

HS2

Phase 2a - Utilities

April 2019

Utility Company Engagement

- Q2 2015 to Q4 2015: Major Utilities Initial Risk Assessment
- Q1 2016 to Q2 2016: Held introductory meetings with utility companies and obtained utility record drawings
- Q2 2016 to Q4 2016: Regular meetings with utility companies to co-ordinate response to emerging civils design and utility companies optioneering
- Q1 2017 to Q4 2017: Regular meetings with utility companies to co-ordinate utility company designs and environmental mitigation
- Q2 2018: Interdisciplinary Design Review for Additional Provision 2
- Q2 2018 to Q4 2018: Meetings with utilities to refine designs and understand Bill powers required
- Feb 2019: AP2 deposit

Utility Changes in Additional Provision 2 (AP2) and Supplementary Environmental Statement (SES2)

- The hybrid Bill scheme and Additional Provision 1 included utility works and diversions, but these have continued to be refined and updated requirements are now reflected in AP2/SES2
- The process of refinement has taken into account more detailed information about things like:
 - Access routes
 - Compounds
 - Utility company design codes
 - Connection requirements
- AP2 also includes changes to the Bill limits following discussions with utility companies to ensure sufficient land is included to carry out the works and diversions

Utilities in Phase 2a

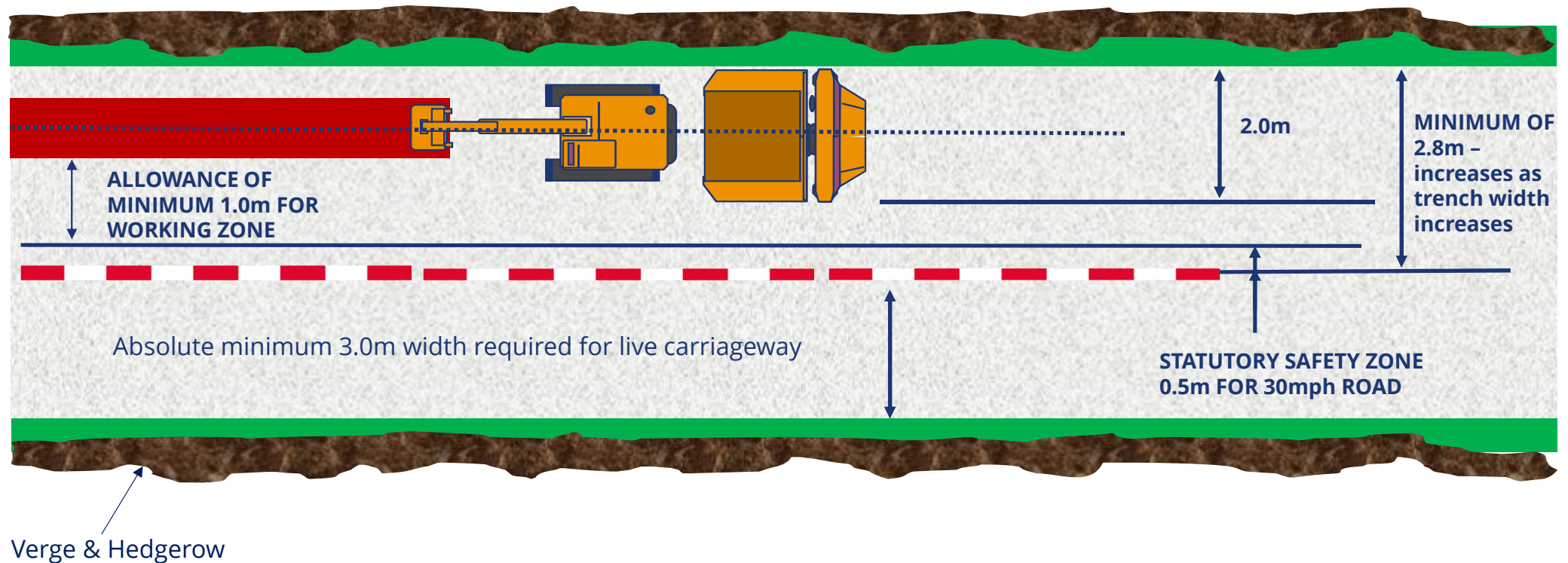
- Utility companies with affected assets in Phase 2a include (but are not limited to):
 - National Grid Gas Transmission
 - Cadent
 - National Grid Electricity Transmission
 - Western Power Distribution
 - Scottish Power Energy Networks
 - Severn Trent Water
 - South Staffordshire Water
 - United Utilities
 - Openreach
 - Virgin Media
 - British Pipeline Agency
 - Mainline Pipelines

Utility Works - General

- Smaller utility works on roads will generally be carried out on a rolling basis up to 50m in length, avoiding closure of the road
- Where lane closures or temporary road closures are required they will normally be restricted to short term and/or weekend closures resulting in only localised and temporary traffic and pedestrian diversions
- The utility companies are required to comply with the Environmental Minimum Requirements including the Code of Construction Practice

Illustrative arrangements for pipelines and cables within roads

Typical minimum width requirements for excavation for trench



For pipelines and cables within roads

Examples



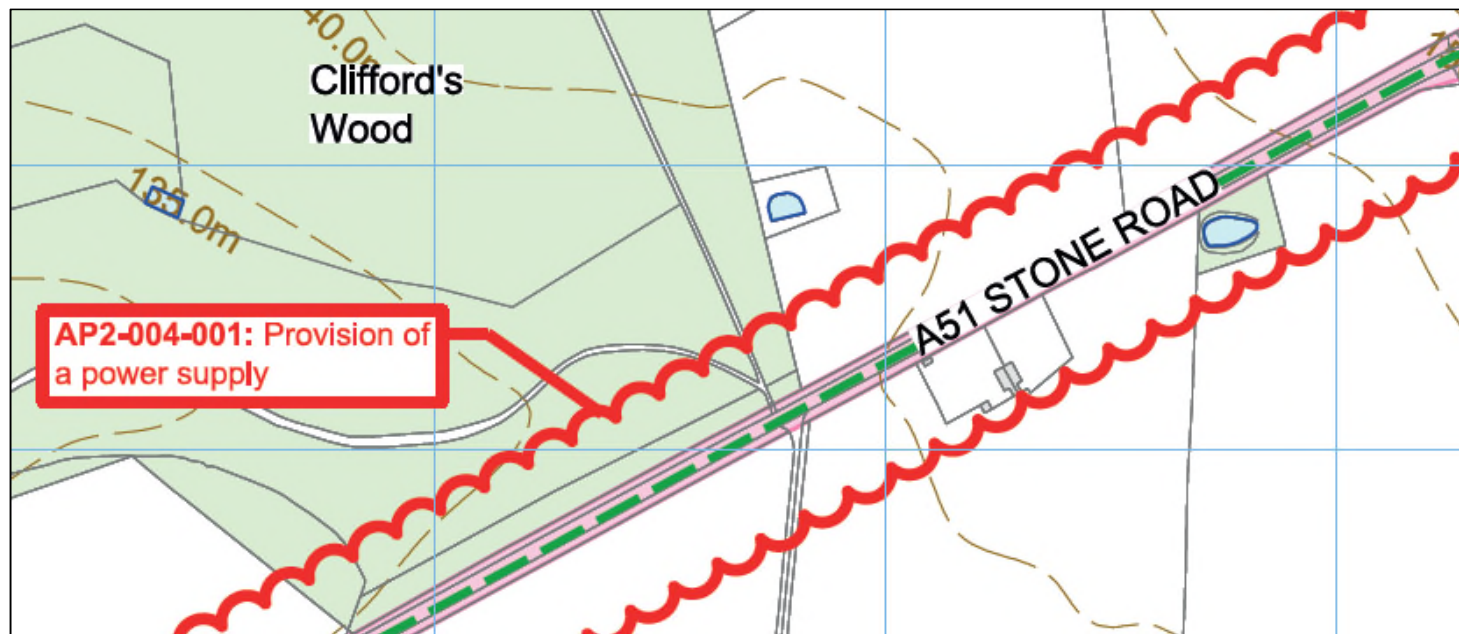
Works within single
carriageways – traffic controlled



Trench Support

For pipelines and cables within roads

Example on Phase 2a



Extract from AP2 ES: CT-05-226

AP2-004-001

- Required for power supply to Whiteley Heath Tunnel
- 2x33kv cable laid in verge/carriageway
- Anticipated to commence in 2022
- No closure of A51 Stone Road anticipated during works

For pipelines and cables within land other than roads

- Areas of land required for utility diversions take account of the need for flexibility of the final design of the diverted route
- Normally the width of the working area for the laying of pipelines and cables will be approximately 40m
- The working area allows for the excavation of the land for the utility to be laid, temporary storage of the excavated material and access for the necessary construction plant, materials and equipment

For pipelines and cables within land other than roads

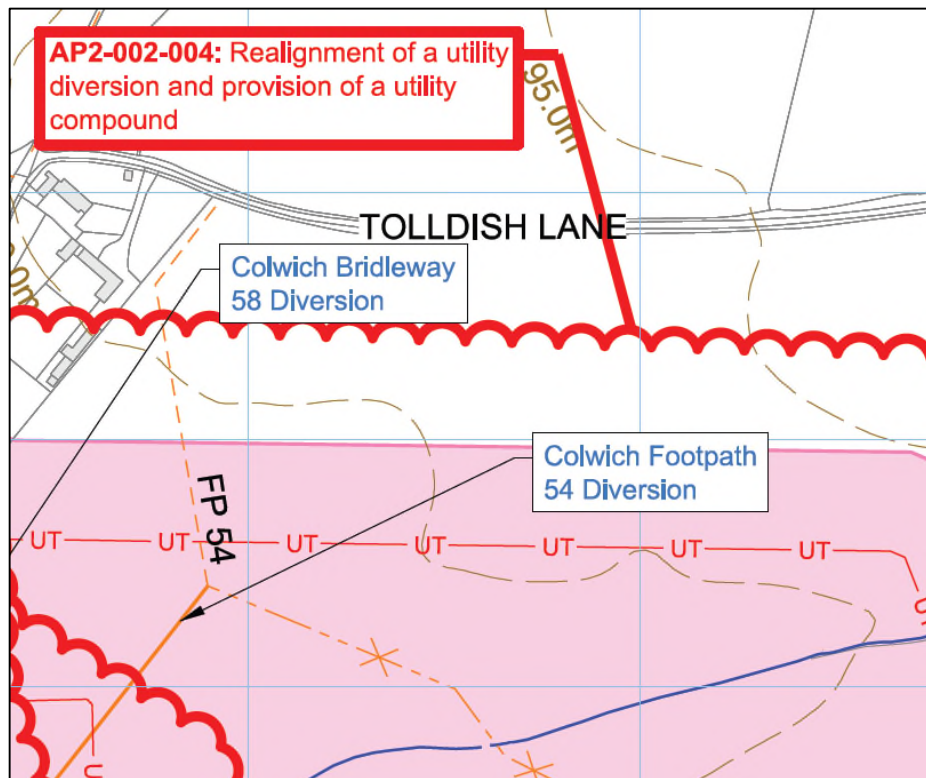
Example



Installation of ducts ready for cabling

For pipelines and cables within land other than roads

Example on Phase 2a



Extract from AP2 ES: CT-05-211

AP2-002-004

- Required for diversion of National Grid gas pipeline
- 1050mm diameter pipeline
- 1.5km total diversion length
- Total anticipated duration of utility work 9 months
- Anticipated to commence in 2021