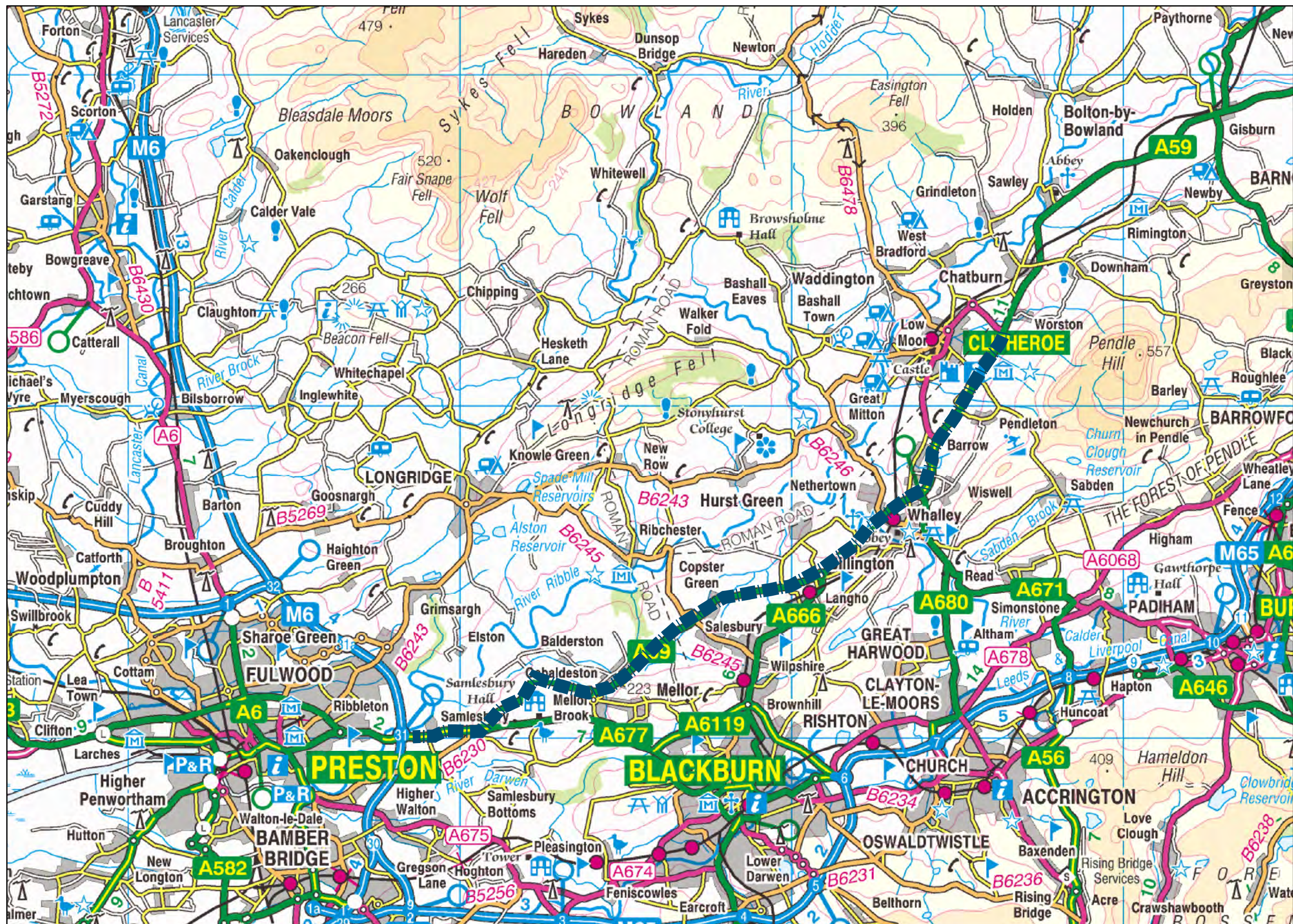


## Appendix A1 – Proposed Routes

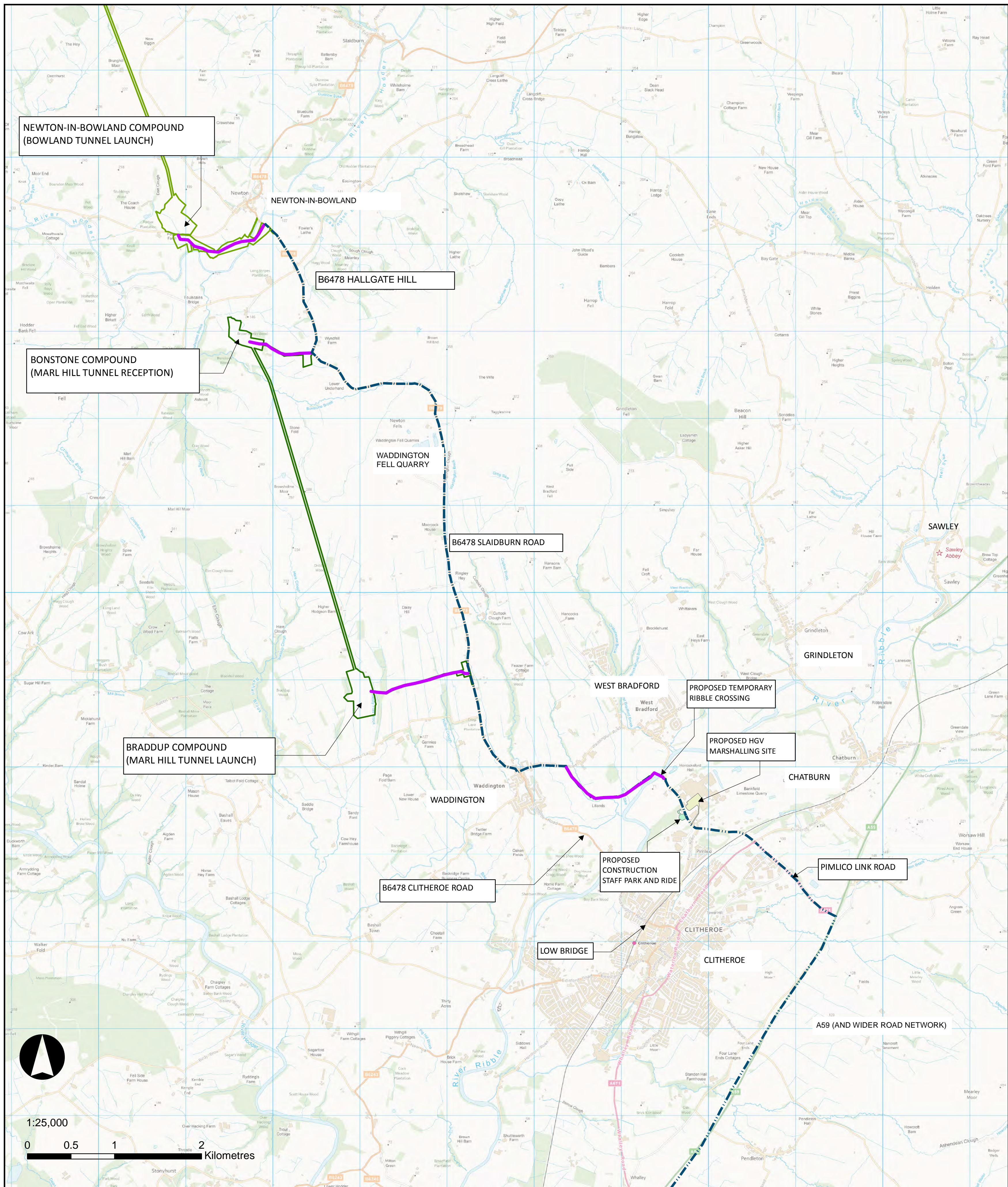
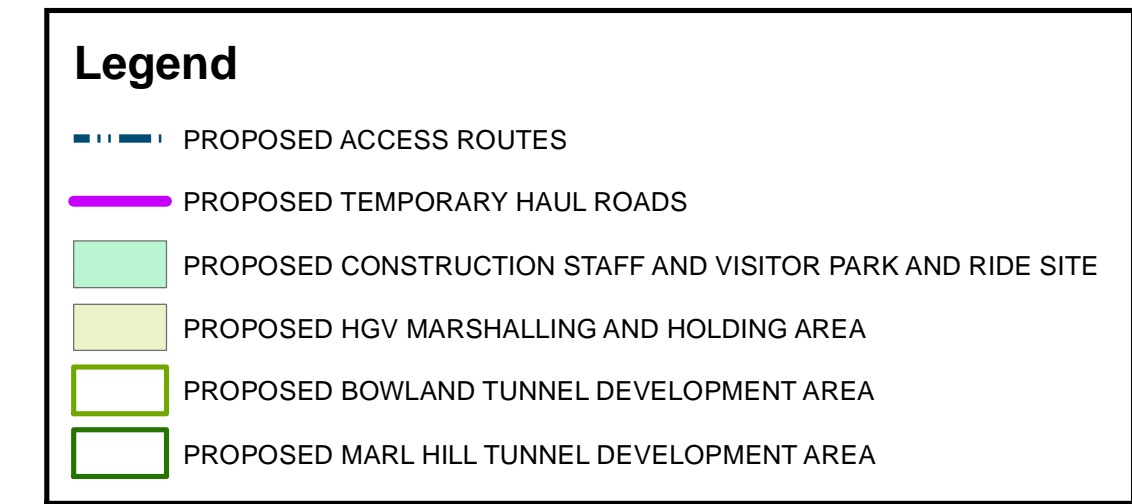
Figure A-1-01: Proposed Access Routes (MNA\_A-1-01)



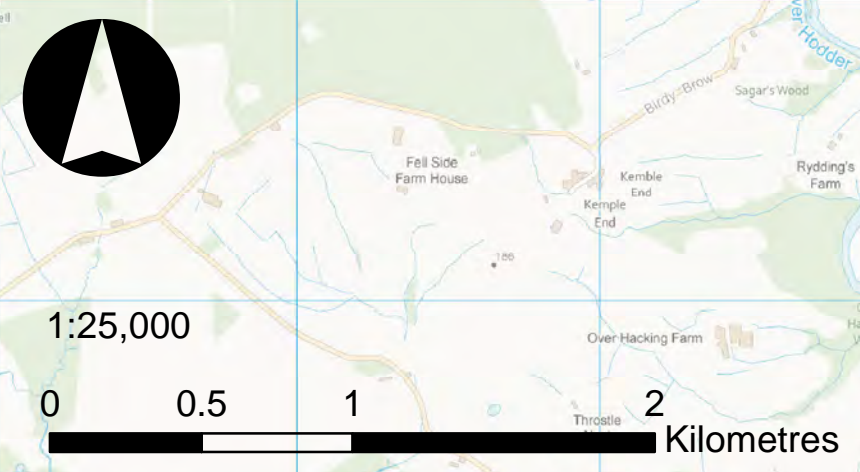
**APPENDIX A1**  
**FIGURE A-1-01: PROPOSED ACCESS ROUTES**



**PROPOSED ACCESS ROUTE LINKING THE M6 MOTORWAY NETWORK TO CLITHEROE**



**PROPOSED ACCESS ROUTES LINKING CLITHEROE TO PROPOSED CONSTRUCTION COMPOUNDS**



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 10002432.



## Appendix A2 – Daily Two Way Vehicle Movements

Figure A-2-01: Option 2 – Construction Phase 1 (MNA\_A-2-01)

Figure A-2-02: Option 2 – Construction Phase 2 (MNA\_A-2-02)

Figure A-2-03: Option 2 – Construction Phase 3 (MNA\_A-2-03)

Figure A-2-04: Option 2 – Construction Phase 4 (MNA\_A-2-04)

Figure A-2-05: Option 2 – Construction Phase 5 (MNA\_A-2-05)

Figure A-2-06: Transport Planning Summary (MNA\_A-2-06)







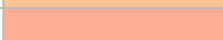

**APPENDIX A2 - FIGURE A-2-01**  
**OPTION 2 - CONSTRUCTION PHASE 1**  
 (Newton-in-Bowland Site Establishment)  
 Duration shall not exceed 1.25 years

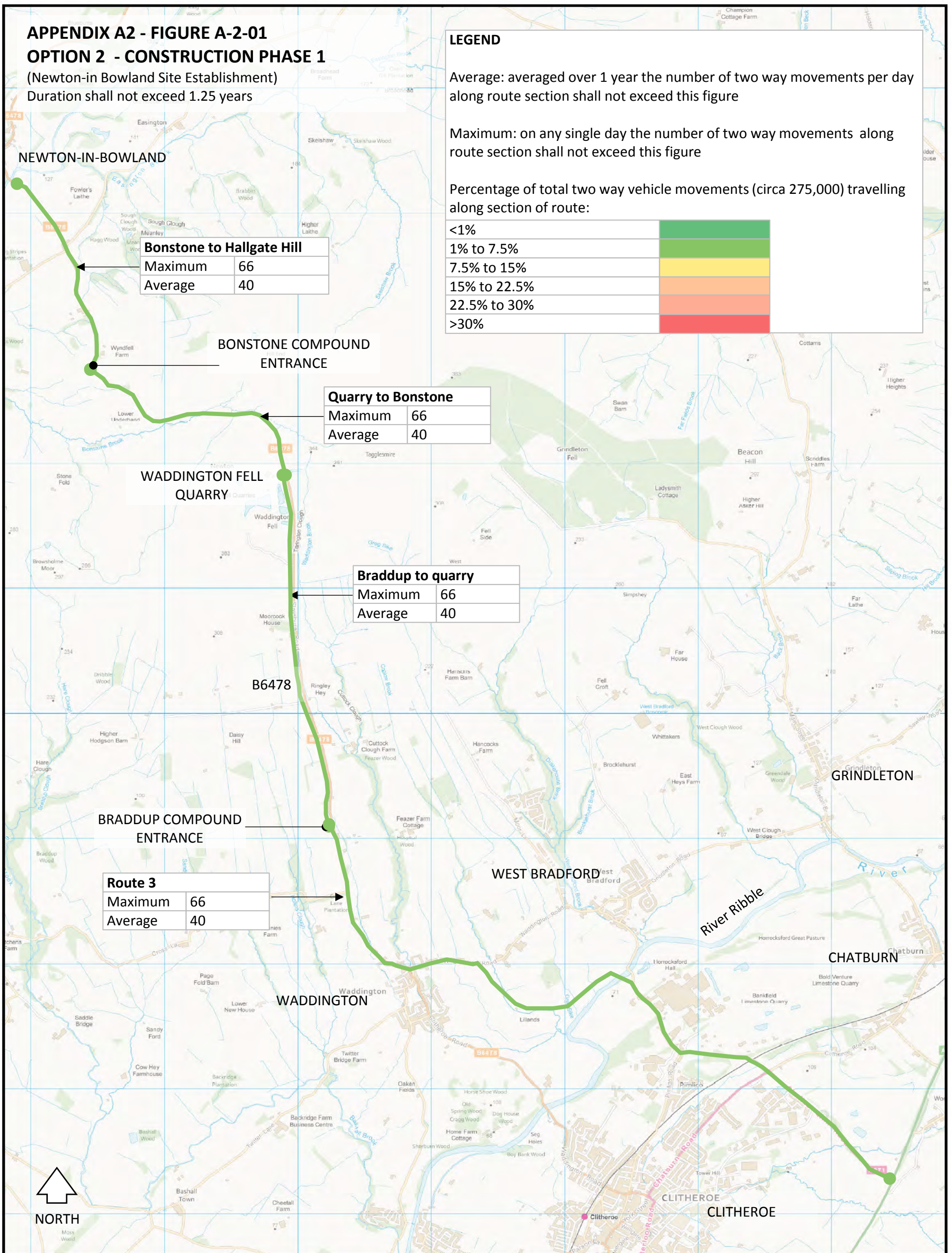
**LEGEND**

Average: averaged over 1 year the number of two way movements per day along route section shall not exceed this figure

Maximum: on any single day the number of two way movements along route section shall not exceed this figure

Percentage of total two way vehicle movements (circa 275,000) travelling along section of route:

<1%	
1% to 7.5%	
7.5% to 15%	
15% to 22.5%	
22.5% to 30%	
>30%	



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX A2 - FIGURE A-2-02**  
**OPTION 2 - CONSTRUCTION PHASE 2**







(Bowland tunnel Drive and Marl Hill Tunnel Site Establishment)  
 Duration shall not exceed 1.25 years

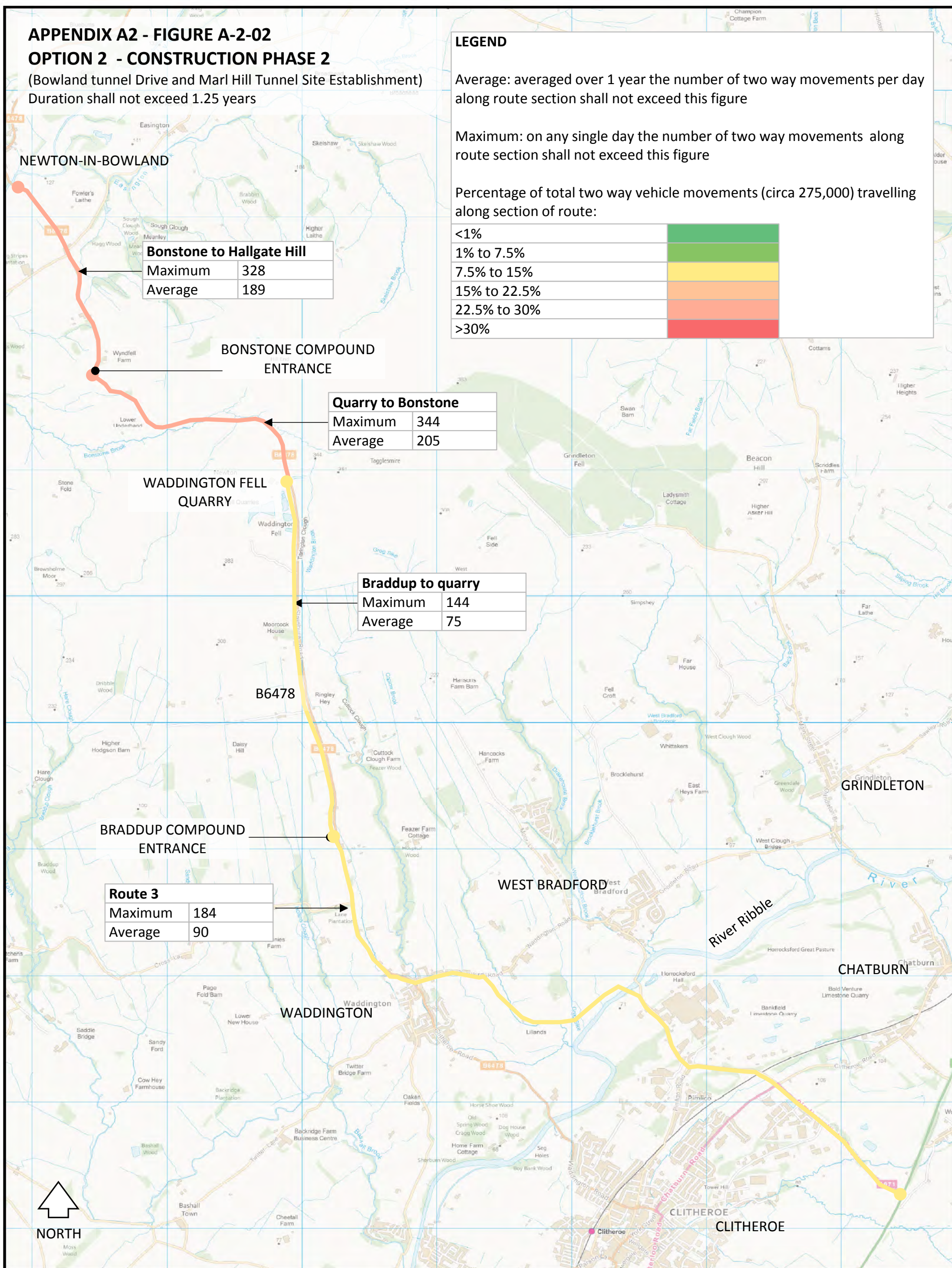
**LEGEND**

Average: averaged over 1 year the number of two way movements per day along route section shall not exceed this figure

Maximum: on any single day the number of two way movements along route section shall not exceed this figure

Percentage of total two way vehicle movements (circa 275,000) travelling along section of route:

<1%	
1% to 7.5%	
7.5% to 15%	
15% to 22.5%	
22.5% to 30%	
>30%	



Bonstone to Hallgate Hill	
Maximum	328
Average	189

Quarry to Bonstone	
Maximum	344
Average	205

Braddup to quarry	
Maximum	144
Average	75

Route 3	
Maximum	184
Average	90



NORTH

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.






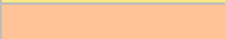

**APPENDIX A2 - FIGURE A-2-03**  
**OPTION 2 - CONSTRUCTION PHASE 3**  
 (Bowland Tunnel Drive and Marl Hill Tunnel Drive)  
 Duration shall not exceed 1.25 years

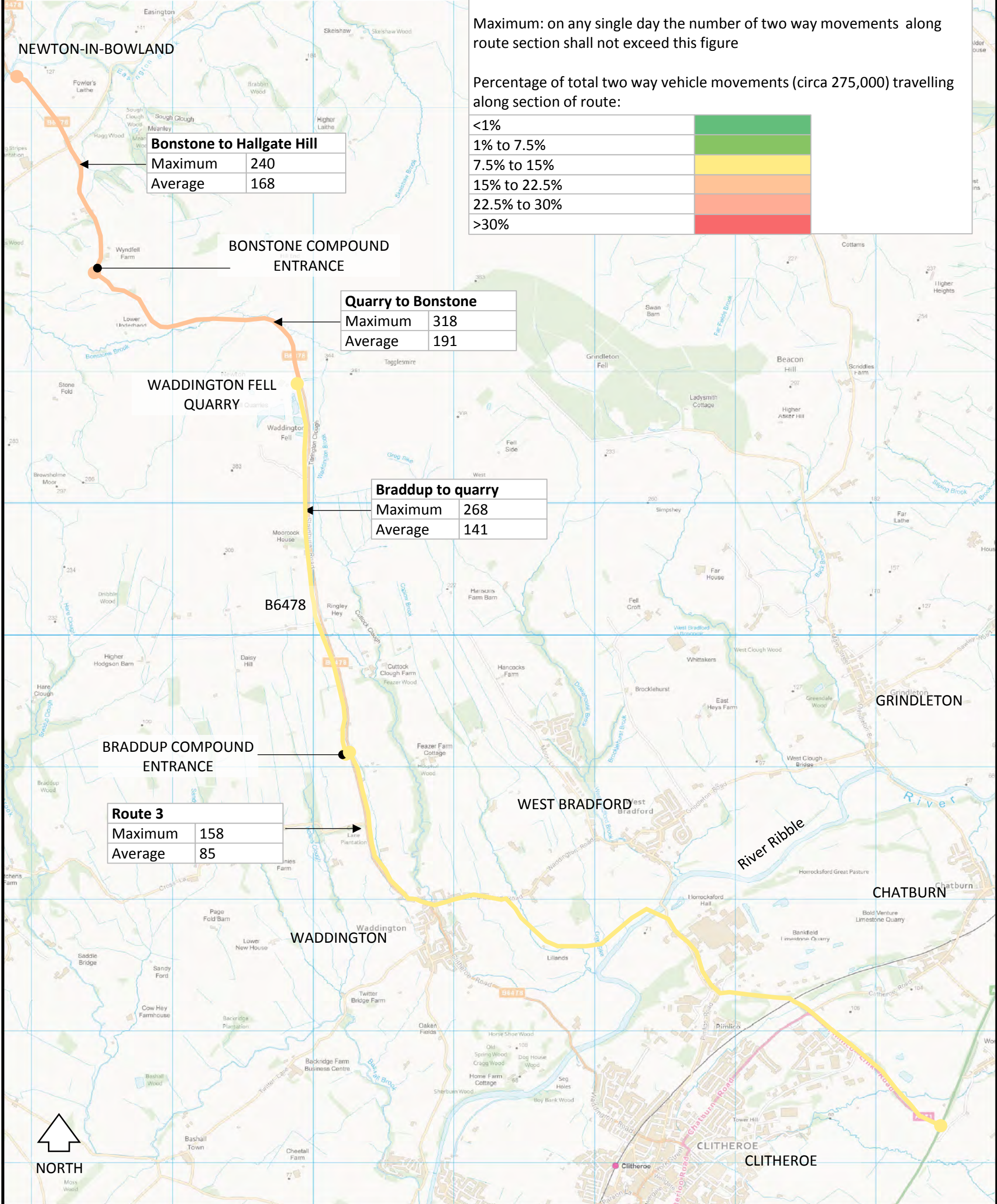
**LEGEND**

Average: averaged over 1 year the number of two way movements per day along route section shall not exceed this figure

Maximum: on any single day the number of two way movements along route section shall not exceed this figure

Percentage of total two way vehicle movements (circa 275,000) travelling along section of route:

<1%	
1% to 7.5%	
7.5% to 15%	
15% to 22.5%	
22.5% to 30%	
>30%	



Bonstone to Hallgate Hill	
Maximum	240
Average	168

Quarry to Bonstone	
Maximum	318
Average	191

Braddup to quarry	
Maximum	268
Average	141

Route 3	
Maximum	158
Average	85



NORTH

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX A2 - FIGURE A-2-04**

**OPTION 2 - CONSTRUCTION PHASE 4**

(Bowland Tunnel Drive and Marl Hill Tunnel Reinstatement)




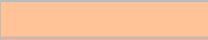


Duration shall not exceed 2 years

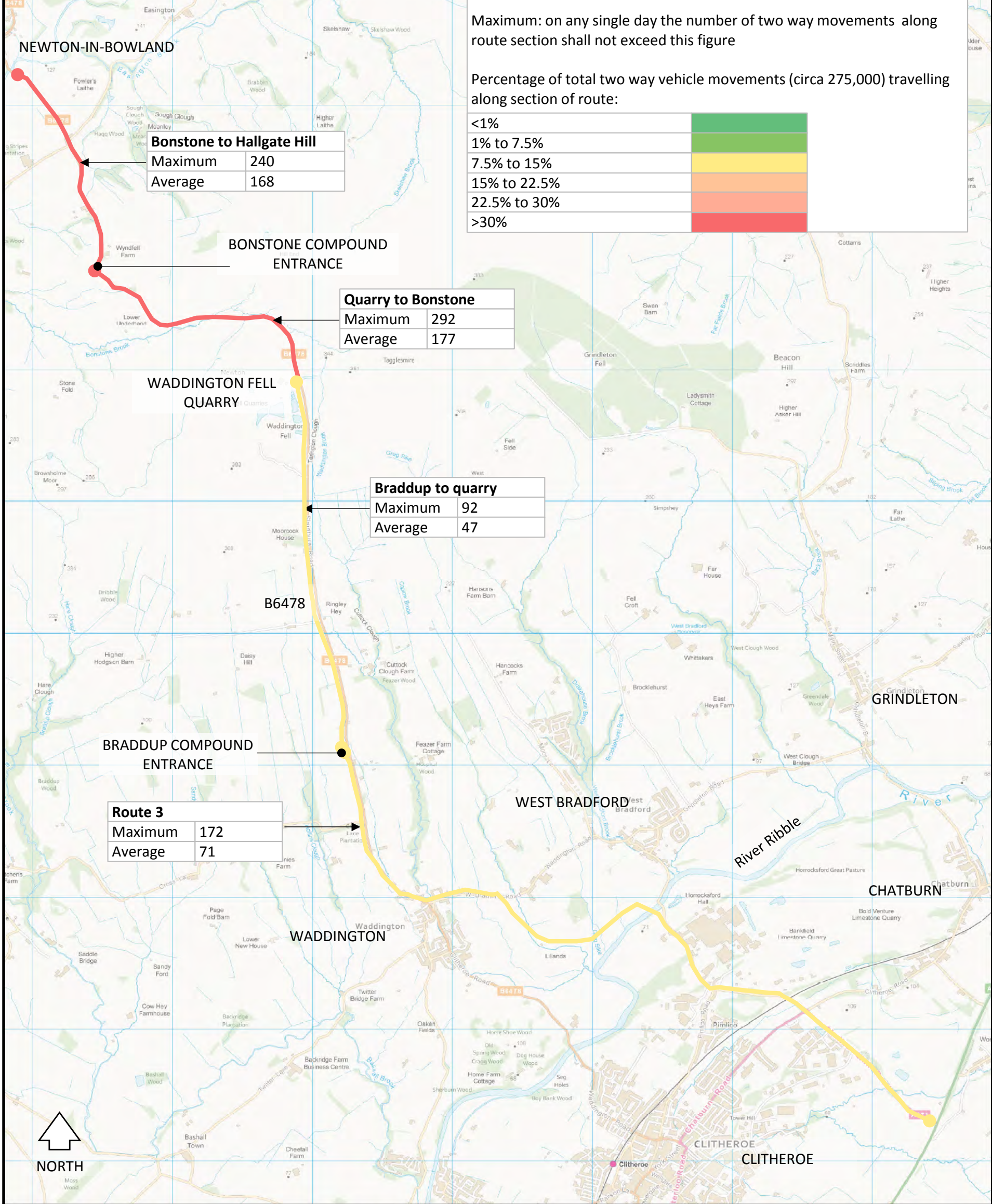
**LEGEND**

Average: averaged over 1 year the number of two way movements per day along route section shall not exceed this figure

Maximum: on any single day the number of two way movements along route section shall not exceed this figure

Percentage of total two way vehicle movements (circa 275,000) travelling along section of route:

<1%	
1% to 7.5%	
7.5% to 15%	
15% to 22.5%	
22.5% to 30%	
>30%	



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.






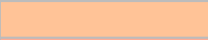


**APPENDIX A2 - FIGURE A-2-05**  
**OPTION 2 - CONSTRUCTION PHASE 5**  
 (Bowland Tunnel Drive Reinstatement)  
 Duration shall not exceed 2 years

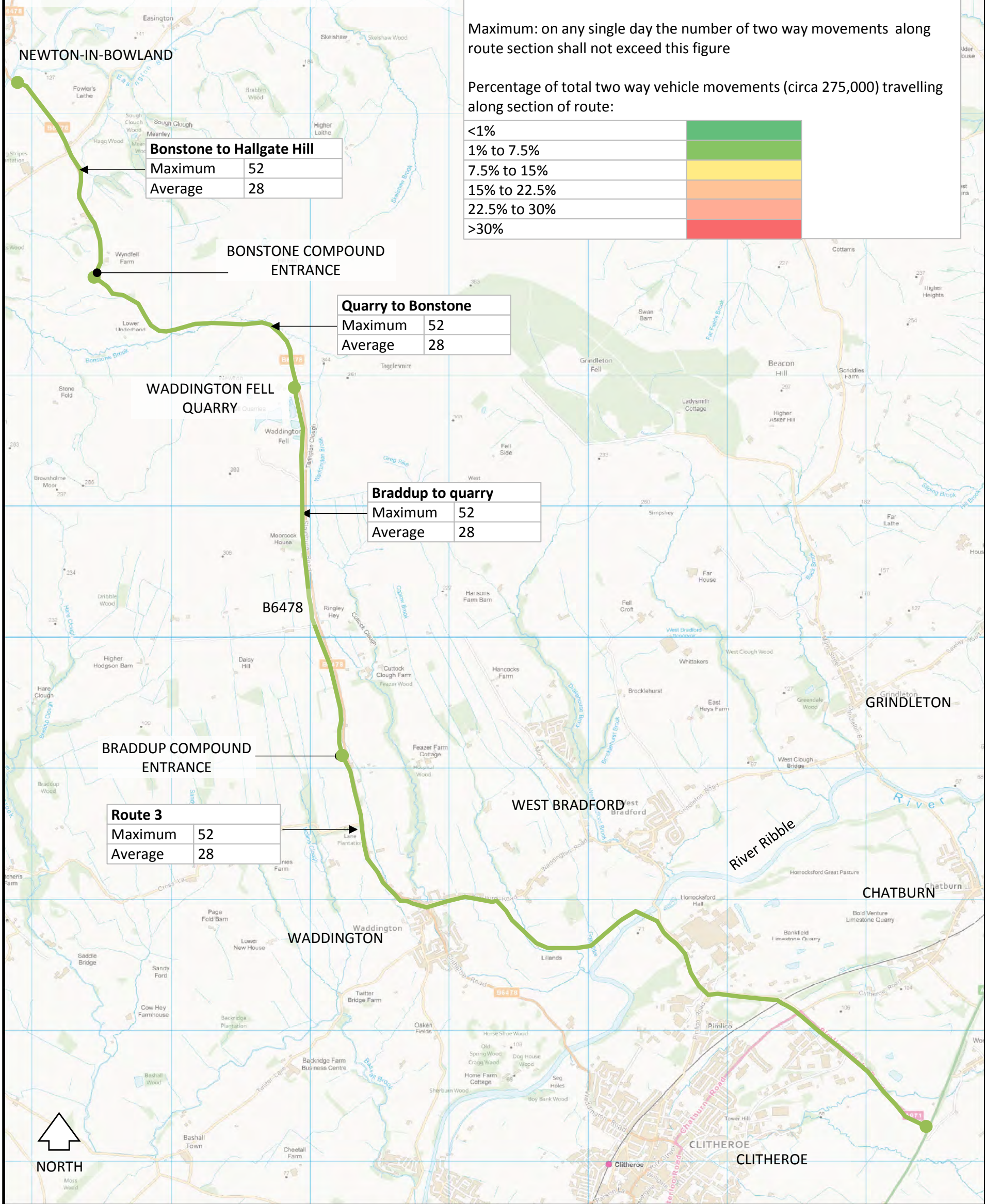
**LEGEND**

Average: averaged over 1 year the number of two way movements per day along route section shall not exceed this figure

Maximum: on any single day the number of two way movements along route section shall not exceed this figure

Percentage of total two way vehicle movements (circa 275,000) travelling along section of route:

<1%	
1% to 7.5%	
7.5% to 15%	
15% to 22.5%	
22.5% to 30%	
>30%	



**Bonstone to Hallgate Hill**

Maximum	52
Average	28

**Quarry to Bonstone**

Maximum	52
Average	28

**Braddup to quarry**

Maximum	52
Average	28

**Route 3**

Maximum	52
Average	28



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



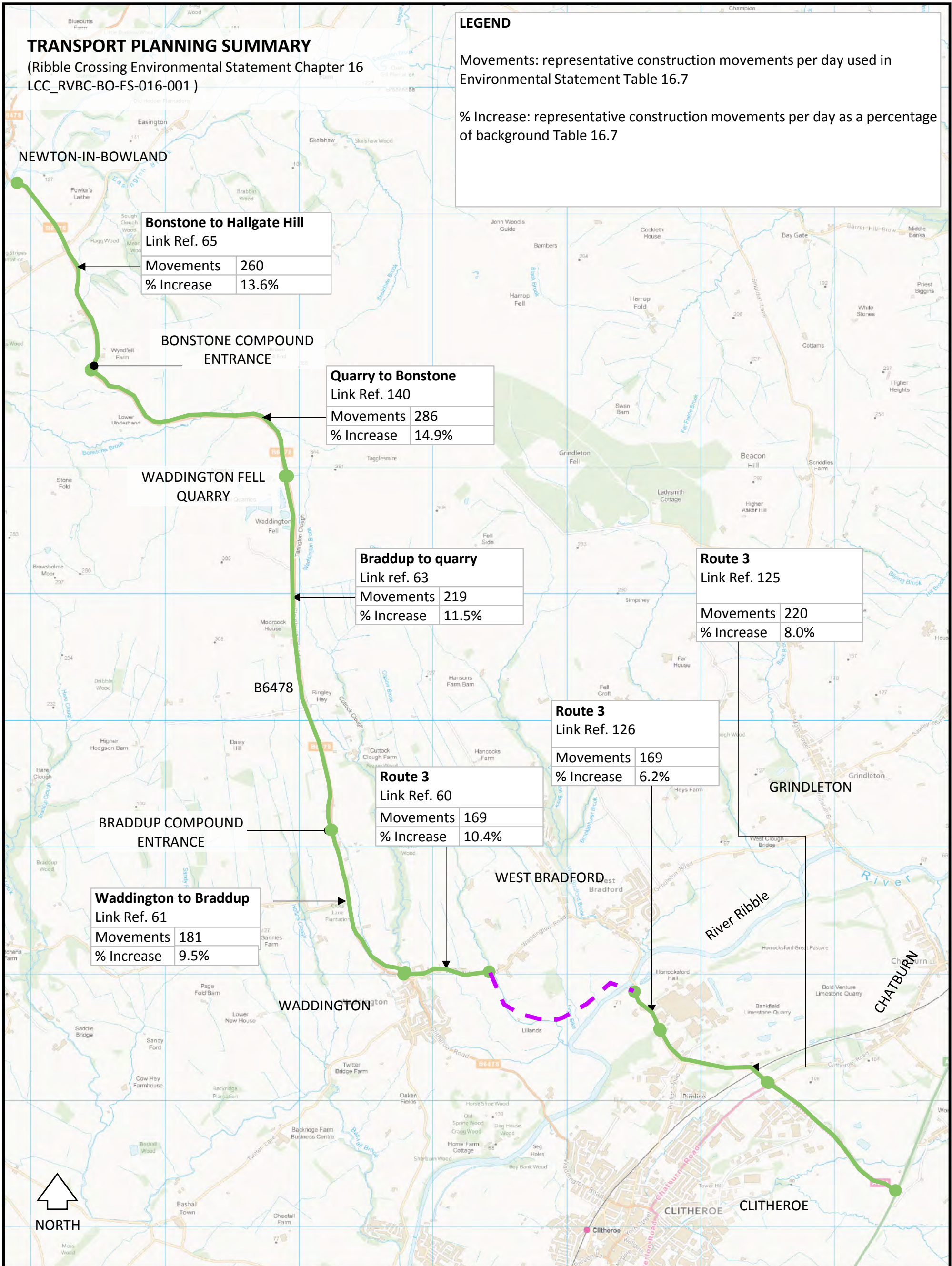
# TRANSPORT PLANNING SUMMARY

(Ribble Crossing Environmental Statement Chapter 16  
LCC\_RVBC-BO-ES-016-001)

## LEGEND

Movements: representative construction movements per day used in Environmental Statement Table 16.7

% Increase: representative construction movements per day as a percentage of background Table 16.7



The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



## Appendix A3 – Anticipated Vehicle Types

Figure A-3-01: HGV – 4 axle rigid max GVW 32 Tonne\* (rigid/tipper) (MNA\_A-3-01\_to\_06)

Figure A-3-02: HGV – 5/6 axle articulated tanker up to GVW 44 Tonne (MNA\_A-3-01\_to\_06)

Figure A-3-03: HGV – tractor unit, low loader step trailer up to GVW 44 Tonne (MNA\_A-3-01\_to\_06)

Figure A-3-04: 5/6 axle articulated flatbed up to GVW 44 Tonne (MNA\_A-3-01\_to\_06)

Figure A-3-05: Abnormal Indivisible Load Mobile Crane (MNA\_A-3-01\_to\_06)

Figure A-3-06: Abnormal Indivisible Load Tunnel Boring Machine Components (MNA\_A-3-01\_to\_06)



**Figure A-3-01**

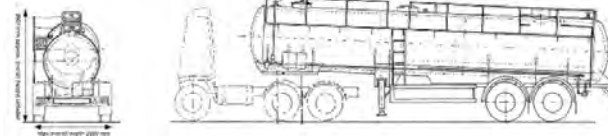
**HGV - 4 axle rigid max GVW 32 Tonne\* (rigid/tipper)**



Overall Width: 2.49  
Overall Length: 8.79  
Approx. Turning Diameter: 21.5  
Approximate Height: 3.1

**Figure A-3-02**

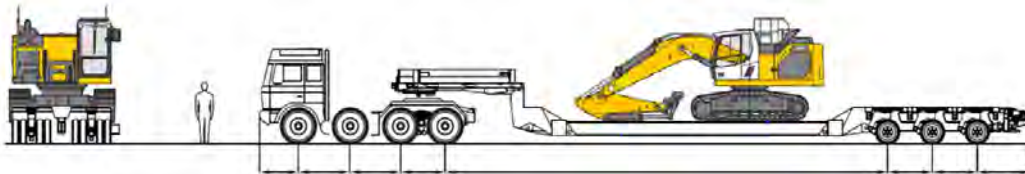
**HGV – 5/6 axle articulated tanker up to GVW 44 Tonne**



Overall Width: 2.55  
Overall Length: 13  
Approx. Turning Diameter: 16.5  
Approximate Height: 3.7

**Figure A-3-03**

**HGV - tractor unit, low loader step trailer up to GVW 44 Tonne**



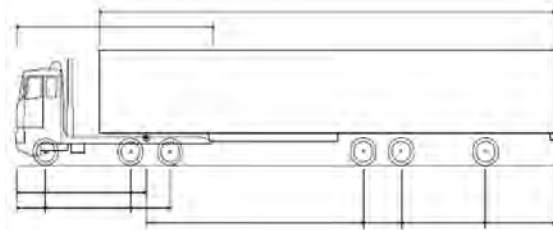
Overall Width: 3.05\*\*  
Overall Length: 21.045  
Approx. Turning Diameter: 19.6  
Approximate Height: 4

Note: Unloaded trailer width likely to be approx. 2.75m

\*\* Will vary depending upon load typically 2.9m width anticipated

**Figure A-3-04**

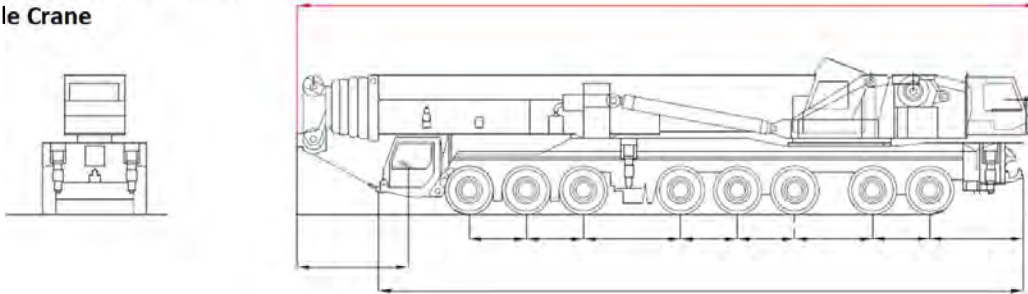
**HGV – 5/6 axle articulated flatbed up to GVW 44 Tonne**



Overall Width: 2.55  
Overall Length: 18.5  
Approx. Turning Diameter: 17.5  
Approximate Height: 3.6

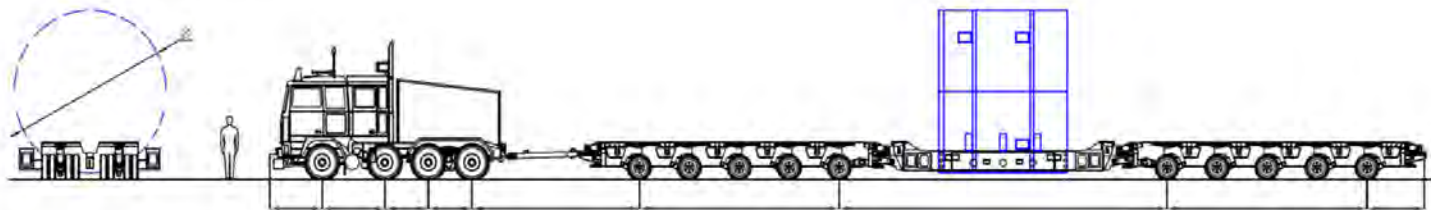


**Figure A-3-05**  
**Abnormal Indivisible Load**  
**Mobile Crane**



Overall Width: 3  
 Overall Length: 21.4  
 Approx. Turning Diameter: 32.9  
 Approximate Height: 4

**Figure A-3-06**  
**Abnormal Indivisible Load**  
**Tunnel Boring Machine Components**



Load diameter (  $\Phi$  ): 4.3  
 Tractor & Trailer Width: 3  
 Overall Length: 34.3  
 Approx. Turning Diameter: 64  
 Approximate Height: 4.6



## Appendix B1 – Swept path results and highway modifications

Figure B-1-01: Swept paths for proposed routes - B6478 Hallgate Hill Junction to Chapel Croft (MNA\_B-1-01)

Figure B-1-02: Swept paths for proposed routes - B6478 Hallgate Hill (Chapel Croft - Bonstone Access Junction) - Slaidburn Road (MNA\_B-1-02)

Figure B-1-03: Swept paths for proposed routes - B6478 Slaidburn Road (Smelt Mills Clough/Bonstone Brook) (MNA\_B-1-03)

Figure B-1-04: Swept paths for proposed routes - B6478 Slaidburn Road (Waddington Fell Quarry/Titrington Brow) (MNA\_B-1-04)

Figure B-1-05: Swept paths for proposed routes - B6478 Slaidburn Road / Fell Road (MNA\_B-1-05)

Figure B-1-06: Swept paths for proposed routes - B6478 Slaidburn Road (Braddup Access Junction) (MNA\_B-1-06)

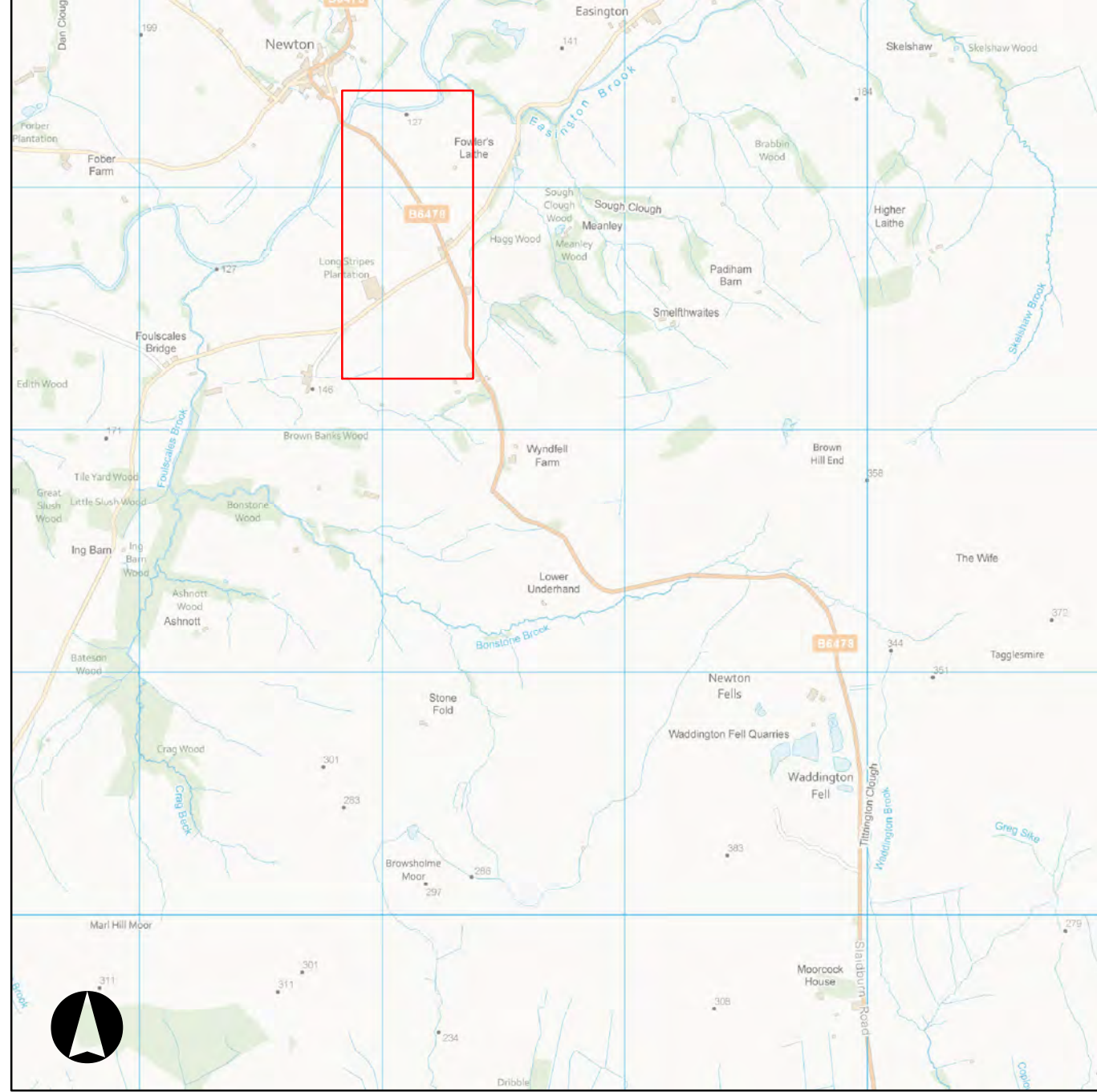
Figure B-1-07: Swept paths for proposed routes - B6478 Slaidburn Road (North Waddington) (MNA\_B-1-07)

Figure B-1-08: Swept paths for proposed routes - East of Waddington West Bradford Road (MNA\_B-1-08)



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**  
**FIGURE B - 1 - 01**

B6478 Hallgate Hill (TA Link Ref. 65)



**WIDER AREA** 0 0.3 0.6 1.2 Kilometers



**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER HALLGATE HILL (SOUTHBOUND)**  
**AT SIGNPOSTED ROAD NARROWING**



**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER HALLGATE HILL (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**

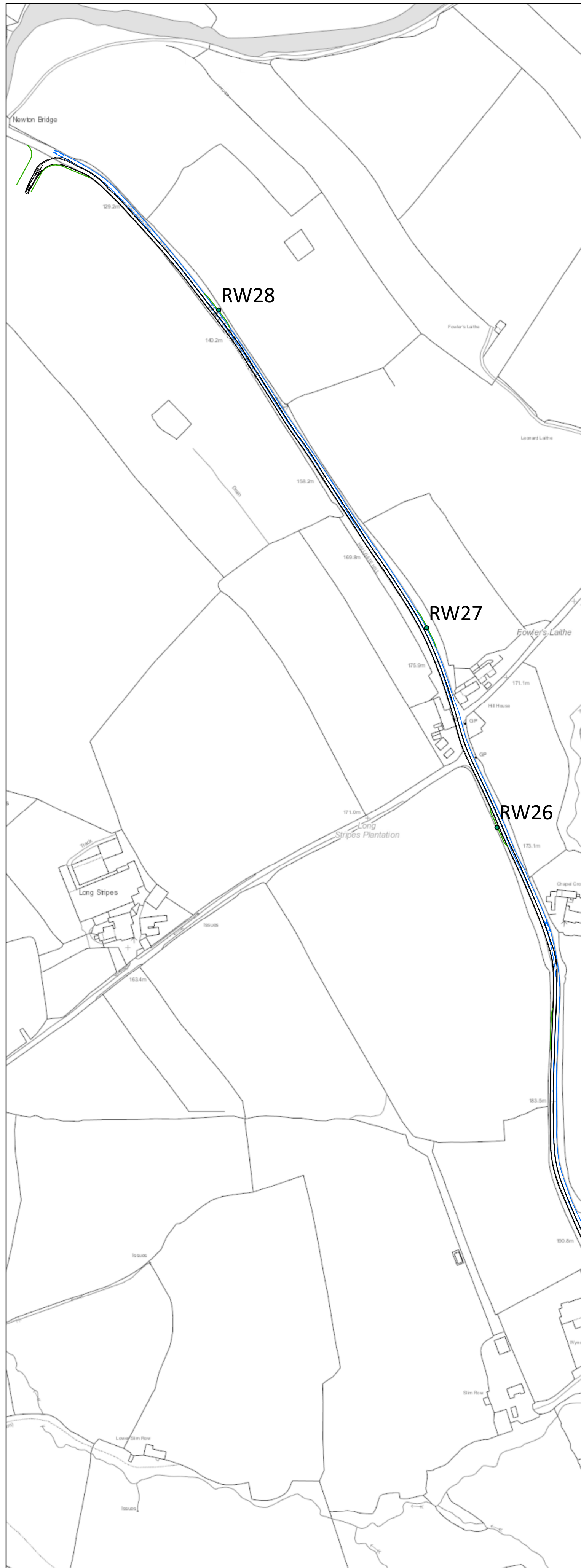
- Legend**
- Road Modification Reference
  - Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - tractor unit, low loader step trailer from site (Southbound)**



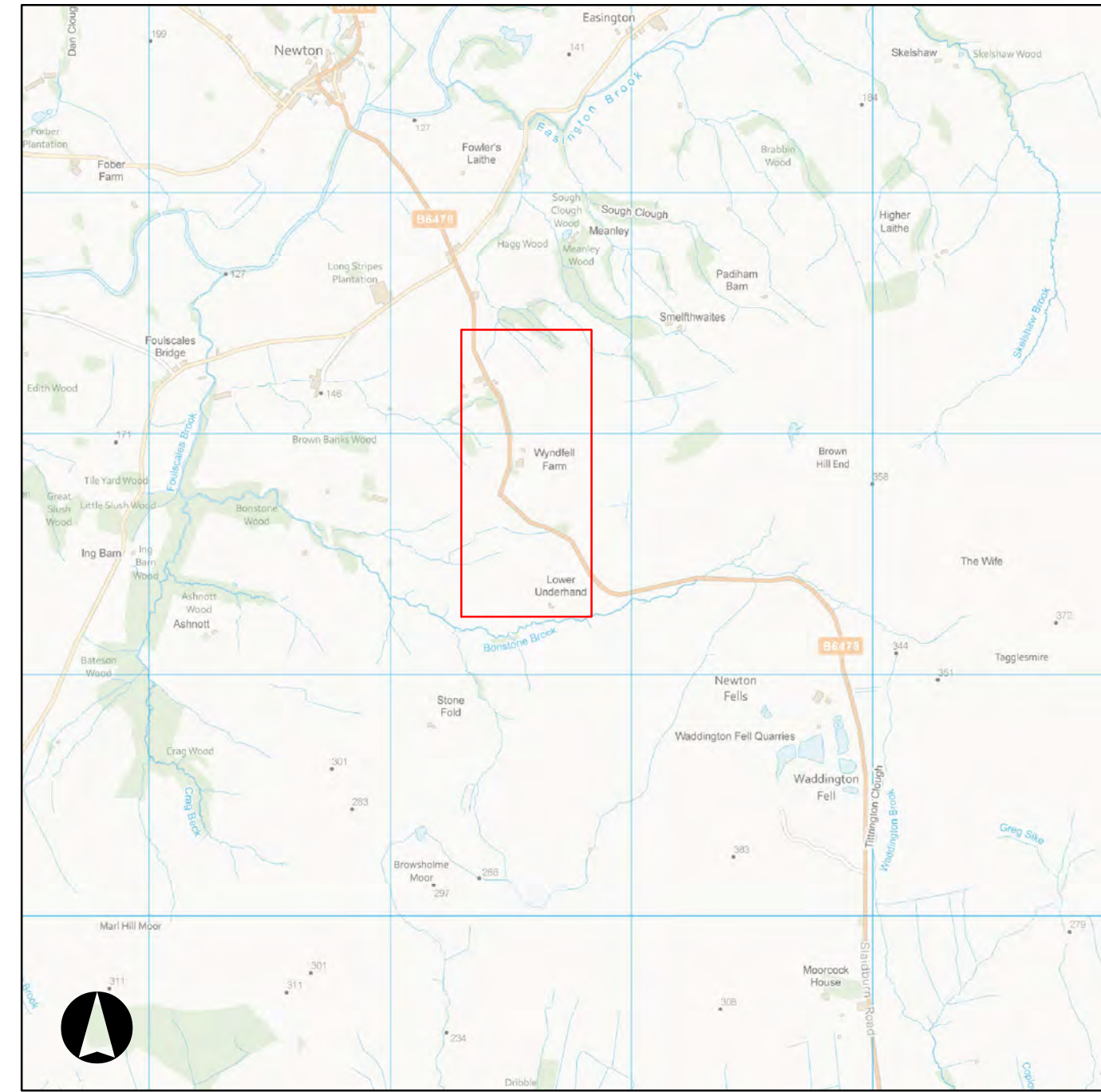
**HGV - tractor unit, low loader step trailer to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**  
**FIGURE B - 1 - 02**

*B6478 Hallgate Hill/Slaidburn Road (TA Link Refs. 65 + 140)*



**WIDER AREA** 0 0.3 0.6 1.2 Kilometers



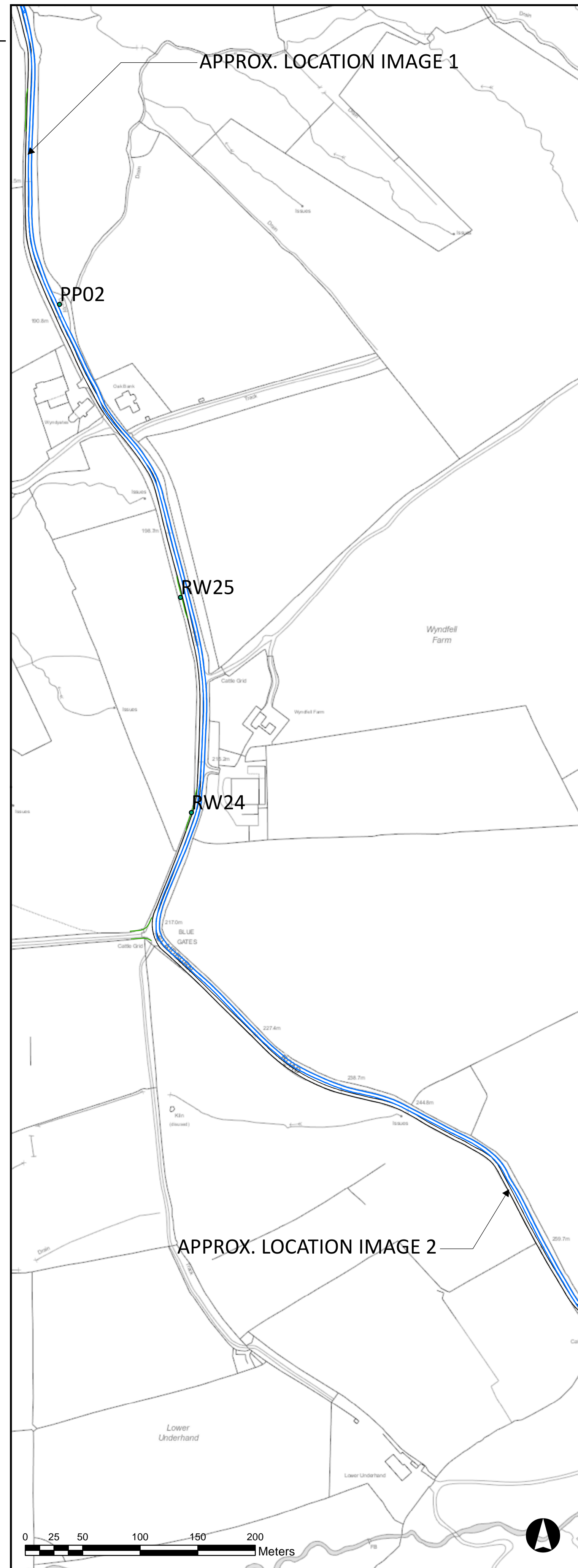
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER HALLGATE HILL (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**



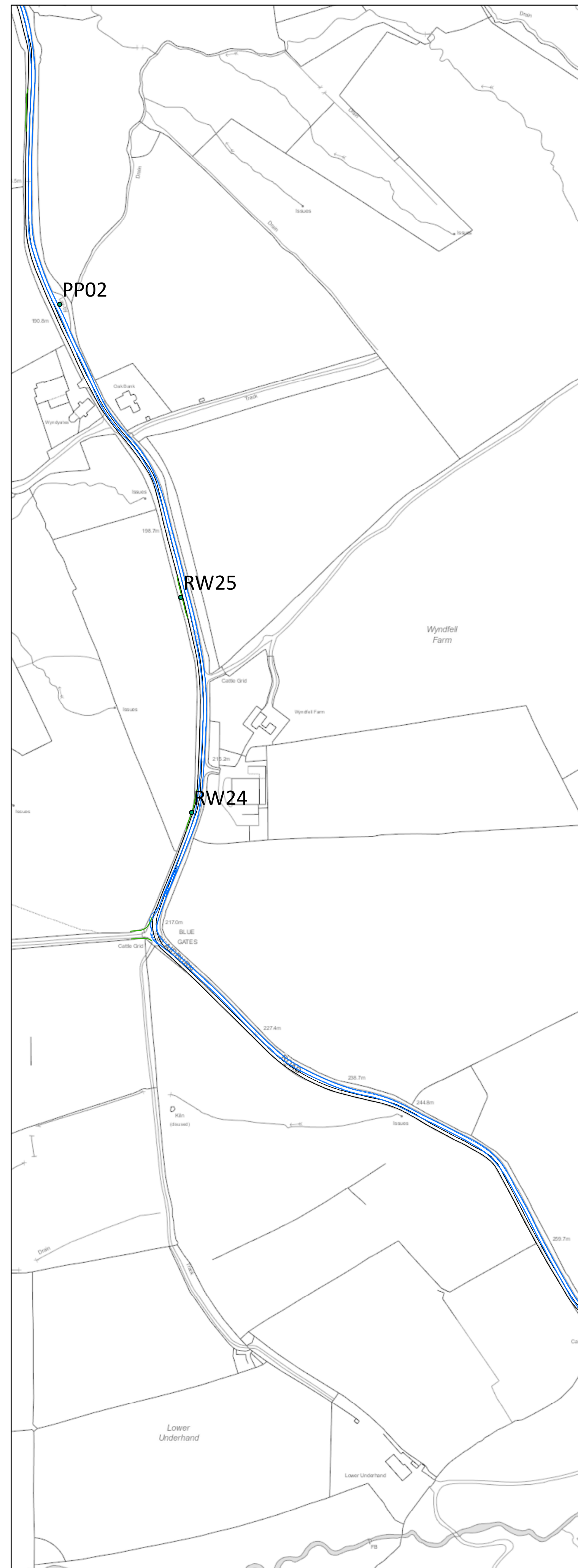
**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN ROAD (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**

**Legend**

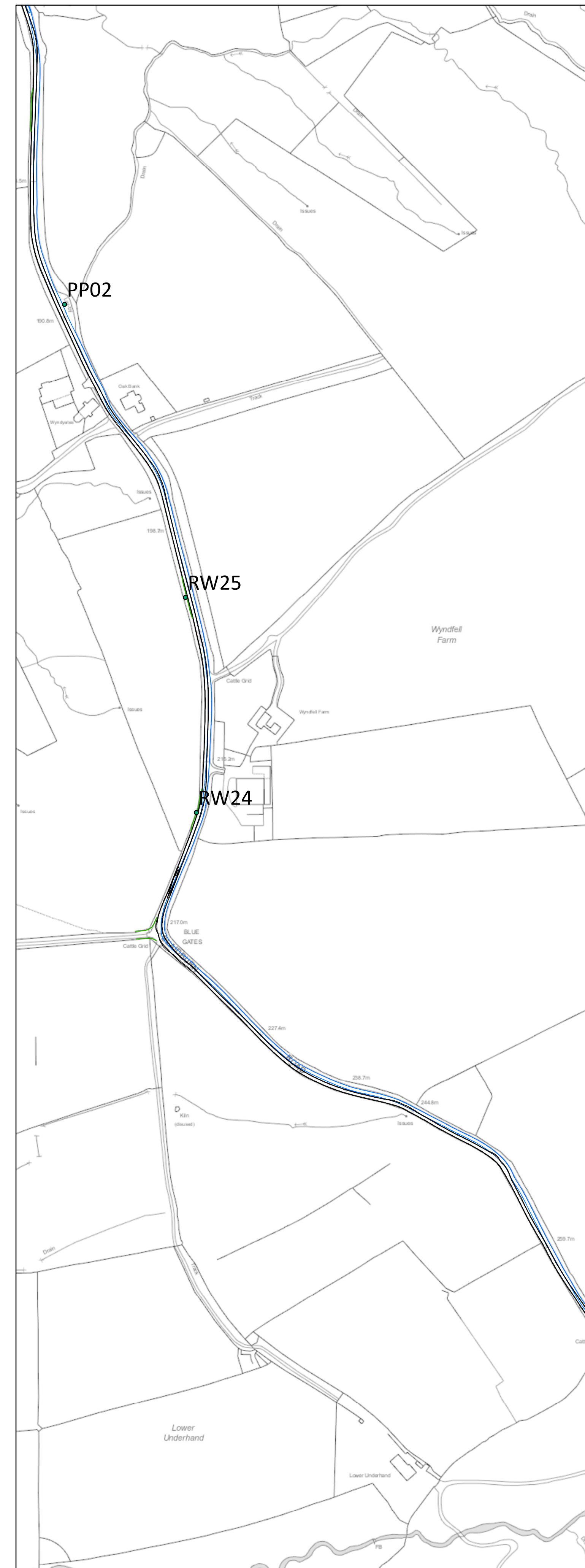
- Road Modification Reference
- Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - tractor unit, low loader step trailer from site (Southbound)**



**HGV - tractor unit, low loader step trailer to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

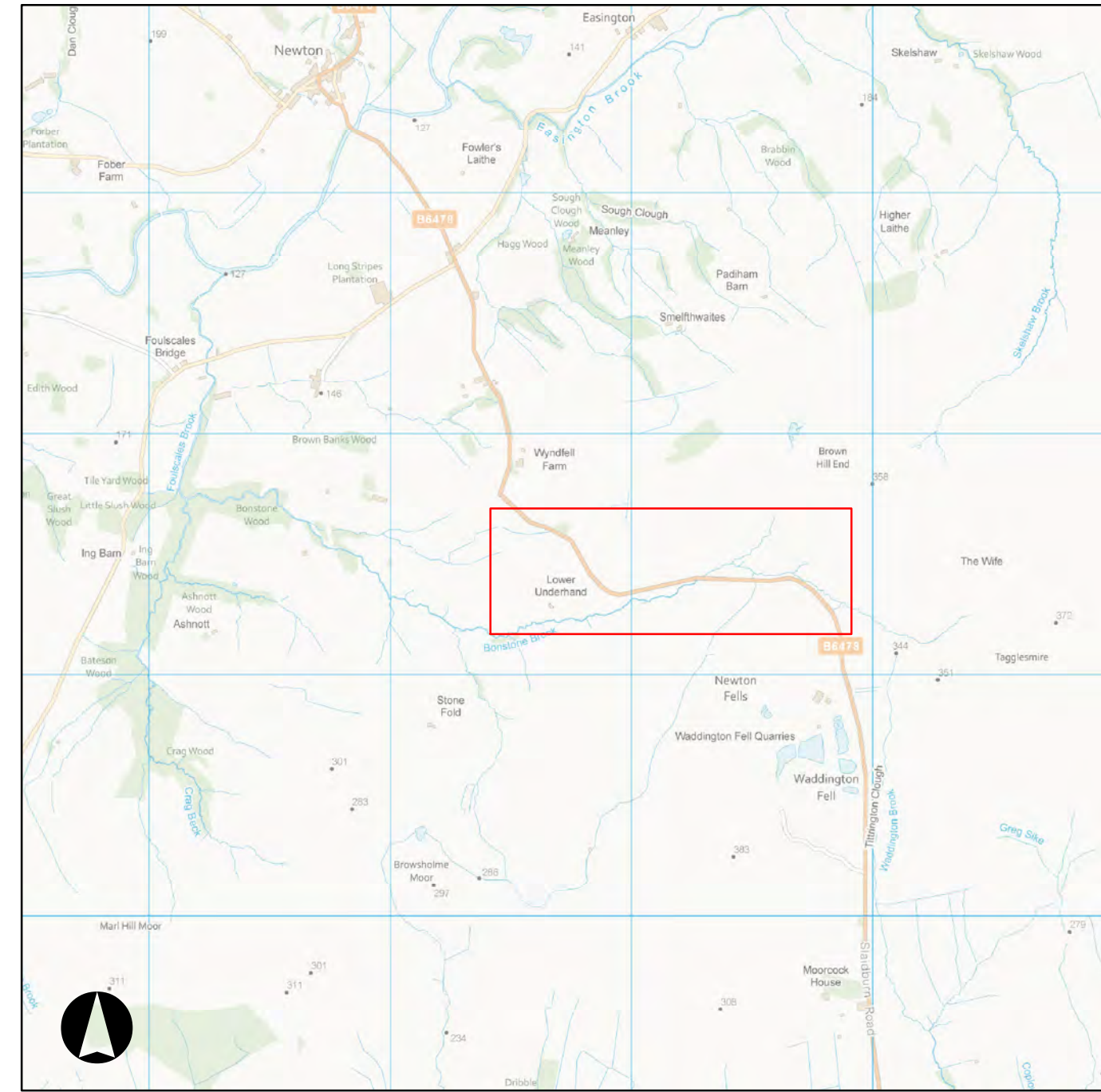
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



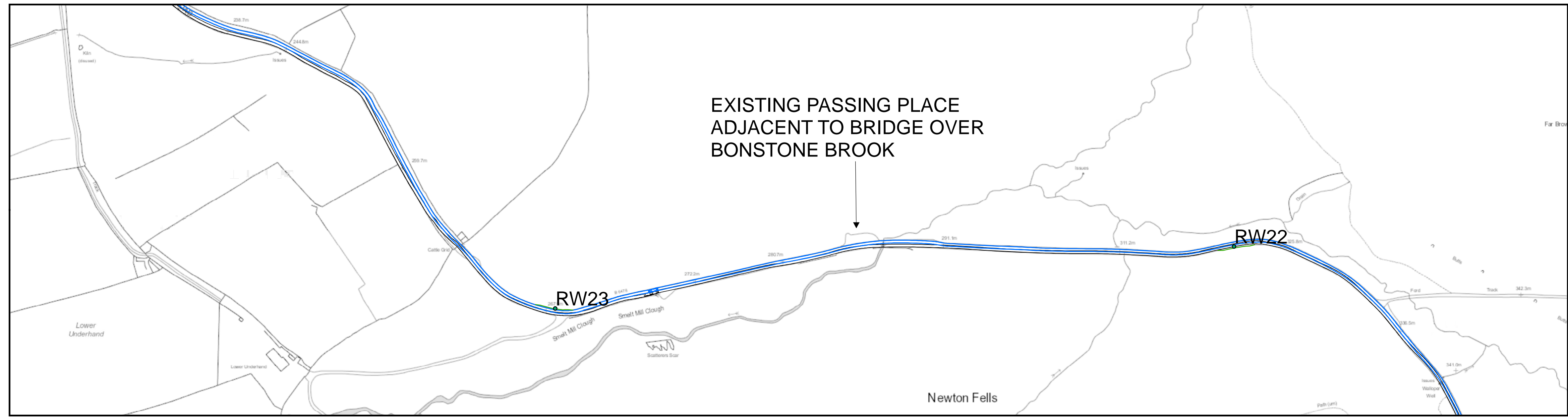
**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**

**FIGURE B - 1 - 03**

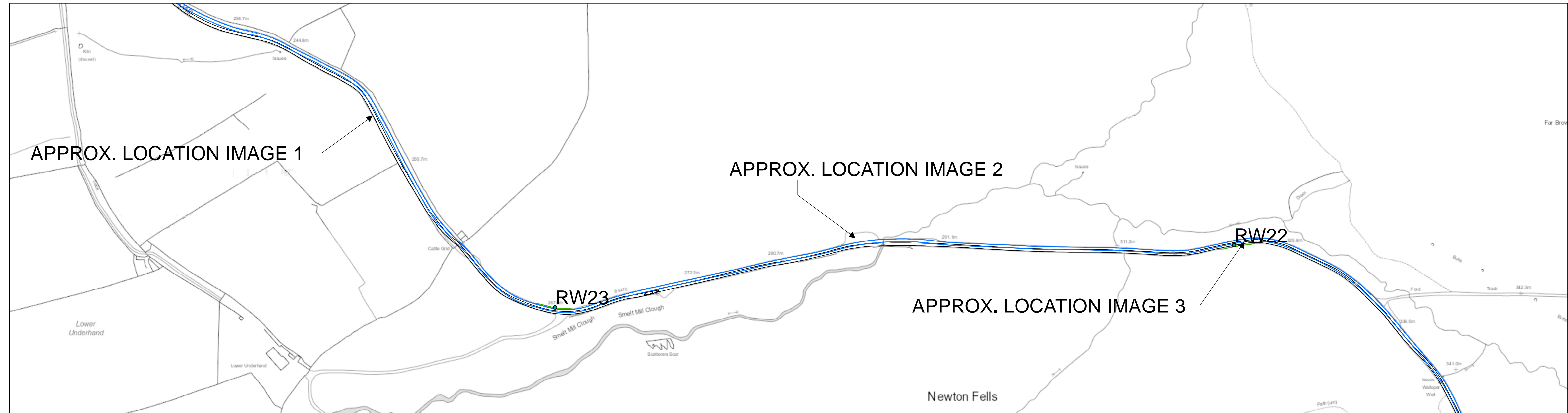
**B6478 SLAIDBURN ROAD (SMELT MILL CLOUGH/ BONSTONE BROOK)**  
**TA LINK REF. 140**



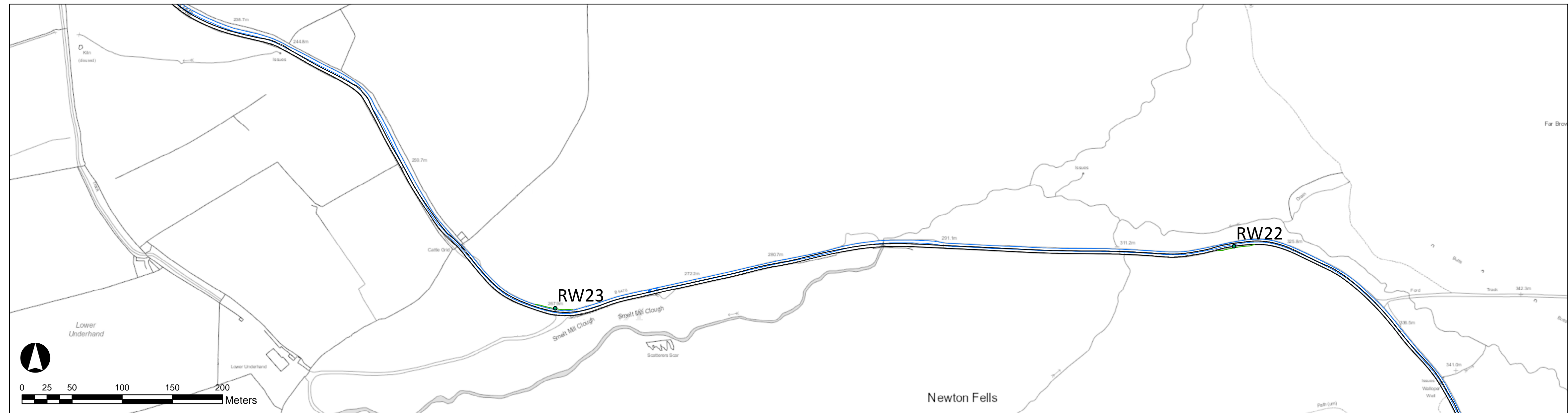
**WIDER AREA** 0 0.3 0.6 1.2 Kilometers



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - tractor unit, low loader step trailer from site (Southbound)**



**HGV - tractor unit, low loader step trailer to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)**  
**OBSERVED TYPICAL LANE DISCIPLINE**



**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)**  
**BONSTONE BROOK PASSING PLACE**



**IMAGE 3: HGV TRIAL 11th NOVEMBER 2020**  
**4AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**

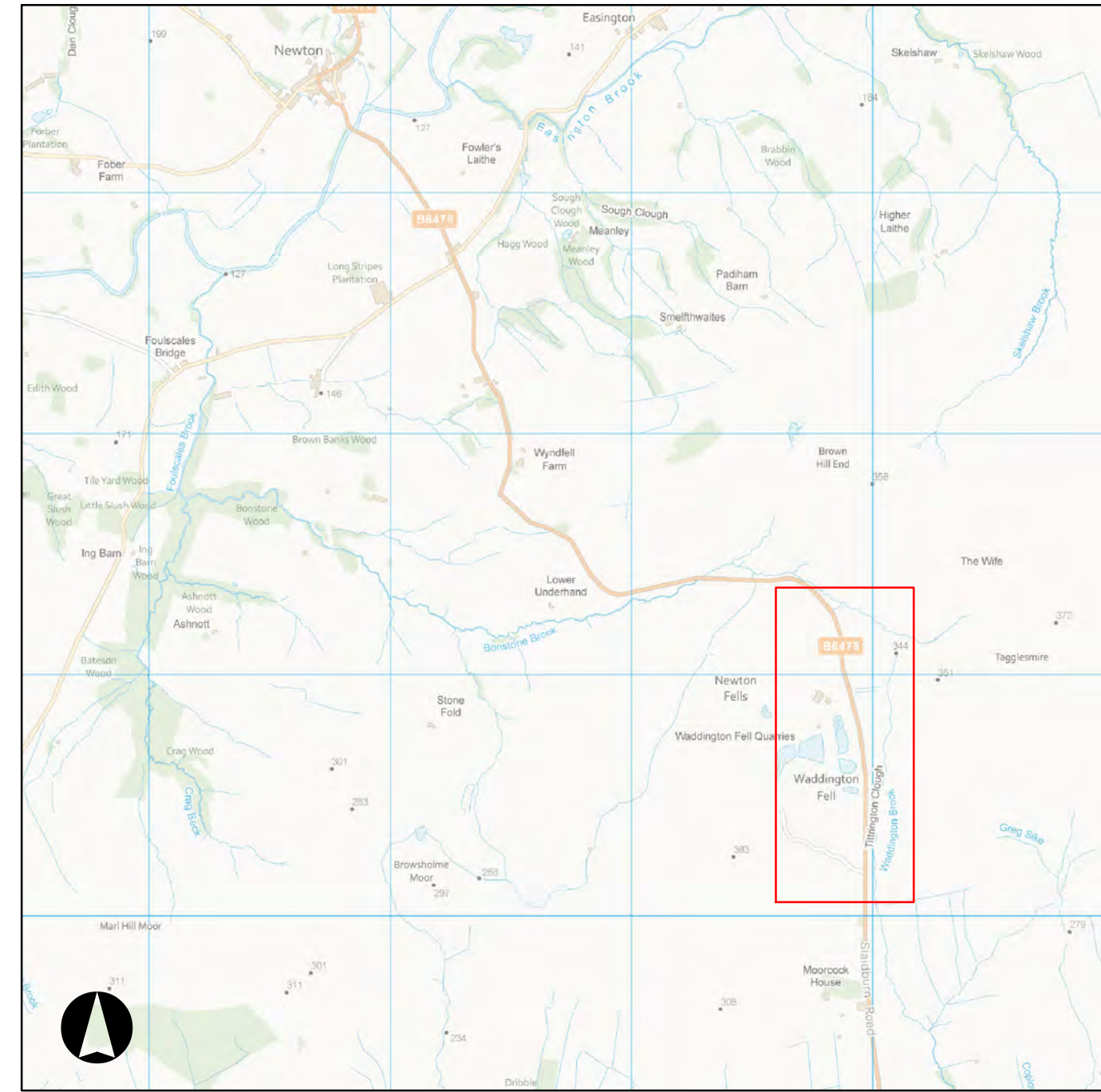
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.  
 Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**

**FIGURE B - 1 - 04**

B6478 Slaidburn Road (TA Link Refs. 140 + 63)



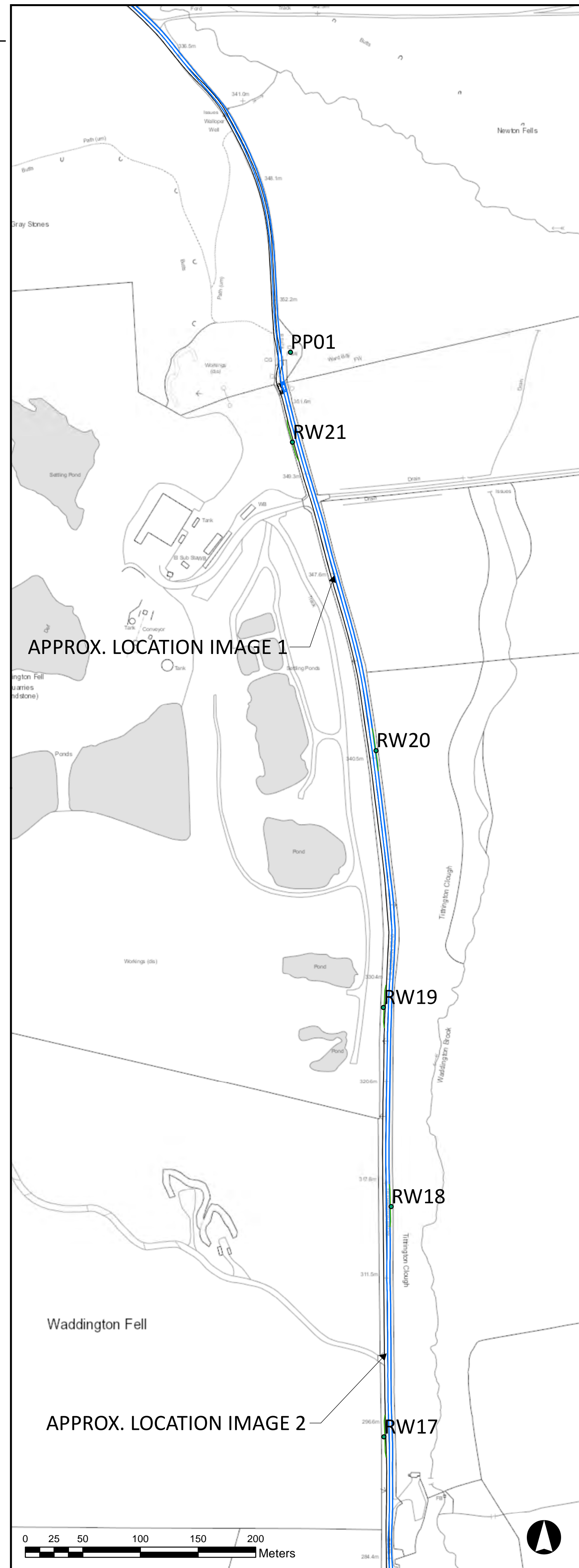
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020  
4 AXLE RIGID TIPPER HALLGATE HILL (SOUTHBOUND)  
TYPICAL OBSERVED LANE DISCIPLINE**



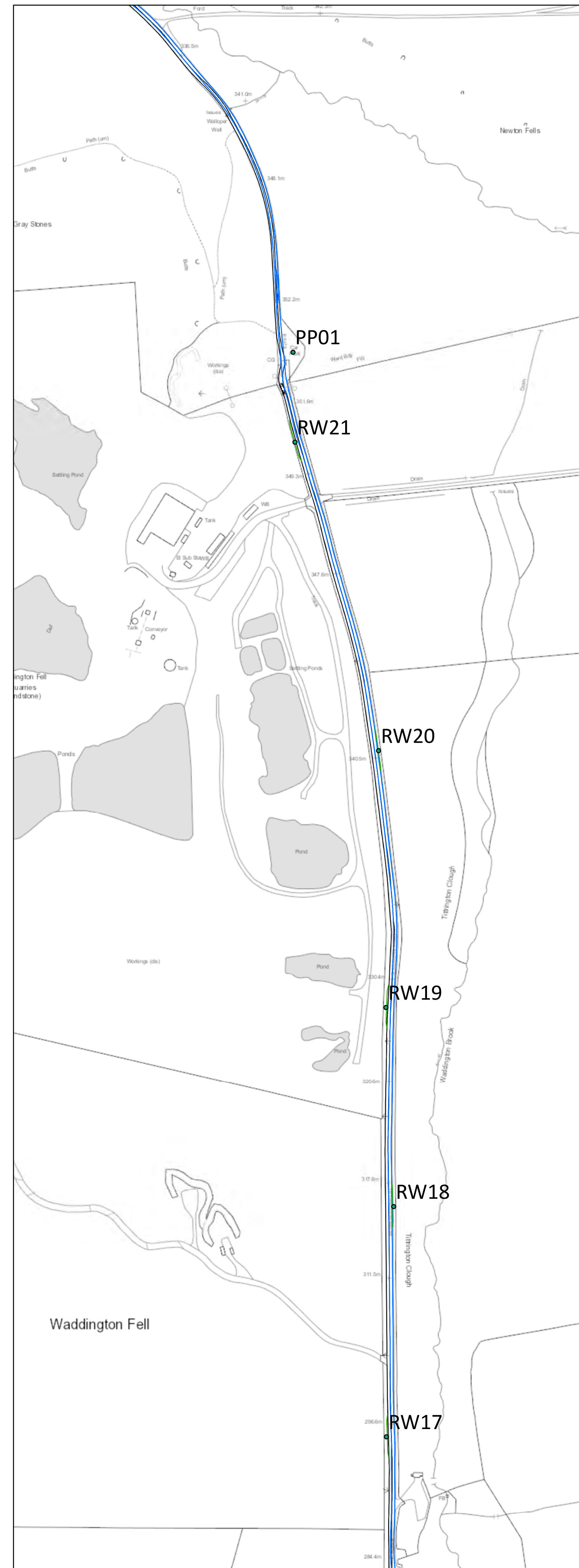
**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020  
4 AXLE RIGID TIPPER SLAIDBURN ROAD (SOUTHBOUND)  
TYPICAL OBSERVED LANE DISCIPLINE**

**Legend**

- Road Modification Reference
- Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)  
HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)  
HGV - tractor unit, low loader step trailer from site (Southbound)**



**HGV - tractor unit, low loader step trailer to site (Northbound)  
HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

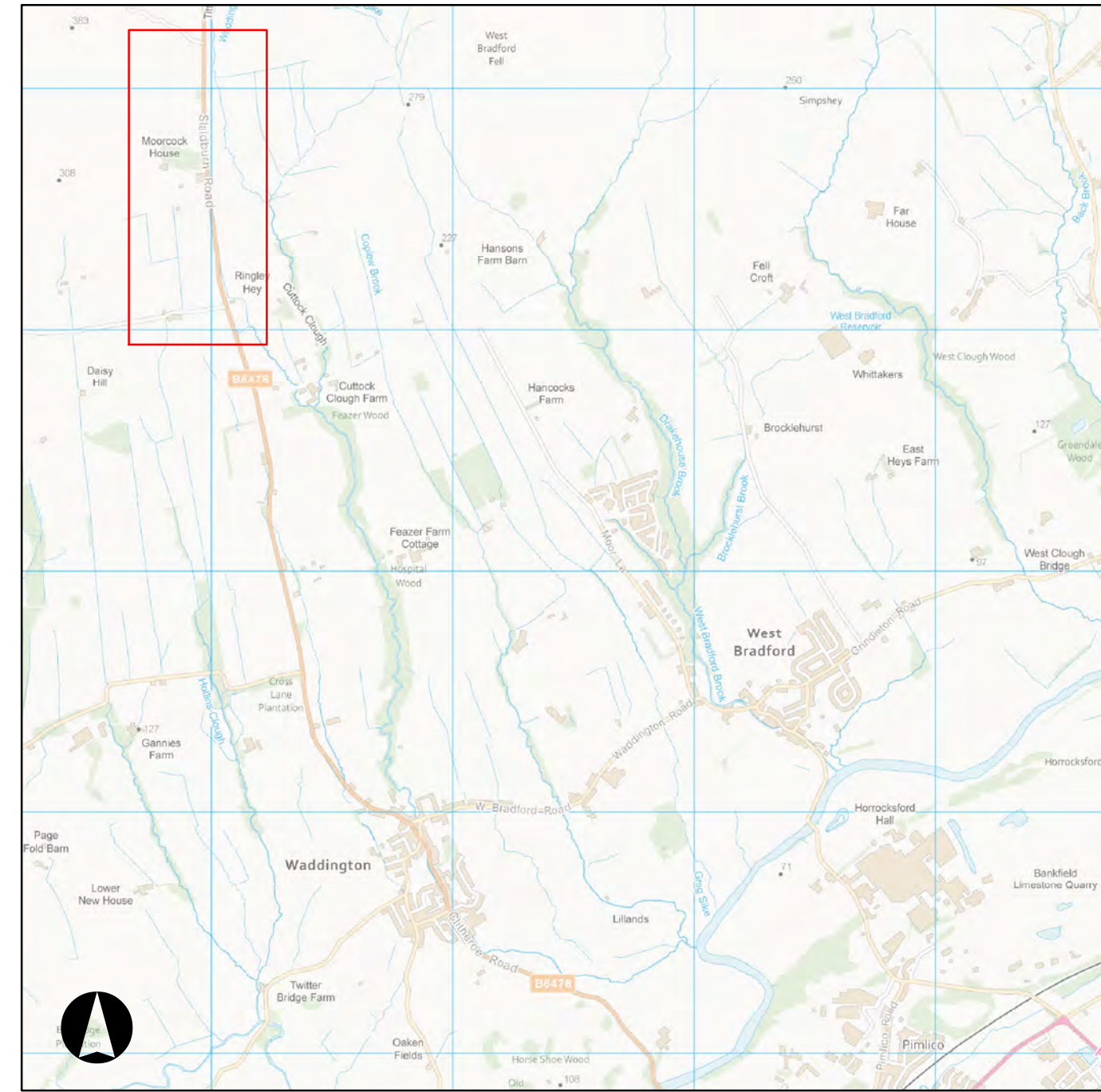
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**

**FIGURE B - 1 - 05**

B6478 Slaidburn Road (TA Link Ref. 63)



**WIDER AREA** 0 0.3 0.6 1.2 Kilometers



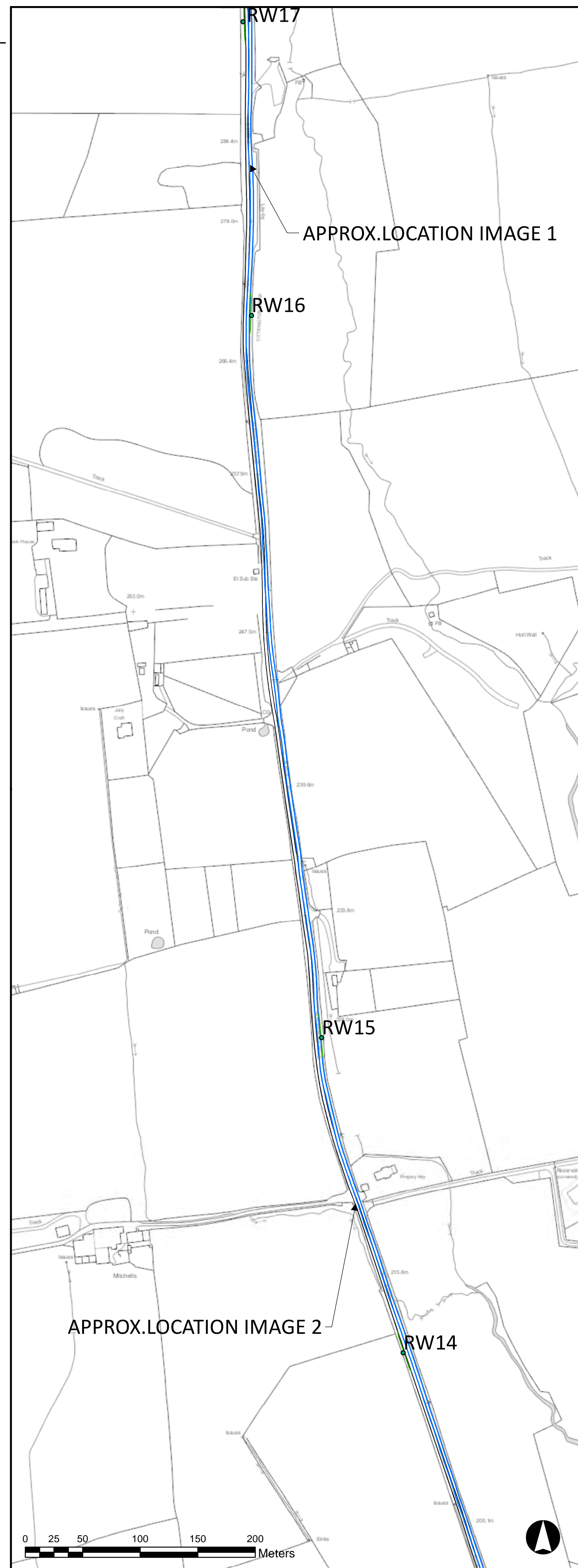
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020  
4 AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)  
TYPICAL OBSERVED LANE DISCIPLINE**



**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020  
4 AXLE RIGID TIPPER SLAIDBURN ROAD (SOUTHBOUND)  
TYPICAL OBSERVED LANE DISCIPLINE**

**Legend**

- Road Modification Reference
- Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)  
HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)  
HGV - tractor unit, low loader step trailer from site (Southbound)**

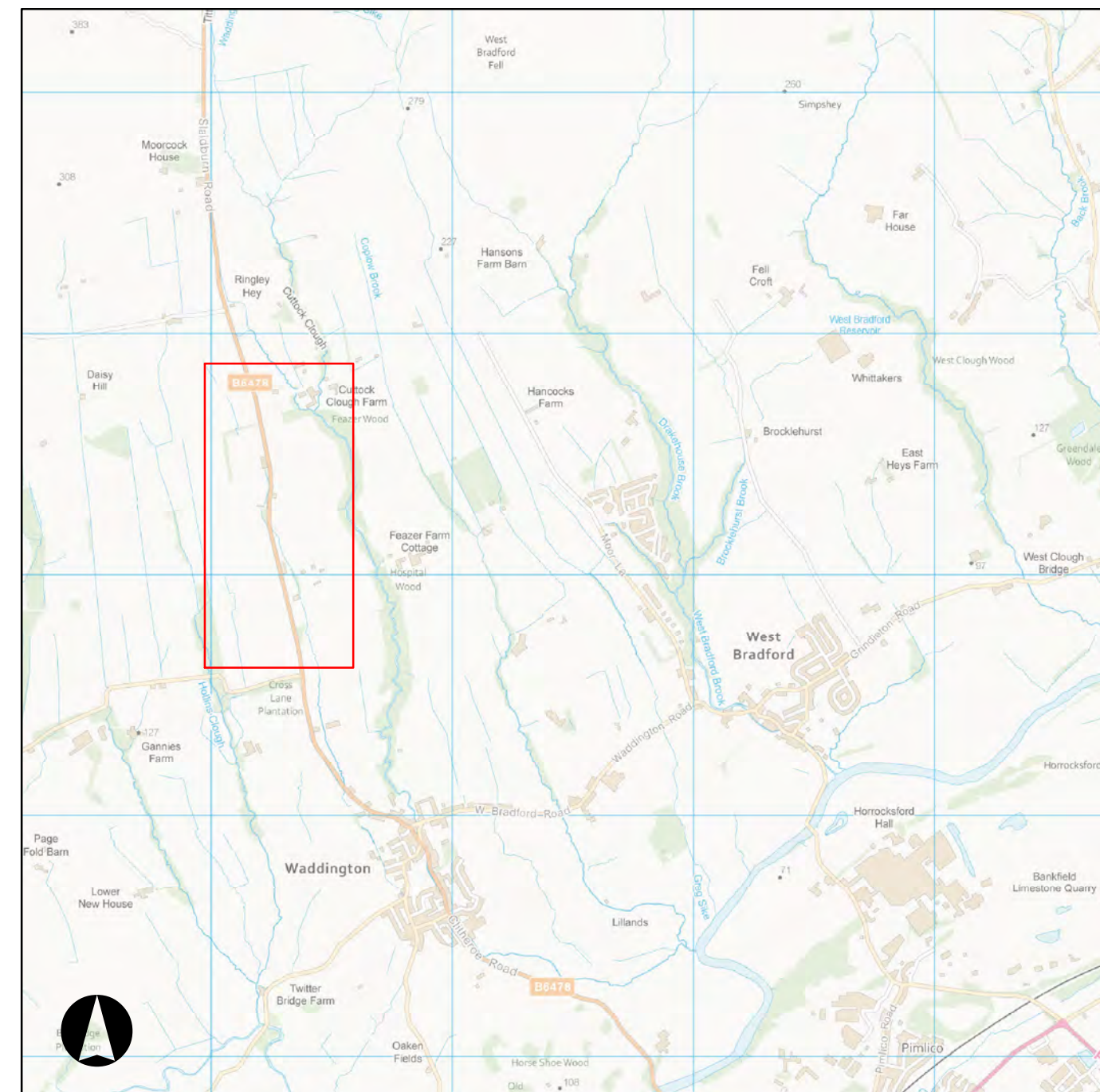


**HGV - tractor unit, low loader step trailer to site (Northbound)  
HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**  
**FIGURE B - 1 - 06**

B6478 Hallgate Hill/Slaidburn Road (TA Link Refs. 65 + 140)



**WIDER AREA** 0 0.3 0.6 1.2 Kilometers



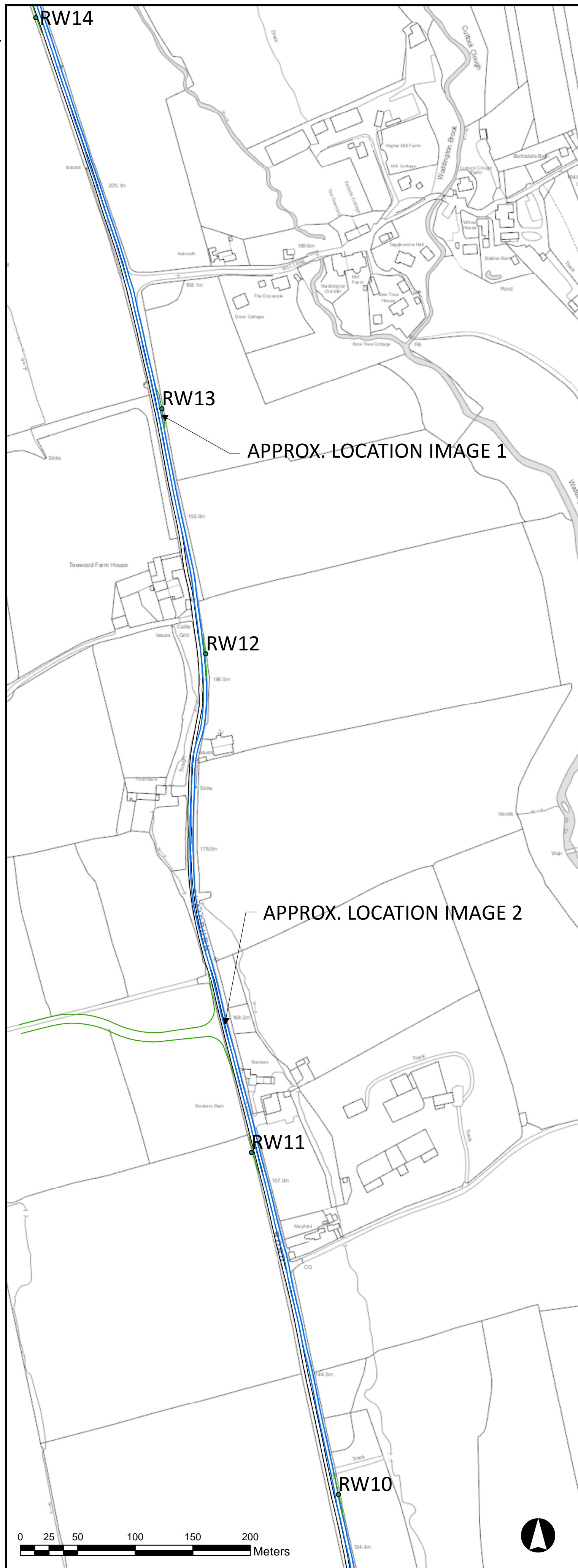
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**



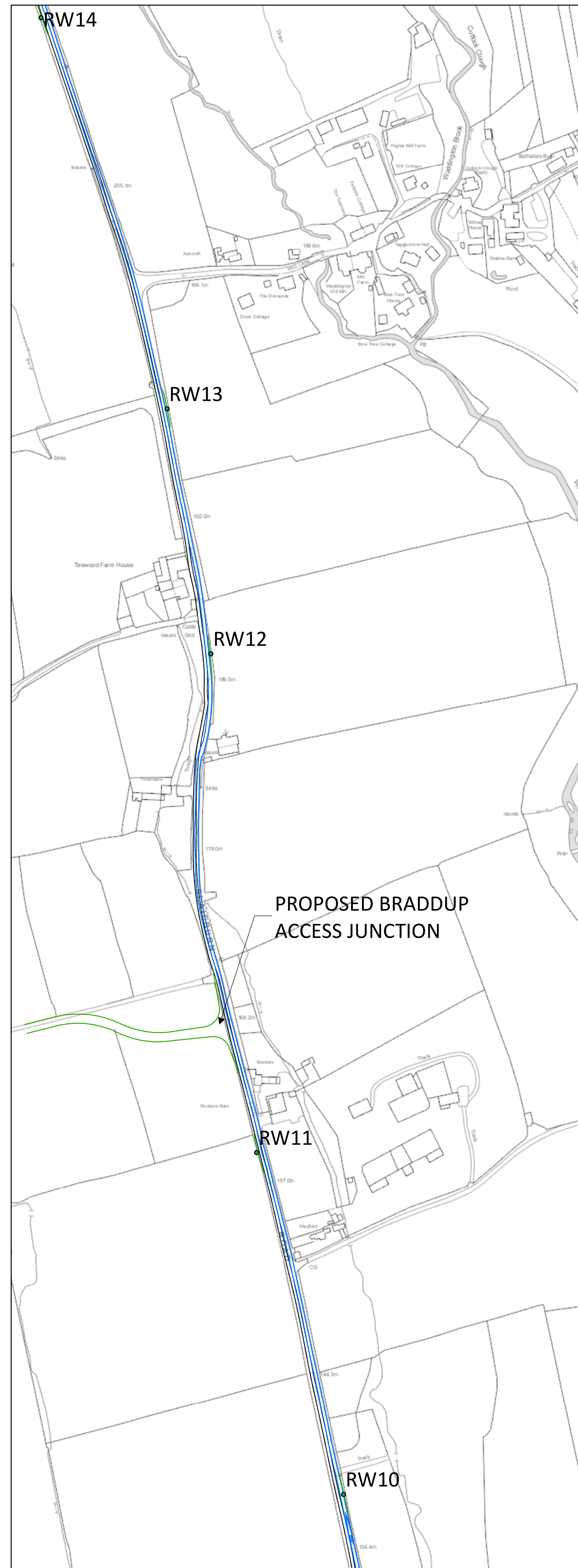
**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN ROAD (SOUTHBOUND)**  
**LEAVES LANE TO AVOID HEDGEROW**

**Legend**

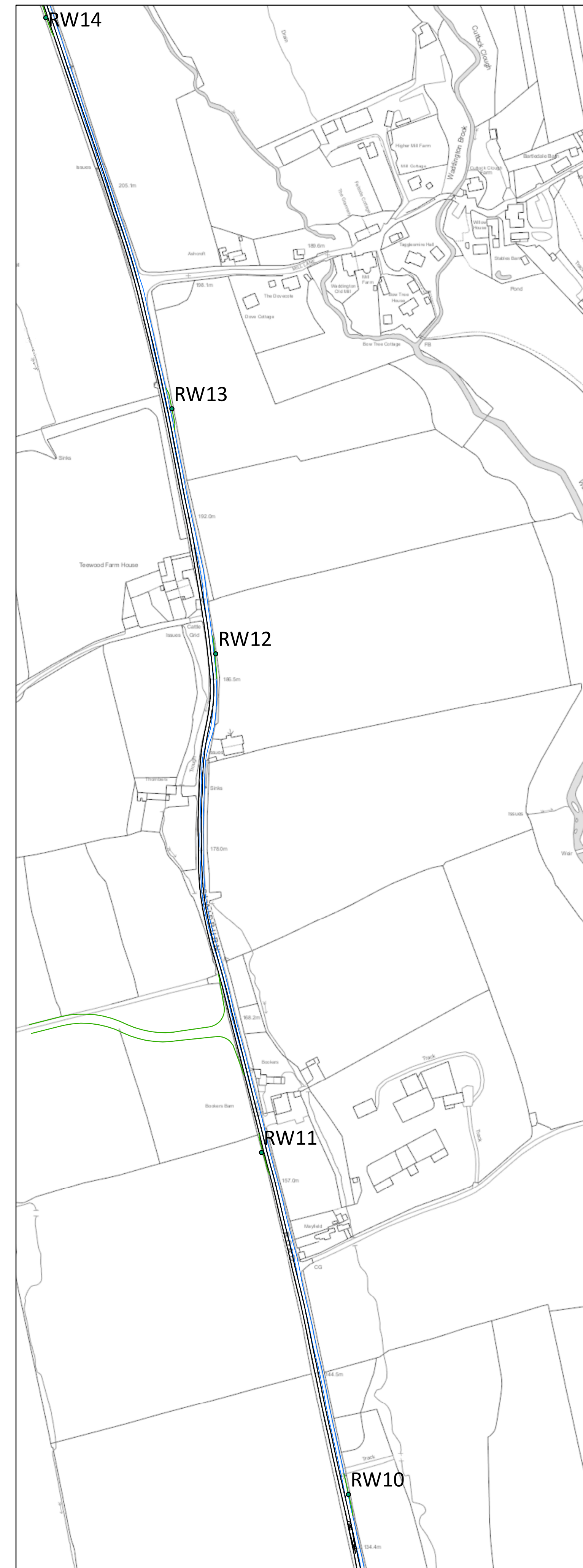
- Road Modification Reference
- Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - tractor unit, low loader step trailer from site (Southbound)**



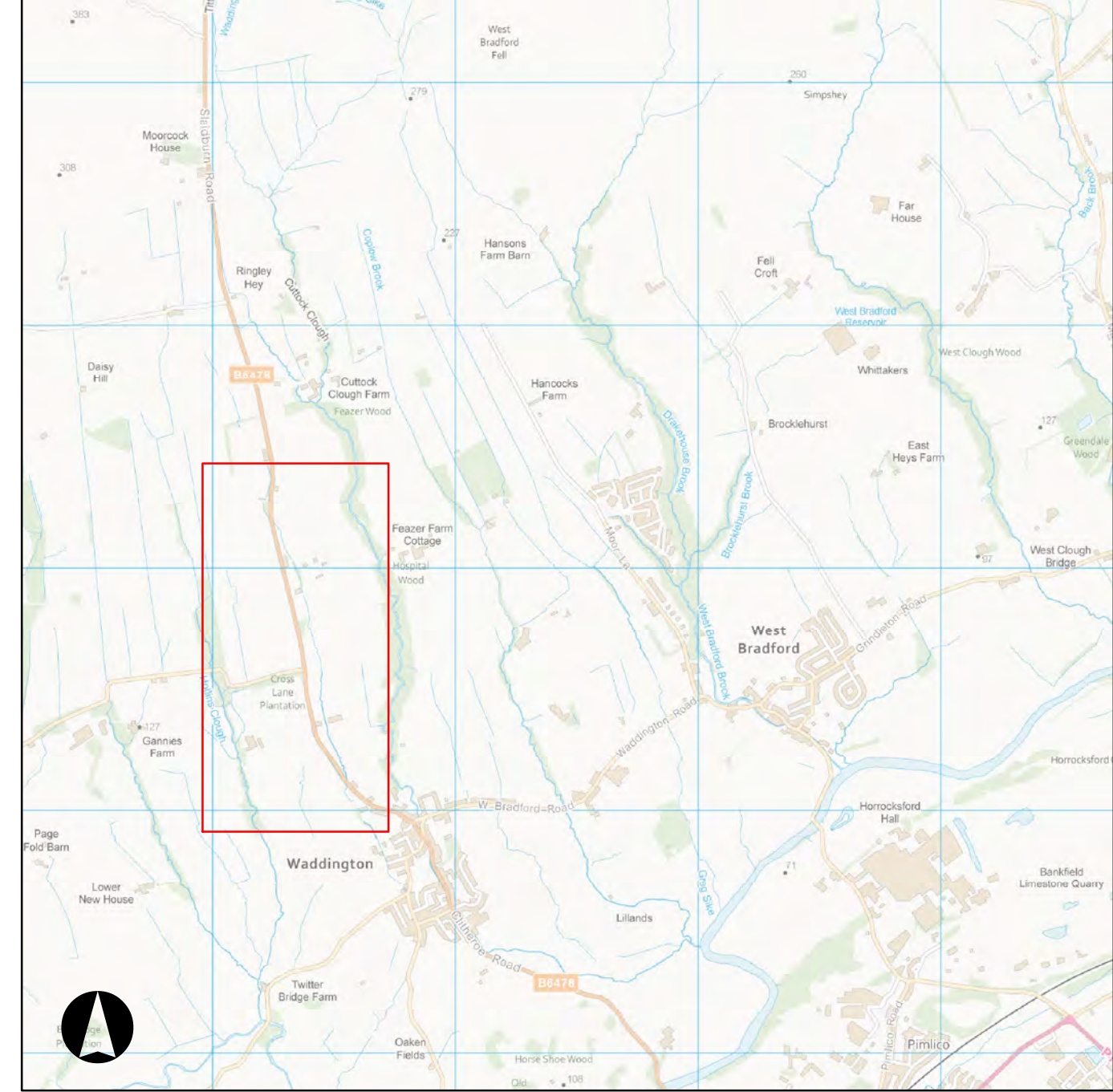
**HGV - tractor unit, low loader step trailer to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**  
**FIGURE B - 1 - 07**

*B6478 Slaidburn Road - The Square Waddington (TA Link Res. 61)*



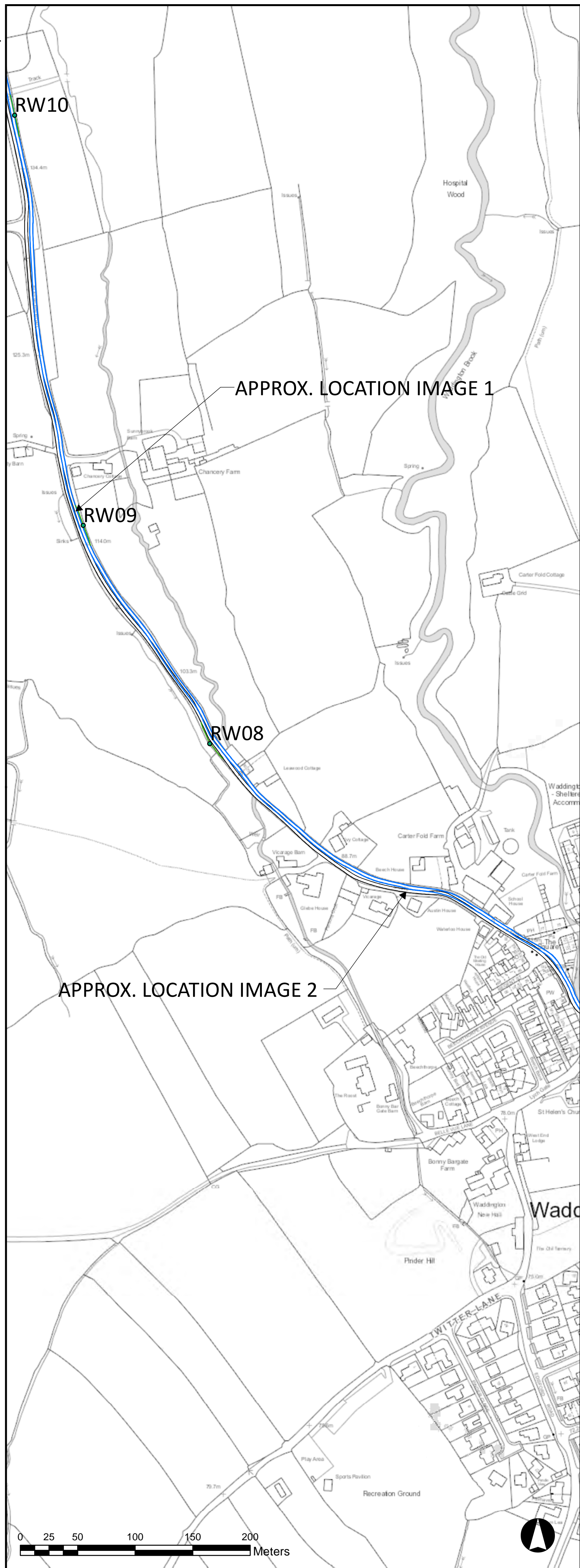
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER SLAIDBURN RD (SOUTHBOUND)**  
**TYPICAL OBSERVED LANE DISCIPLINE**



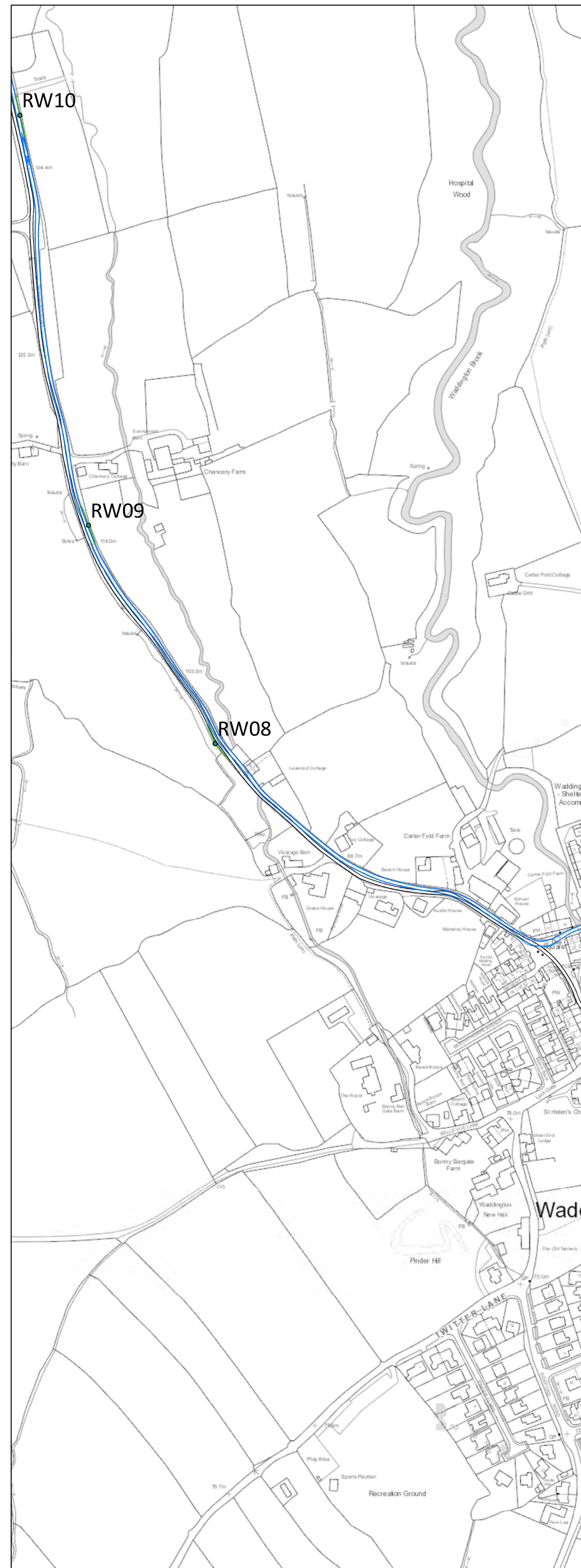
**IMAGE 2: HGV TRIAL 11th NOVEMBER 2020**  
**4 AXLE RIGID TIPPER THE SQUARE WADDINGTON**  
**(SOUTHBOUND) TURNING ONTO WEST BRADFORD RD**

**Legend**

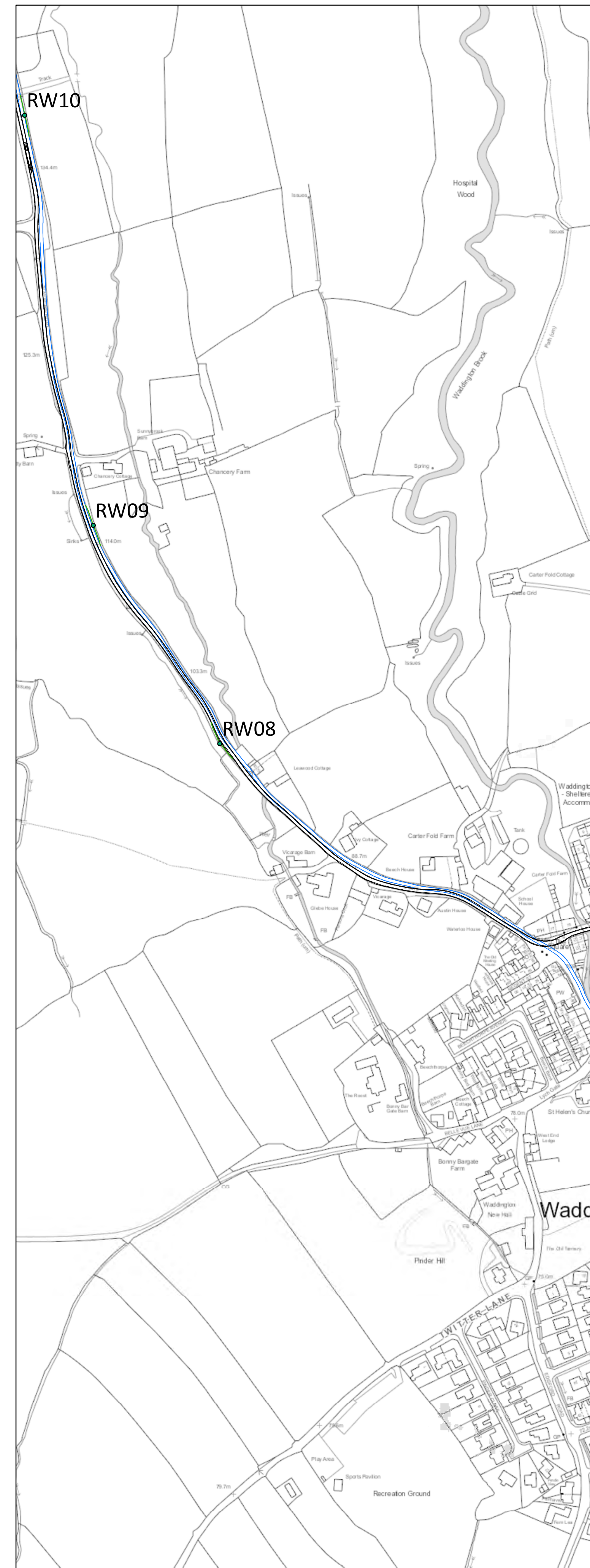
- Road Modification Reference
- Proposed Road Modification



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**



**HGV - 4 axle rigid (rigid/tipper) to site (Northbound)**  
**HGV - tractor unit, low loader step trailer from site (Southbound)**



**HGV - tractor unit, low loader step trailer to site (Northbound)**  
**HGV - 4 axle rigid (rigid/tipper) from site (Southbound)**

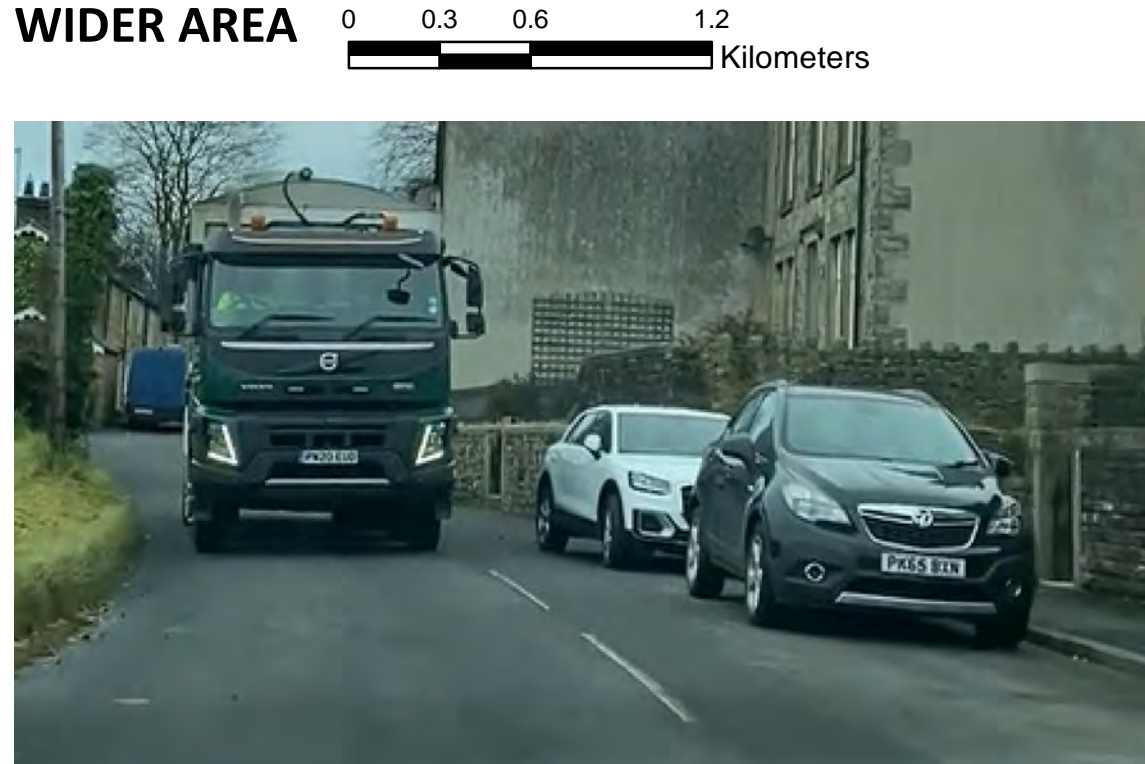
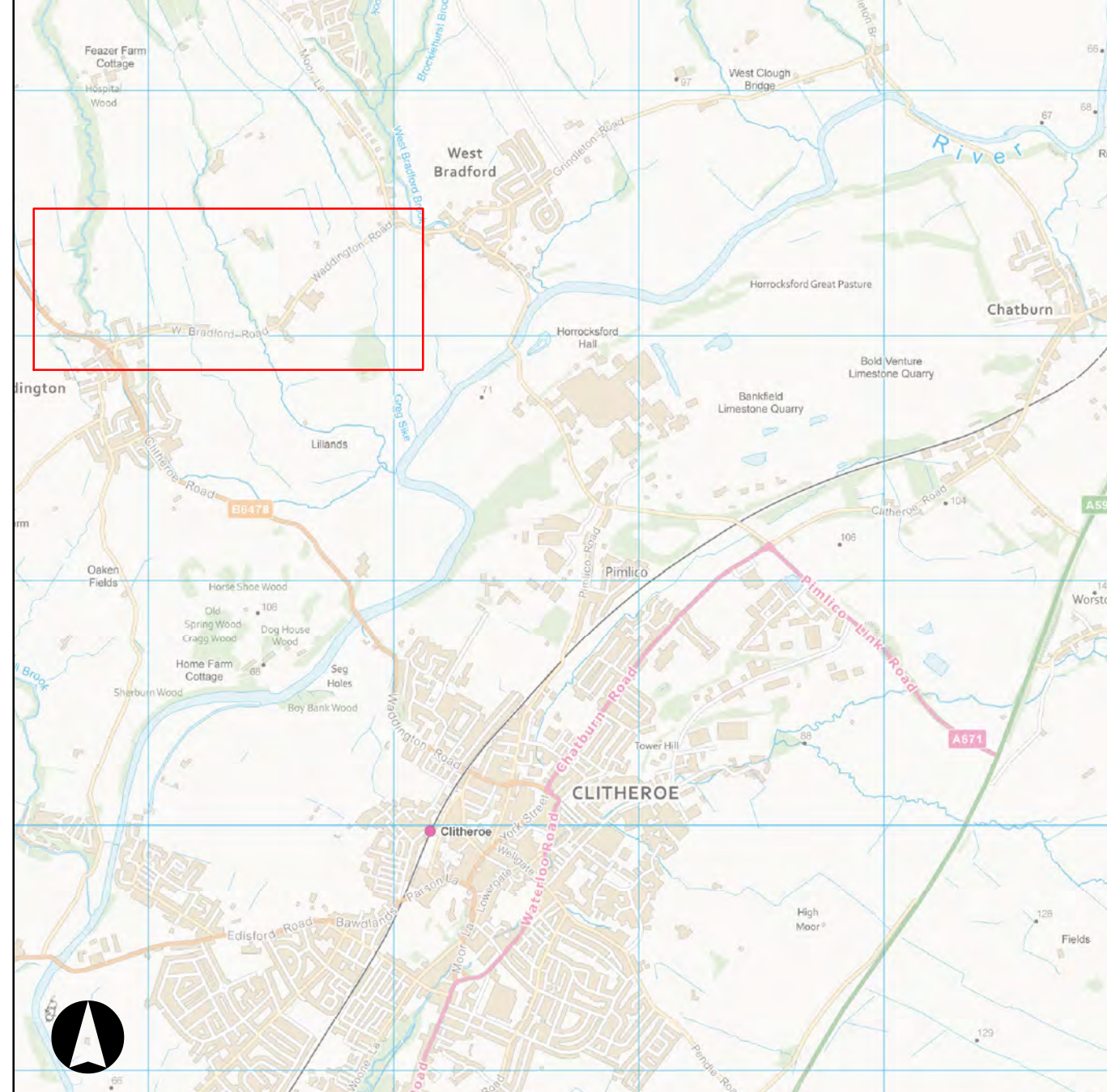
The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown. Crown copyright and database rights 2017 Ordnance Survey 100022432.



**APPENDIX B1 - SWEEP PATHS FOR PROPOSED ROUTES**

**FIGURE B - 1 - 08**

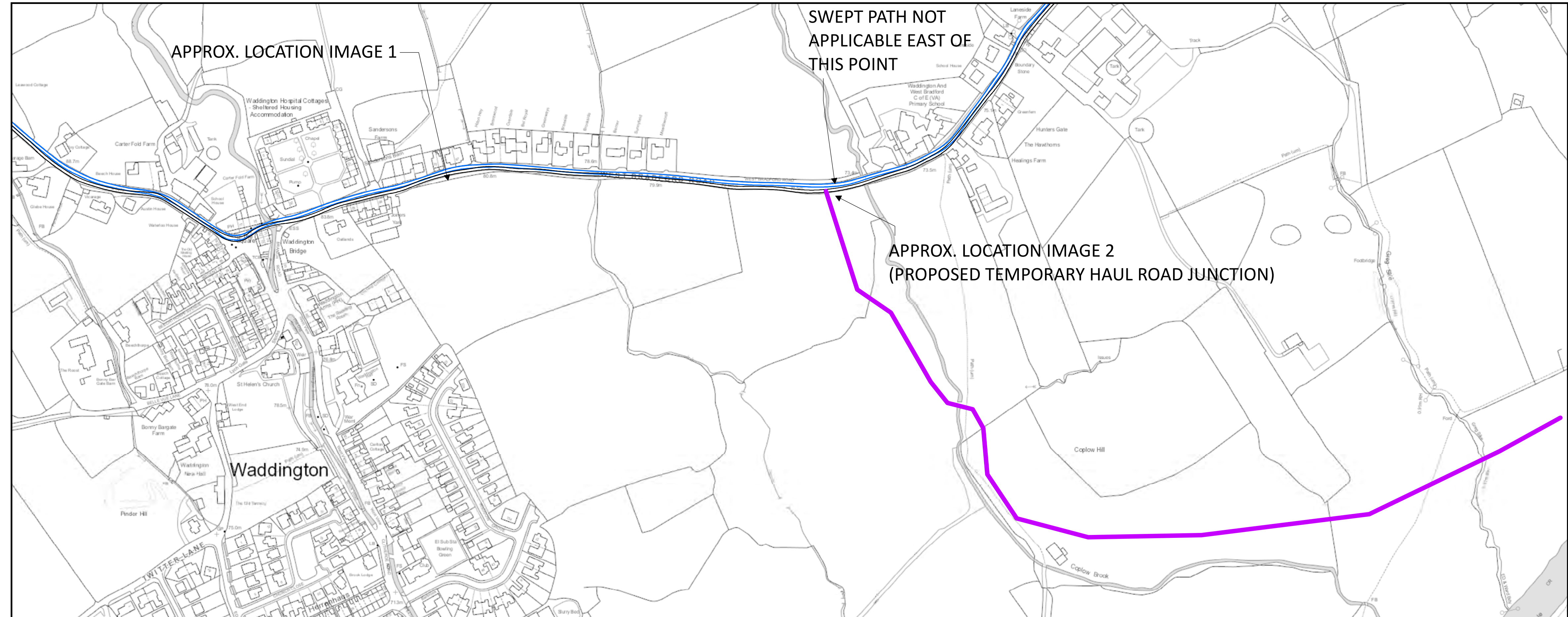
**Waddington - West Bradford Road (TA Link Ref. 60)**



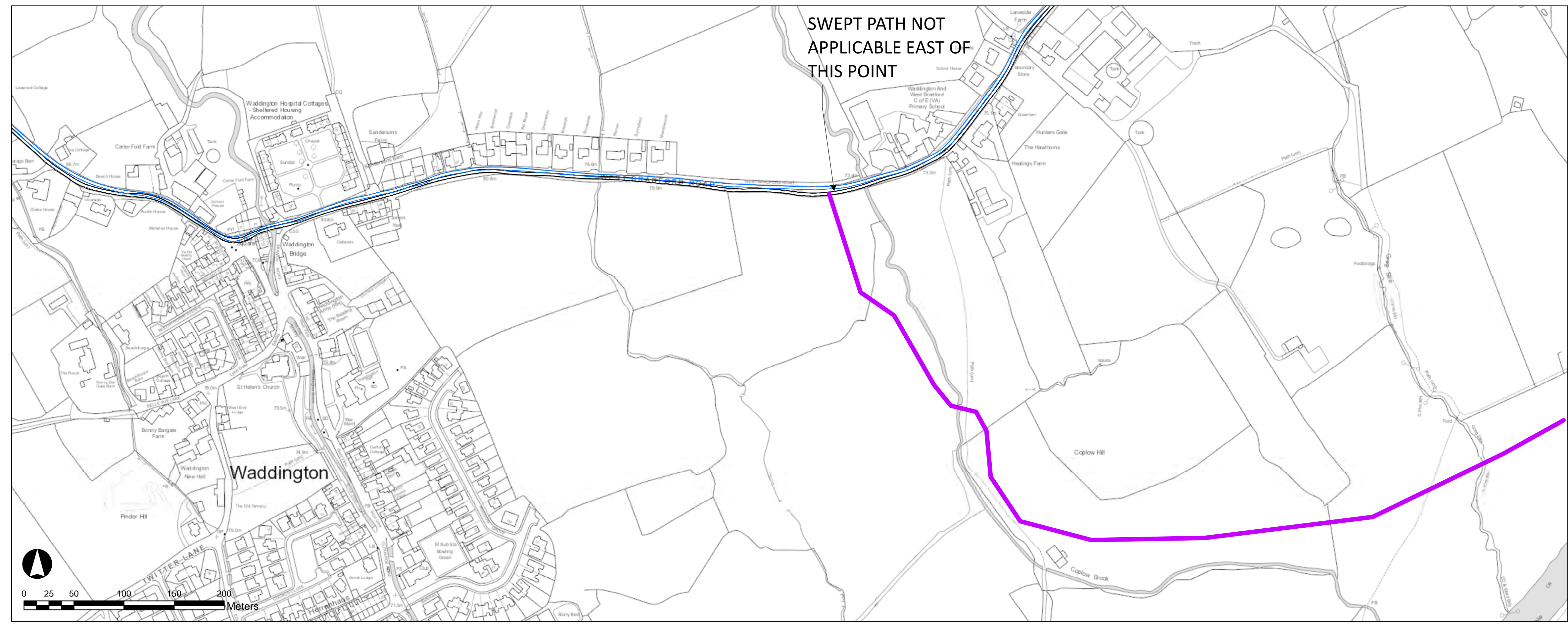
**IMAGE 1: HGV TRIAL 11th NOVEMBER 2020  
4 AXLE RIGID WEST BRADFORD RD (SOUTHBOUND)  
LEAVES LANE TO PASS PARKED CARS**



**IMAGE 2: PROPOSED JUNCTION LOCATION  
VIEW TOWARDS  
WADDINGTON & W. BRADFORD PRIMARY SCHOOL**



**HGV - tractor unit, 40' artic to site (Northbound)  
HGV - tractor unit, low loader step trailer from site (Southbound)**



**HGV - tractor unit, low loader step trailer to site (Northbound)  
HGV - tractor unit, 40' artic from site (Southbound)**

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