



# Windy Ridge Quarry, Cartworth Moor Road, Holmfirth

Transport Assessment

August 2022

1769(B)

Paragon Highways  
Office 20/21 The Rear Walled Garden, Nostell  
Estate

Wakefield WF4 1AB

☎ 01924 291536

✉ [mail@paragonhighways.com](mailto:mail@paragonhighways.com)  
[paragonhighways.com](http://paragonhighways.com)



## Quality Management

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| Prepared by | PAH          |            |            |            |
| Checked by  | JJH          |            |            |            |

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## **1.0 Introduction**

- 1.1.1 Paragon Highway Consultants have been appointed to prepare this Transport Assessment to support a planning application to form a new access onto Cartworth Moor Road and an extension to the quarry for the continued extraction of sandstone minerals and restoration of the land at Windy Ridge Quarry, Cartworth Moor Road, Cartworth Moor, Holmfirth. Appendix A shows the site location in relation to the local highway network.
- 1.2 The site has the benefit of planning permission (planning application reference 2020/70/92410/W) to extract sandstone and import fill material (along with some recycling of the infill material for exportation) until 2028 with a maximum of 16 HGV loads per day (8 in – 8 out). The current application would seek to increase the number of daily trips to a maximum number of 30 and allow for the extraction of sandstone for the next 12 years and importation of infill material for the following 10 years, with waste recycling operations continuing throughout the 22 year period.
- 1.3 The proposals are to extend the life of the quarry and to increase HGV movements to up to 30 per day. The proposals also include the provision of a new site access. Highway improvements are also proposed along Cartworth Moor Road in the form of additional HGV passing places and surface repair works between the White Gate Road/Cartworth Moor Road junction and the site access.
- 1.4 If approved the existing access will revert to Bridleway use and field access only i.e. removing the HGV trips associated with the quarry.
- 1.5 This Transport Assessment considers the site access and suitability of the local highway network, including details on the accident record and provides suitable justification to the LPA that the HGV restrictions can be relaxed to allow further HGV movements associated with the quarry operations. This Transport Assessment demonstrates that the proposed increase in movements and the formation of a new access to the site should be acceptable in highway safety terms.

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## **2.0 Existing Situation**

### **2.1 Site Description**

- 2.1.1 The site is located within Holmfirth some 2km southwest of the town centre and around 1km southeast of the settlement of Holmbridge. The current site occupies around 1.9 hectares of quarry workings and is currently accessed from an unmade track that bounds the site to the north. The site is bounded by grazing land to the east and south, and White Gate Road to the west. A site location is shown at Appendix A.
- 2.1.2 The quarry has operated over many years producing around 1350 tonnes of sandstone used for block, walling, paving and graded stone per annum. It also provides around 2650 tonnes of masonry stone per annum.
- 2.1.3 The current planning permission (planning application number 2020/70/92410/W) was granted in 2021 and allows for the continued extraction of sandstone minerals and restoration of the land with a maximum of 8 HGV loads per day (16 two way). The current permission allows for the quarry to be restored to agricultural use by means of infill and to recycle construction, demolition and excavated waste. The current permission will allow workings until 2028, allowing a back fill volume of some 100,000m<sup>3</sup> with 20% recoverable aggregate for export.
- 2.1.4 The HGV traffic will use the new access onto Cartworth Moor Road and will travel southeast to access the A616 Sheffield Road via Linshaws Road, Bare Bones Road, Flight Hill, Law Common Road, and Penistone Road (B6106). Whilst there is no strict routing for HGVS (other than the previous prohibition of using White Gate Road) this route is the only feasible route for HGV quarry traffic given the limited opportunities for HGVs to use other routes given the layout, widths, and alignments of these alternative routes.

### **2.2 Local Highway Network**

- 2.2.1 The site is currently accessed from an existing track that connects the quarry with Cartworth Moor Road to the east. The track contains a compacted stone surface and generally ranges between 3m and 3.5m in width and is therefore of single width. There are two junction areas prior to reaching the far west side quarry entrance that can be used as informal passing places. The track is around 600m in length and travels in a westerly direction from Cartworth Moor Road.



### **Existing Quarry Access Track**

- 2.2.2 The track forms part of the public right of way network (HOL/94/10) and is a bridleway that runs between Cartworth Moor Road and White Gate Road. It is signed from Cartworth Moor Road and White Gate Road and along the HGV access route, it contains grass verges on both sides providing step off areas for pedestrians and cyclists should a HGV be travelling along the track.
- 2.2.3 The track joins Cartworth Moor Road via an unmarked priority junction. Visibility at the junction is good given the alignment of Cartworth Moor Road and are considered to be proportionate to the general traffic speeds experienced along the road.
- 2.2.4 Cartworth Moor Road is a local access road that provides access to a small number of commercial and farmstead properties in addition to the application site and Hillhouse Edge Quarry. It is subsequently subject to light traffic volumes throughout the day. Cartworth Moor Road is a two-way single carriageway road with grass verges provided on both sides. The first 350m length of this road south from the existing site access track contains a bituminous and sealed surface that is in fair condition. The carriageway width is generally between 4.4m and 5.0m and provides good intervisibility for approaching vehicles to position at wider areas to allow for two-way flow. Further to the south the road changes to a compacted stone surface that ranges between 3.4m and 6.6m in width. There is currently very little opportunity for opposing vehicles to simultaneously pass until the road meets White Gate Road/ Linshaws Road junction around 1km further south.

- 2.2.5 From the point where Cartworth Moor Road deviates from a bitumen surface to compacted stone surface, there are only a total of two passing places where HGVs can pass one another along the full 1km length. One of the passing places currently has a width of around 6.0 and the other 6.6m. There is some partial widening approximately half way down the track which has a width of approximately 5.1m which allows for a car to pass an HGV but not for two HGVs to pass.
- 2.2.6 There are significant stretches between the passing places along Cartworth Moor Road, proposals for additional passing places have been put forward as part of the application. Whilst the road contains an unmade surface for the majority of its length it does form part of the highway network and is maintained in character.



**Cartworth Moor Road – South**

- 2.2.7 Cartworth Moor Road joins White Gate Road via an unmarked priority junction. White Gate Road joins with Linshaws Road and Bare Bones Road as a continuous route between Cartworth Moor Road and Dunford Road some 2.58km in length. These roads do not contain any frontage development and are subject to light traffic volumes throughout the day.



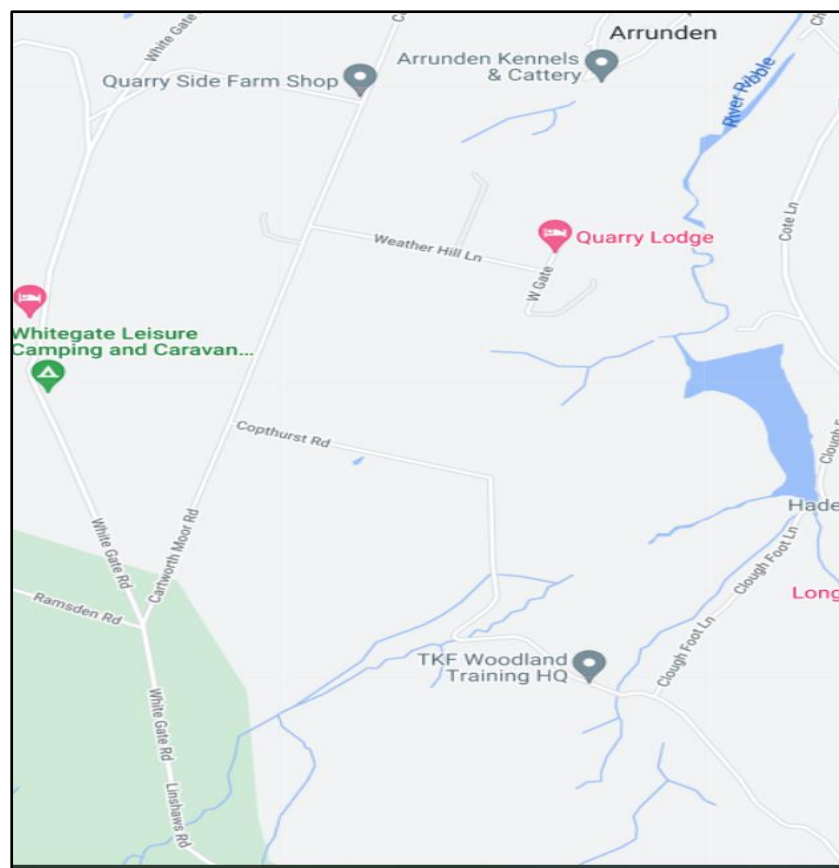
**Cartworth Moor Road/White Gate Road Junction**

- 2.2.8 The carriageways of White Gate Road, Linshaws Road and Bare Bones Road are generally between 5 and 5.5m allowing for the majority of its length to allow an HGV to pass a car or for opposing HGVs to simultaneously pass. It is acknowledged that there are narrow sections of around 4.1m in some isolated areas, however these are generally preceded by wide sections of carriageway that can be up to 6m wide, with good intervisibility between opposing motorists. The carriageway is in fair condition and considered to be suitable for its day-to-day use. The road contains grass verges on both sides and does not contain any streetlighting. Subsequently, the road is subject to the national speed limit (60mph) although actual traffic speeds are much lower given the layout of the road.
- 2.2.9 Bare Bones Road meets Dunford Road via a priority junction complete with give way markings and signing. Dunford Road is a much higher status road and contains a wider two-way single carriageway of around 7.3m in width and contains grass verges on both sides. The road is subject to the national speed limit, and in the vicinity of the Bare Bones Road junction does not contain street lighting. Dunford Road provides a connection between Hade Edge and Holmfirth to the north and Dunford Bridge and the A628 to the south, the latter of which is a primary route that connects the towns of Barnsley and Pontefract to the east with Greater Manchester to the west and is one of the key routes across the Pennines. Dunford Road is generally subject to light traffic volumes with a noticeable increase during the network peak periods.

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- 2.2.10 Dunford Road also provides a connection to Flight Hill opposite the Bare Bones Road junction. This route connects with Law Common Road and provides a direct route to the B6106 Penistone Road, which also provides a good connection to the A616 and the A628 to the southeast.

### 3.0 Road Traffic Accidents

- 3.1.1 The personal injury accident records for the 5-year period up to June 2021 have been obtained from the Crashmap website ([crashmap.co.uk](https://crashmap.co.uk)). The study area includes the lengths of highway within the vicinity of the site and the route leading to and including the junction with Dunford Road, and therefore includes Cartworth Moor Road, White Gate Road, Linshaws Road and Bare Bones Road totalling some 4.25km of highway. The search area is considered to be robust and allows a suitable appraisal of the road safety impact of the quarry operations on the adjacent highway network.
- 3.1.2 From the accident study it has been found that there have been no reported injury accidents during the 5-year study period on the rural roads and junctions mentioned above. Therefore, the site access arrangement and adjacent local highway network appears to operate safely for all traffic including HGVs associated with Windy Ridge Quarry or the neighbouring Hillhouse Edge Quarry.



**Accidents (Crashmap.co.uk) Survey Area**

- 3.1.3 The reported injury accident record along the access roads used by quarry traffic is very good and does not indicate a road safety problem that would warrant treatment of be a cause for concern as a result of the slight change in HGV traffic volumes using the route between the site and Dunford Road.

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## **4.0 Development Proposals**

- 4.1.1 The proposals are to extend the quarry area with the inclusion of the field to the south of the existing quarry. The development will also include for the provision of a dedicated vehicular access directly onto Cartworth Moor Road. The existing point of access to the quarry can then revert back to being a bridleway only. The current planning approval allows for a maximum of 16 HGV movements per day, the new proposals also increase the maximum number of trips to 30 per day.
- 4.1.2 The stone recovery should be completed within the next 12 years, with a further 10 years for backfill operations. The recycling operations will continue for the 22 year period.
- 4.1.3 The proposed dedicated site access onto Cartworth Moor Road will be laid out with a hardened surfaced for its initial 20 metres and more informally with a crushed stone road surface thereafter up to its connection to the quarry.
- 4.1.4 The new access will be laid out to accommodate 2-way traffic flow at the passing bay (for HGV's) i.e with a carriageway width of 4.1 metres widening to 6m at the proposed passing bay area. The initial 20m of the access will be 7.3m wide and will contain a 10m radius on the south side and a reduced 8m radius on the north side. All HGVs accessing the site shall travel to and from the south along Cartworth Moor Road. The proposed geometry of the site access can easily accommodate HGVs associated with the quarry operations. For other traffic associated with the quarry (cars and LGVs) there are no restrictions on the routes taken along the highway network to reach the quarry.
- 4.1.5 Due to the width and condition of Cartworth Moor Road actual traffic speeds are far lower than the national speed limit currently in place. Whilst it is envisaged that vehicles would travel less than 30mph along the road, to provide some comfort to the LHA visibility splays of 2.4m x 120m are proposed on both sides of the access meeting the requirements within Design Manual for Roads and Bridges for 40mph speed.
- 4.1.6 The proposed access arrangements can be found at Appendix B.
- 4.1.7 As part of the application, highway improvement works are proposed on Cartworth Moor Road to mitigate the increase in HGV movements in the form of additional passing places to allow HGVs to pass one another and track resurfacing work, where deemed necessary by the LPA.

#### **4.1.8 Passing Places (Existing Highway)**

- 4.1.9 Cartworth Moor Road runs for approximately 1km between the White Gate Road junction and the existing Quarry access. Along this length of highway there are only 2 areas with a suitable width to allow two HGVs to pass one another.



**Cartworth Moor Road – Existing Passing Place**

- 4.1.10 As part of the overall development proposals, it is proposed to add an additional two passing places providing a carriageway width of 5.5m, which meets the width stated in the Kirklees Highway Design Guide for two HGVs to pass one another. To match the existing materials on Cartworth Moor Road, the proposed passing places will be made up of crushed stone construction.
- 4.1.11 Cartworth Moor Road is a straight highway that provides good intervisibility along its length. The proposed passing places have been positioned so an appropriate distance between two areas where HGV's can pass is provided. This should not only improve highway safety for HGV traffic it will also make Cartworth Moor Road much safer for the private vehicles associated with the small number of commercial and farmstead properties that gain access along the route. The proposals indicating the proposed passing places can be seen at Appendix C.
- 4.1.12 Carriageway Surface Repair**

- 4.1.13 Cartworth Moor Road has been subject to HGV use for a considerable number of years and in places the crushed stone and soil has begun to wear away causing large pot holes and an uneven surface to form along the track.



**Cartworth Moor Road – Existing uneven surface**

- 4.1.14 As part of the application proposals, isolated surface restoration work is proposed along Cartworth Moor Road. This will be in the form of crushed stone to match the existing passing places and any protruding rock will be removed and the void filled with appropriate matching material.

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## **5.0 Traffic Impact**

### **5.1.1 Existing Traffic**

5.1.2 The current planning approval (planning application reference 2020/70/92410/W) restricts the hours of operation to between 0800- and 1730-hours Monday to Friday, and between 0800 and 1230 hours on Saturdays (planning condition 32(a). Conditions 6 of the approval restrict the number of HGVs to no more than 16 per day (8 in and 8 out).

5.1.3 The existing site generates a maximum of 2 HGV trips per hour associated with Windy Ridge Quarry. The quarry vehicles differ depending on what is being transported. The transport of block stone is transported in 25 tonne loads, with the walling, paving, and garden stone transported in 15 tonne loads. The masonry stone and imported material is generally exported/ imported in 20 tonne loads, using a rigid tipper waggon.

5.1.4 There is no evidence that the HGV traffic associated with the quarry, or the adjacent quarries causes a problem on the local highway network given the good road safety record over the 5-year study period, and that notwithstanding the status of some of the roads, they appear suitable to enable the continued quarry operations at the site and neighbouring quarry.

### **5.1.5 Proposed Traffic**

5.1.6 The existing planning approval for Windy Ridge Quarry expires in 2028. To improve productivity and efficiency of quarry operations at the site, there is a requirement to increase the number of HGVs accessing the site, as the existing planning conditions are considered to be outdated, onerous and detrimental to productivity.

5.1.7 During the first 12 year extension period the quarry would export 10 loads of stone per day, with 5 loads of waste material imported per day, and 4 loads of recycled materials exported (as return loads). Therefore, should all imported vehicles have return loads this would provide a maximum of 30 HGV movements per day.

5.1.8 Once stone extraction is completed, for the following 10 year period there will be 15 loads per day of imported waste material and up to 15 loads out of recycled material (return loads). This would provide a maximum of 30 HGV movements per day for the infill operations once stone extraction is completed.

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- 5.1.9 Having regard to the layout of the site access and local highway network along the HGV route it is considered that a dedicated route from the quarry site directly onto Cartworth Moor Road can only improve highway safety by removing the potential impact between HGV's and horse riders using the existing bridleway (HOL/94/10).
- 5.1.10 It must also be acknowledged that the current route followed by the drivers and the good road safety record along the route and in the general locale, that to increase the number of HGV trips to a maximum number of 30 trips per day (15 in and 15 out) should have no impact upon highway safety.
- 5.1.11 This increase in HGVs trips would equate to an extra 1 or 2 HGV movements (generally a 20-tonne rigid vehicles) per hour using the local roads and gaining access to the site (via the new arrangement). This would generate a total of 3 to 4 HGV trips per hour associated with Windy Ridge Quarry.
- 5.1.12 The proposals will therefore increase the total HGV quarry traffic from 2 trips per hour to between 3 or 4 trips per hour. This increase of 1 to 2 HGVs per hour would be generally unrecognisable from the level of HGV traffic already experienced along the route linking the quarry with Dunford Road.
- 5.1.13 Therefore, considering the layout of the local highway network, which for the majority contains a suitable width and construction to cater for the HGV traffic together with the proposed addition of passing places, the increase in the number of daily HGV trips should not be a significant cause of concern for the LPA.
- 5.1.14 The road safety record along the route and within the locale does not indicate a road safety problem. The proposed slight increase in daily HGV movements associated with the quarry would not be material or significant and has been balanced with the appropriateness of the adjacent highway network and proposed improvements to same and to the construction of a dedicated site access.

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## **6.0 Conclusion**

- 6.1.1 This report presents the proposals to increase the number of HGVs transporting material associated with Windy Ridge Quarry, Cartworth Moor Road, Holmfirth.
- 6.1.2 The report also presents the proposals to construct a dedicated site access onto Cartworth Moor Road, whilst retaining the existing site access for bridleway users only as per its existing status.
- 6.1.3 The report concludes that both capacity and safety elements of the proposals are acceptable, as the proposed slight increase in daily HGV movements associated with the quarry would not be material or significant and has been balanced with the appropriateness of the adjacent highway network, the new site access arrangements and highway improvements to Cartworth Moor Road.
- 6.1.4 It is therefore concluded that the development is considered acceptable, and that there are no highway safety or efficiency reasons why planning consent for the proposed development should not be granted.

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# Appendix A

## Location Plan



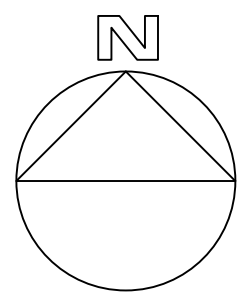
**Legend:**

-  Site Location

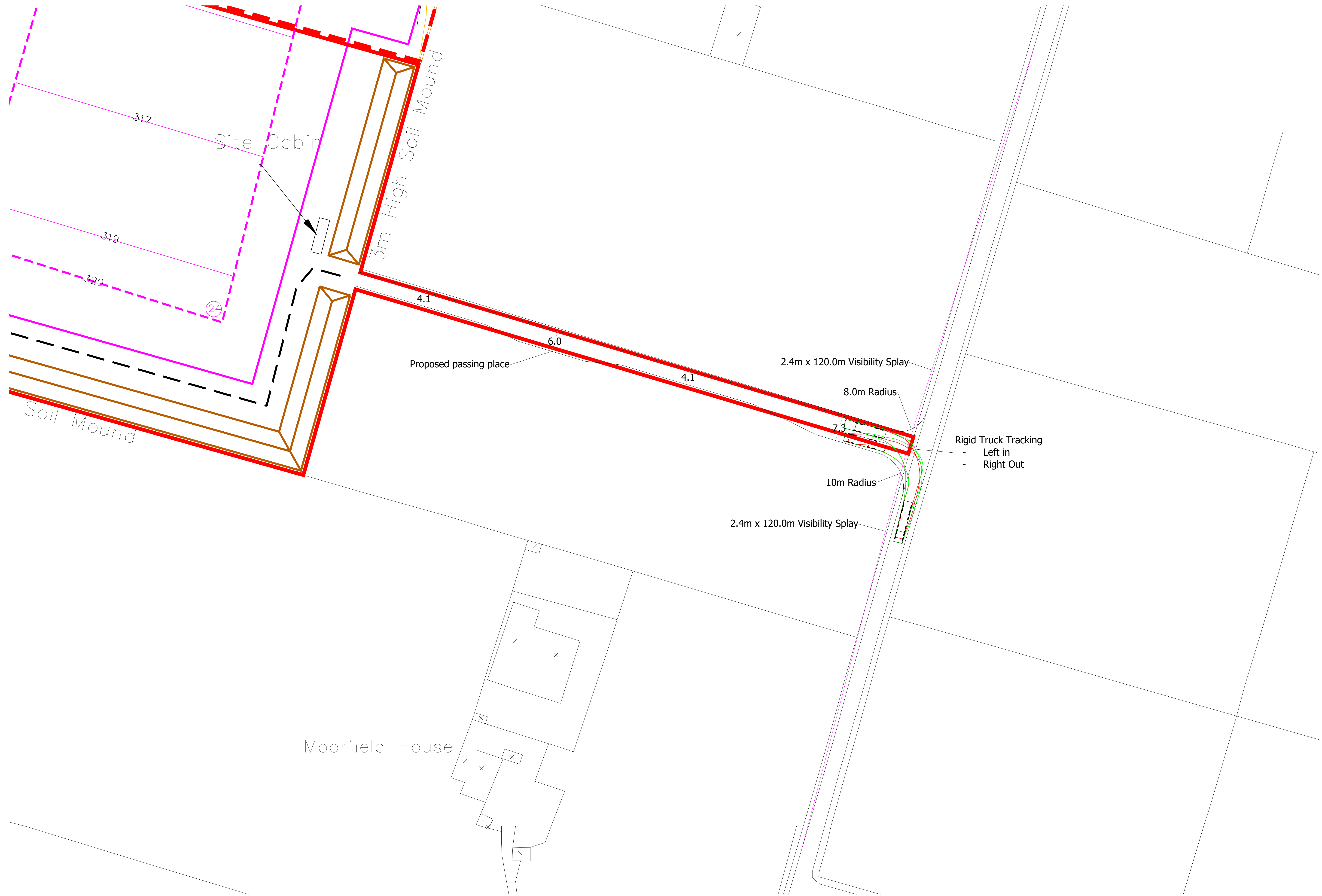
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# Appendix B

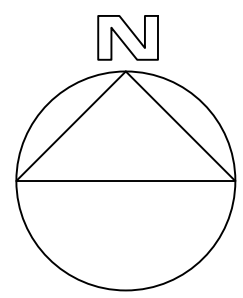
## Proposed Access Arrangements



GENERAL NOTES  
This drawing shows the provisional design only and is subject to Local Authority approval. This drawing should not be scaled for setting out purposes unless specified.  
  
This drawing is based on a topographical/ordnance survey provided by others.



| REV                           | DATE | DESCRIPTION |
|-------------------------------|------|-------------|
| PROJECT                       |      |             |
| WINDY RIDGE QUARRY, HOLMFIRTH |      |             |
| TITLE                         |      |             |
| PRELIM ACCESS PROPOSAL        |      |             |
| SCALE                         |      |             |
| 1:1000 @ A1                   |      |             |
| DRAWING                       |      |             |
| 1769 201                      |      |             |
| DATE                          |      |             |
| 22.08.2022                    |      |             |



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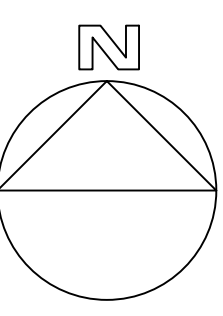


| REV                                           | DATE | DESCRIPTION |
|-----------------------------------------------|------|-------------|
| PROJECT                                       |      |             |
| WINDY RIDGE QUARRY, HOLMFIRTH                 |      |             |
| TITLE                                         |      |             |
| PRELIM ACCESS PROPOSAL<br>- INTERNAL TRACKING |      |             |
| SCALE                                         |      |             |
| 1:1000 @ A1                                   |      |             |
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| 1769 202                                      |      |             |
| DATE                                          |      |             |
| 22.08.2022                                    |      |             |

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# Appendix C

## Highway Improvements Drawing



GENERAL NOTES

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A 07.10.2021 ADDITIONAL NOTES ADDED

PROJECT

WINDY RIDGE QUARRY, CARTWORTH MOOR, HOLMFIRTH

TITLE

HIGHWAY IMPROVEMENTS DRAWING

SCALE

1:2500 @ A1

DRAWING

1769-101A

DATE

07.10.2021



PARAGON HIGHWAYS  
OFFICE 20/21 THE REAR WALLED GARDEN,  
THE NOSTELL ESTATE,  
WAKEFIELD WF4 1AB  
01924 291536 /  
MAIL@PARAGONHIGHWAYS.COM