statement produced by Hydrock, (dated October 2020) were justifiable, however were based on a smaller scale development.

4.1.3 Notwithstanding, this TSA has illustrated a revised trip generation methodology and justified that even if the worst-case scenario of 1600 total HGV movements over a 25-week period was considered for this development, the material impact on the surrounding local highway network would be minimal.

4.1.4 In addition, as previously stated, while Hydrock understand that any type of disruption to the local highway network would be unwelcomed, it is felt that a modest increase in traffic for 25 weeks to facilitate 40 years of renewable energy, is a reasonable trade-off.

## 4.2 Conclusion

4.2.1 Given the above information, it is concluded that Hydrock, acting on behalf of the client, has adhered to provide evidence to all of the aforementioned comments / concerns raised from feedback from the consultation process.

4.2.2 Hydrock therefore believe that it has been demonstrated that the proposed Green Farm solar farm development would not lead to a severe impact to either the existing or the future forecast capacity on the local highway network.

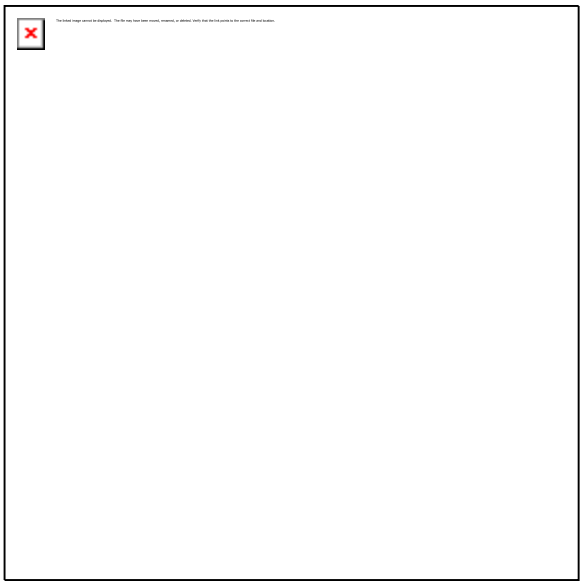
4.2.3 It is also again reiterated that the National Planning Policy Framework [NPPF] (February 2019) states that:

*"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."*

4.2.4 It is concluded that the development proposals are acceptable in highways and transport terms. There are no highways or transport related reasons upon which a refusal of the planning application would be justified.


# APPENDIX A

Form TP.52

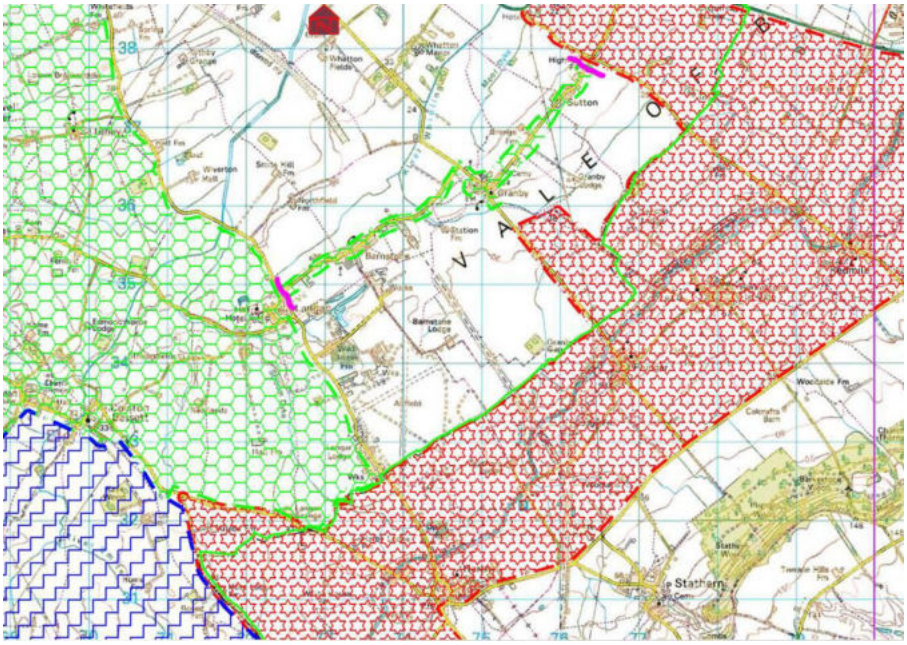


**TOWN AND COUNTRY PLANNING ACT**
HIGHWAY REPORT ON PROPOSALS FOR DEVELOPMENT

| | | | |
|---|---|---|---|
| **DISTRICT:** | Melton | Date received | 27/11/2020 |
| **OFFICER:** | Andrew Cunningham | | |
| **PROPOSAL:** | Installation of a solar farm comprising ground mounted solar PV panels with a net installed generating capacity (AC) of up to 49.9MW, including mounting system, battery storage units, inverters, underground cabling, stock proof fence, CCTV, internal tracks and associated infrastructure, landscaping and environmental enhancements for a temporary period of 40 years and a permanent grid connection hub | D.C. No. | 20/01182/FUL |
| **LOCATION:** | Land East Of Jericho Covert Jericho Lane Barkestone Le Vale | | |
| **APPLICANT:** | N/A | | |

Further to our previous comments, the Highway Authority has received clarification on the weight limits in the vicinity of the site. I have been informed that the proposed route through Granby village is not possible as it would go through an Environmental weight limit (EWL).

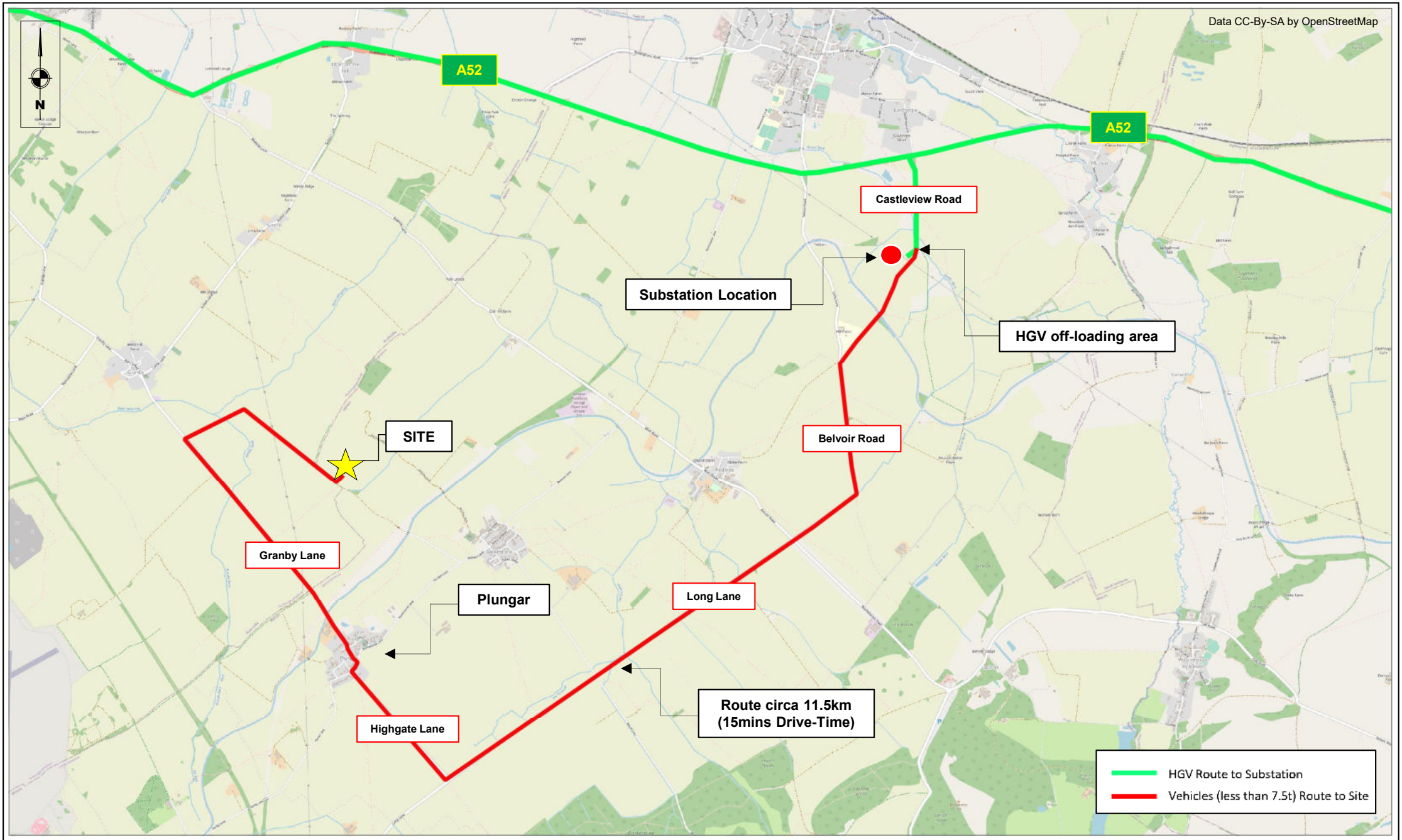
Please see the screen shot showing the EWL's in the area and the separate EWL for Granby, the Langar Granby Sutton road. (pink lines at the ends of this EWL).




Taking this into account, the applicant will need to explore alternative routes for construction vehicles to access the site.

DS
Principal Development Control Officer
11/12/20


# APPENDIX B




Hydrock

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|---|---|---|---|---|---|---|---|---|---|
| Project Title: Green Farm Solar Farm | Drawing Title: HGV Routing Plan | Job Number: C-16421 | By: SG | Rev | Description | Date | By | Drawing No.: 0001 |
| | | Date: 02.03.2021 | Checked: SD | - | - | - | - | |
| | | Scale: NTS | Status: - | - | - | - | - | Figure: 1 |
| | | | | - | - | - | - | |
| | | | | - | - | - | - | |