

M5 Junction 10 Improvements Scheme

Applicant's response to Open Floor Hearing 2 (OFH2),
Compulsory Acquisition Hearing 2 (CAH2) and
Issue Specific Hearing 5 (ISH5) Action Points

TR010063 – APP 9.94

Rules 8 (k)

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M5 Junction 10 Improvements Scheme Development Consent Order 202[x]

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1. Introduction

1.1. Purpose of this document

- 1.1.1. The purpose of this document is to provide the Applicant's response to the Action Points raised at the Open Floor Hearing 2 (OFH2), Compulsory Acquisition Hearing 2 (CAH2) and Issue Specific Hearing 5 (ISH5) held on the 20 November 2024.

2. Applicant's response to actions arising from Open Floor Hearing 2 (OFH2), Compulsory Acquisition Hearing 2 (CAH2), Issue Specific Hearing 5 (ISH5): Traffic and Transport, Funding and Environmental Matters

Action	Description	Applicant Response
OFH2 No Actions arising		
CAH2 Actions arising from CAH2		
1	Provide schedule to Mr King re. (Bruton) land need / purpose for each plot for ongoing maintenance?	<p>The Applicant has engaged with Mr King on 25 November 2024 following compulsory acquisition hearing 2 (CAH2) on 20 November 2024 to understand the exact nature of his question. Mr King explained that his clients would like to know why the Applicant was only taking rights over some plots and not acquiring the freehold and what on-going maintenance is anticipated in relation to plots over which rights are being acquired.</p> <p>The schedule below outlines the land plots which are owned by Cheltenham Borough Council and occupied by Mr R Bruton as a tenant under an Agricultural Holdings Act tenancy. This outlines what the land will be used for in relation to the proposed scheme and if there is proposed ongoing maintenance in relation to these plots.</p> <p>The Applicant will be pursuing voluntary agreement with the landowners and, in respect of acquisition of rights, this will most likely be in the form of an option for an easement over land. The easement will then contain the necessary rights for the Applicant to construct and maintain the Scheme.</p>

Action	Description	Applicant Response			
		Plot	Work number	Works	Reasoning
		4/3a	1n 20	New right for the construction of an environmental barrier adjacent to Barn Farm north of Junction 10 and west of the M5 New right for the diversion, use, maintenance and protection of electric cable and associated apparatus and equipment for the benefit of National Grid Electricity Distribution PLC	The environmental barrier being constructed is a reflective noise barrier, which will be retained on the south eastern edge of this plot. This plot isn't being purchased as the Applicant only requires the rights to keep the barrier in place and won't physically affect the remaining land. Similarly, regarding work no. 20 – the Applicant only requires a right for the benefit of National Grid Electricity Distribution PLC and does not require the freehold to be able to maintain this apparatus.
		4/3b	1n 20	New right for the construction, use, protection, inspection and maintenance of an environmental barrier adjacent to Barn Farm north of Junction 10 and west of the M5	As per 4/3a.

Action	Description	Applicant Response			
				New right for the diversion, use, protection, inspection and maintenance of electric cable and associated apparatus and equipment for the benefit of National Grid Electricity Distribution PLC	
		4/3d	1c	New right for the temporary access for the construction of a new southbound exit slip from the M5 to the A4019 and new permanent right of access to provide, protect, inspect and maintain environmental and ecological mitigation	The Applicant is proposing permanent rights in relation to access within the plot in order to maintain environmental and ecological mitigation within 4/3d and assist in access to 4/3e.
		4/3c	1c 1o	Required for the construction of a new southbound exit slip from the M5 to the A4019 required for the construction of an environmental barrier adjacent to land housing a traveller site north of Junction 10 and east of the M5	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		4/3d(i)	1a	Required for access to the M5 Motorway to provide and maintain advance signage, cabling, ducting	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.

Action	Description	Applicant Response			
		4/3e	1c	New right for the temporary access for the construction of a new southbound exit slip from the M5 to the A4019 and new permanent right of access to provide, protect, inspect and maintain environmental and ecological mitigation	As can be seen on sheet 4, works plans, this plot is required for environmental compensation and mitigation works. A new right is proposed to be acquired to provide rights of access in order to maintain this mitigation.
		4/3f	1e 1m 1n 20	<p>Required for the construction of a new northbound entry slip from the A4019 to the M5</p> <p>Required for the extension of the Leigh Brook culvert (also known as the Barn Farm culvert)</p> <p>Required for the construction and retention of an environmental barrier adjacent to Barn Farm north of Junction 10 and west of the M5</p> <p>Required for the diversion of National Grid Electricity Distribution plc electric cable and associated apparatus and equipment</p>	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		4/3g	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across

Action	Description	Applicant Response			
					this plot. Temporary rights are sought in relation to construction compound no.2.
		4/3g(i)	1e	Required for temporary working space for the construction of a new northbound entry slip from the A4019 to the M5	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights of access are required to provide working space for the construction of the northbound entry slip.
		4/3h	1j 2b	New right for the use land northwest of Junction 10 as a construction compound New right to provide, protect, inspect and maintain landscaping northwest of Junction 10	The Applicant is proposing to acquire new rights in relation to this plot only. Permanent acquisition of this plot is not required. The Applicant is seeking rights in order to maintain landscaping, which can be seen on sheet 4 of the environmental masterplan. The Applicant considers that the current use of the land can continue and therefore permanent acquisition wouldn't be necessary.

Action	Description	Applicant Response			
		4/3i	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		4/3j	1l	Required for the construction of drainage attenuation basins (2) with associated drainage facilities, access and landscaping northwest of Junction 10	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		4/3k	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		4/3l	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		4/3m	1j	Required for construction compound no. 2 northwest of	The Applicant is not proposing to acquire any permanent rights across

Action	Description	Applicant Response			
				Junction 10	this plot. Temporary rights are sought in relation to construction compound no.2.
		5/1a	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		5/1a(i)	3d 27	New right for the construction of new or altered private means of access New right for the diversion, use, protection and maintenance of telecommunication cable and associated apparatus and equipment	The Applicant is proposing to acquire permanent rights in relation to this plot. Given the status of the works as a private means of access it is not necessary to acquire a freehold interest as the landowner will continue to have ongoing control of the land. Permanent rights are also required in relation to the telecommunication apparatus which is required in order to provide the statutory undertaker protection over their diverted apparatus.

Action	Description	Applicant Response			
		5/1a(ii)	1j	Required for construction compound no.2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		5/1b	1l 3d 27	Required for the construction of drainage attenuation basins (2) with associated drainage facilities, access and landscaping northwest of Junction 10 Required for the construction of new or altered private means of access Required for the diversion of telecommunication cable and associated apparatus and equipment	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		5/1c	1j	Required for construction compound no. 2 northwest of Junction 10	The Applicant is not proposing to acquire any permanent rights across this plot. Temporary rights are sought in relation to construction compound no.2.
		5/1d	1e 20	Required for the construction of a new northbound entry slip from the A4019 to the M5	The Applicant is proposing to permanently acquire the freehold of this plot for the

Action	Description	Applicant Response			
				Required for the diversion of National Grid Electricity Distribution plc electric cable and associated apparatus and equipment	construction and ongoing maintenance of the Scheme.
		5/1e	1e 1j 3d 15 16 27	Required for the Construction of a new northbound entry slip from the A4019 to the M5 Required for construction compound no. 2 northwest of Junction 10 Required for the construction of new or altered private means of access Required for the diversion of Severn Trent Water Limited water pipeline Required for the diversion of Wales & West Utilities Limited gas main Required for the diversion telecommunication cable and associated apparatus and equipment	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		5/1f	1j 3d 27	Required for construction compound no. 2 northwest of Junction 10 Required for construction of new or altered private means of access Required for the diversion of	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the

Action	Description	Applicant Response			
				telecommunication cable and associated apparatus and equipment	Scheme.
		5/1g	1e 15 16 27	<p>Required for the construction of a new northbound entry slip from the A4019 to the M5</p> <p>Required for the diversion of Severn Trent Water Limited water pipeline</p> <p>Required for the diversion of Wales & West Utilities Limited gas main</p> <p>Required for the diversion of telecommunication cable and associated apparatus and equipment</p>	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.
		5/1g(i)	1e 2 2a	<p>Required for the construction of a new northbound entry slip from the A4019 to the M5</p> <p>Required for the construction of a new grade separated roundabout junction and maintenance bays</p> <p>Required for the construction of a new roundabout over the M5 comprising a circulatory carriageway and the Piffs Elm interchange bridges (north and south)</p>	The Applicant is proposing to permanently acquire the freehold of this plot for the construction and ongoing maintenance of the Scheme.

Action	Description	Applicant Response
2	Applicant to provide a summary of CA engagement re. Mr Hadley's land	<p>Timeline and Summary of Engagement for Voluntary Land Acquisition</p> <p>May 2024</p> <ul style="list-style-type: none"> • Draft Heads of Terms for an option agreement were issued, outlining preliminary terms for the voluntary acquisition of land. • The document avoided references to consideration to facilitate broader discussions and included a request for a meeting to review and refine these terms. <p>June 2024</p> <ul style="list-style-type: none"> • A licence agreement was sent to the agent, seeking voluntary access to the land to conduct necessary surveys. <p>July 2024</p> <ul style="list-style-type: none"> • Continued engagement with the agent regarding voluntary acquisition. • Updated Heads of Terms for the option agreement were issued to the agent and landowner, incorporating: <ul style="list-style-type: none"> ○ An offer exceeding agricultural land value. ○ Additional statutory loss payment and an option payment. ○ The offer made reconditioned the proposed scheme's benefits to the landowner's retained land. <p>August 2024</p> <ul style="list-style-type: none"> • Discussions held with the agent regarding voluntary access to perform surveys. • A meeting was proposed to progress discussions on land acquisition.

Action	Description	Applicant Response
		<p>5th September 2024</p> <ul style="list-style-type: none"> A Teams meeting was held with the landowner and their agent to address concerns about the scheme and to discuss the progress of the purchase of land voluntarily. <p>18th September 2024</p> <ul style="list-style-type: none"> An onsite meeting with the landowner and a Teams call with the agent addressed practical issues and explored ways to advance the purchase of the land. Overlay plan was issued to Mr Hadley and his agent to assist in ongoing discussions. <p>September 2024</p> <ul style="list-style-type: none"> Further communication occurred with the agent to outline next steps and clarify what the landowner would require to progress the land sale. <p>October 2024</p> <ul style="list-style-type: none"> An offer for outright purchase of the land was made to the agent and landowner, at the same value as offered in July 2024. This change in purchase structure was initiated at the landowner's request. Which was put forward during the onsite meeting. <p>The Applicant will ensure that the Lands Rights Tracker is updated accordingly for Deadline 10.</p>
3	Provide applicant position statement re. distances relevant to specified work areas for NGED based upon HSE guidance (DCO Schedule 9)	<p>The Applicant's preferred approach in relation to the bespoke protective provisions in favour of NGED included in the D7 dDCO [REP7-002], in particular the definition of "specified works" responded the need to address what was identified as a future risk due to the disproportionate and unreasonable administrative burden causing unnecessary delays that could result from the requirement to follow NGED's standard approach to define what "specified</p>

Action	Description	Applicant Response
		<p>works” are. NGED’s standard approach would have the implication that any works within a 6-metre radius of NGED’s asse would trigger the approval mechanism set out in the protective provisions. This would capture multiple assets of variable voltage within the uniform 6-metre radius. In particular, the Applicant main concern relates to unidentified assets that they may encounter in the implementation of the Scheme, as well as the examples mentioned in the course of the CAH2.</p> <p>In order to ensure a fair balance between securing NGED’s assets, ensuring their approval of works carried out in relation to their assets whilst being able to deliver the Scheme in line with the proposed programme, the Applicant proposal is to follow a similar approach to that included in the Health and Safety Executive Guidance Note GS6 “<i>Avoiding danger from overhead power lines</i>” (the “HSE Guidance”).</p> <p>The HSE Guidance is well referenced and understood by all on project works. For example, in the context of approaching any DCO technical or plant protection team to discuss safeguarding assets and safe working practices, the HSE Guidance would be the point of reference.</p> <p>The HSE Guidance refers to the Energy Networks Association (ENA) publication <i>Look Out Look Up! A Guide to the Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines</i>. This advises establishing exclusion zones around the line and any other equipment that may be fitted to the pole or pylon. The minimum extent of these zones varies according to the voltage and is in line with the current definition of “specified works” included in NGED’s bespoke protective provisions in Part 5 of Schedule 9 of the dDCO.</p> <p>A copy of the HSE Guidance is provided with this submission at Appendix A.</p>
4	Position statement re. Wales and West utilities regarding distances including provision of their guidance relied upon.	<p>The current definition of “specified works” included in the bespoke protective provisions for the benefit of Wales and West Utilities in Part 6 of Schedule 9 of the draft DCO [REP7-002] which defines “specified works” by way of referring to WWU Guidance WW/SP/SSW/22 (the “WWU Guidance”) was initially proposed</p>

Action	Description	Applicant Response
		<p>by Wales and West Utilities and agreed by the Applicant with minor amendments from the original wording.</p> <p>The WWU Guidance sets out the specifications and safety requirements for third parties carrying out work in the vicinity of high-pressure pipelines and associated installations.</p> <p>A copy of the WWU Guidance is provided with this submission at Appendix B.</p>
5	What is a 'reasonable notice period' re. Severn Trent to access assets in stopped up streets etc?	The Applicant believes that a notice period of at least 48 hours in advance to access being required is reasonable and sufficient. The Applicant proposes to amend paragraph 42(2) in Part 4 of Schedule 9 of the draft DCO to reflect this in the next submission of the draft DCO at Deadline 10.
6	Consider form of words regarding Severn Trent - pipe diameters and separation distances.	The Applicant has amended the draft DCO accordingly and this will be reflected in the next submission of the Order at Deadline 10.
ISH5 Actions Arising from ISH5		
1	Provide letter confirming agreement of PPs with BT Openreach	The Applicant has provided the letter at Deadline 9a, please see Appendix C.
5	Filter drain versus Swales – what is the EA position and clarification on the reason for a different conclusion from the applicant and JC	To aid discussions between the EA and the Applicant, the Applicant has provided a Change Application HEWRAT assessment (TR010063/APP/10.42) to the EA for their review, for clarity this document has been submitted at Deadline 9a.
6	WFD – Applicant will come back with written response and set out position regarding NPSNN para 5.225 and 5.226	<p>The Water Framework Directive (WFD) assessment (ES Appendix 8.2 [REP3-028]) was completed on the original design submitted to the DCO.</p> <p>With regards to the requirements detailed in paragraphs 5.225 and 5.226 of the NPSNN (2014), the WFD assessment [REP3-028] was undertaken in line with PINS advice note 18 and considered the WFD and its daughter directives</p>

Action	Description	Applicant Response
		<p>including those relating to priority substances and groundwater. The WFD assessment concluded that the Scheme would be compliant with the directive. The Scheme would not cause deterioration in status of any WFD element and would not prevent the future attainment of water body objectives. As these conclusions were drawn, there is no requirement for the application of Article 4.7 (Regulation 19 under the updated directive).</p> <p>As the Scheme does not include any new abstractions or discharges and is a significant distance from shoreline or estuary water bodies, there has been no requirement for consideration of impacts associated with Water Resource Management Plans, Shoreline/Estuary Management Plans and Marine Plans.</p> <p>The ES Addendum associated with Change application 2 [AS-093] assessed the impact of the changes on WFD compliance. It was determined that the changes would not cause any alterations in the WFD conclusions reported in ES Appendix 8.2 [REP3-028], i.e. the Scheme continues not to cause any deterioration in WFD status and will not prevent the future attainment of water body objectives. A statement to this effect was included in the ES Addendum for each of the design changes, for example paragraph 9.1.6 of [AS-093] for design change 1 within change application 2.</p>
7	Submit updated viewpoint 2 re. landscape impact associated with road design associated changes included within Application Change Request 2	The Applicant has submitted an updated version of Landscape Visualisations Viewpoint 2 – Years 1 and 15 (TR010063/APP/9.35 Rev. 1) at Deadline 9a. As confirmed by the Applicant at ISH5 this is the only visualisation viewpoint from which the design changes associated with Application Change Request 2 are visible.
9	How has Applicant met obligations with respect to impacts on Non- Designated Heritage assets?	<p>The Applicant has followed DMRB, and NPS NN (2014), and considers that its ES is robust and has considered those assets required of it.</p> <p>The Applicant would note that the NPS NN 2014 states at paragraph 5.125 that “the Secretary of State should also consider the impacts on other non-designated heritage assets (as identified either through the development plan</p>

Action	Description	Applicant Response
		<p>process by local authorities, including ‘local listing’, or through the nationally significant infrastructure project examination and decision making process) on the basis of clear evidence that the assets have a significance that merit consideration in that process, even though those assets are of lesser value than designated heritage assets.”</p> <p>The Applicant is of the view that it is only those NDHAs that are identified during examination together with clear evidence that the assets have a significance that merit consideration that need to be considered by the Secretary of State.</p> <p>In line with the requirements of DMRB (LA106) the following sources were consulted to establish a baseline for the historic environment:</p> <ul style="list-style-type: none"> - National Heritage List for England (NHLE). - Gloucestershire Historic Environment Record (GHER). - Know Your Place: West of England digital mapping. - Portable Antiquities Scheme (PAS). - Gloucestershire Historic Landscape Characterisation (HLC) data. <p>The ES Chapter 11 (Cultural Heritage) has been updated to include the eight buildings identified at ISH4 and ISH5 as non-designated heritage assets. These comprise the three properties in Uckington (Elton Lawn, Landean and Post Box Cottage), and five properties off the B4634 and at Withy Bridge (Barn Court, Elm Cottage, Orchard House, House in the Tree PH, and Mill Cottage). None of these buildings are listed on the Historic Environment Record (HER).</p> <p>Information has been provided by the Joint Councils to the Applicant on the basis for each building to be considered as a non-designated heritage asset. The Applicant has subsequently included these eight buildings in the assessment of cultural heritage in ES Chapter 11. An updated copy of the ES Chapter 11 was submitted at Deadline 9 which addressed the three properties at</p>

Action	Description	Applicant Response
		<p>Uckington. A further update to the ES Chapter 11 has been made to address the other five properties and will be submitted at Deadline 10.</p> <p>The Applicant considers that the additional information provided by the Joint Councils has enabled it to make an assessment on the likely significant effects of the Scheme on non-designated heritage assets. The Applicant therefore considers that the ES assessment provided is robust and in accordance with legislative and policy requirements.</p>
11	OS plan of new / additional non- designated heritage assets to be shown on updated plan in separate colour	The Applicant has updated Figure 11-2 in ES Appendix 11.2 (Cultural Heritage Figures) (TR010063/APP/6.15 Rev. 1), to identify the locations of the eight non-designated built heritage assets (NDHAs) that were identified during October and November 2024.

Appendices



Appendix A. Response to CAH2 Action Point 3 – HSE Guidance Note GS6

Avoiding danger from overhead power lines

Guidance Note GS6 (Fourth edition)



This general series guidance note is for people who may be planning to work near overhead lines where there is a risk of contact with the wires, and describes the steps you should take to prevent contact with them. The fourth edition makes the advice easier to follow and has brought the supporting visuals up to date. The guidance has not fundamentally changed from the previous version.

It is primarily aimed at employers and employees who are supervising or in control of work near live overhead lines, but it will also be useful for those who are carrying out the work.

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Introduction

1 Every year people at work are killed or seriously injured when they come into contact with live overhead electricity power lines. These incidents often involve:

- machinery, eg cranes, lorry-loader cranes, combine harvesters, and tipping trailers;
- equipment, eg scaffold tubes and ladders;
- work activities, eg loading, unloading, lifting, spraying, and stacking.

2 If a machine, scaffold tube, ladder, or even a jet of water touches or gets too close to an overhead wire, then electricity will be conducted to earth. This can cause a fire or explosion and electric shock and burn injuries to anyone touching the machine or equipment. An overhead wire does not need to be touched to cause serious injury or death as electricity can jump, or arc, across small gaps.

3 One of the biggest problems is that people simply do not notice overhead lines when they are tired, rushing or cutting corners. They can be difficult to spot, eg in foggy or dull conditions, when they blend into the surroundings at the edge of woodland, or when they are running parallel to, or under, other lines.

4 Always assume that a power line is live unless and until the owner of the line has confirmed that it is dead.

5 This guidance is for people who may be planning to work near overhead lines where there is a risk of contact with the wires, and describes the steps you should take to prevent contact with them. It is primarily aimed at employers and employees who are supervising or in control of work near live overhead lines, but it will also be useful for those who are carrying out the work.

Types of overhead power lines and their heights

6 Most overhead lines have wires supported on metal towers/pylons or wooden poles – they are often called ‘transmission lines’ or ‘distribution lines’. Some examples are shown in Figures 1–3.



Figure 1 275 kV transmission line



Figure 2 11 kV distribution line



Figure 3 400 V distribution line

7 Most high-voltage overhead lines, ie greater than 1000 V (1000 V = 1 kV) have wires that are bare and uninsulated but some have wires with a light plastic covering or coating. All high-voltage lines should be treated as though they are uninsulated. While many low-voltage overhead lines (ie less than 1 kV) have bare uninsulated wires, some have wires covered with insulating material. However, this insulation can sometimes be in poor condition or, with some older lines, it may not act as effective insulation; in these cases you should treat the line in the same way as an uninsulated line. If in any doubt, you should take a precautionary approach and consult the owner of the line.

8 There is a legal minimum height for overhead lines which varies according to the voltage carried. Generally, the higher the voltage, the higher the wires will need to be above ground (see Figure 4). Equipment such as transformers and fuses attached to wooden poles and other types of supports will often be below these heights. There are also recommended minimum clearances published by the Energy Networks Association (ENA Technical Specification 43–8 *Overhead Line Clearances*)¹ between the wires and structures such as buildings and lamp posts.

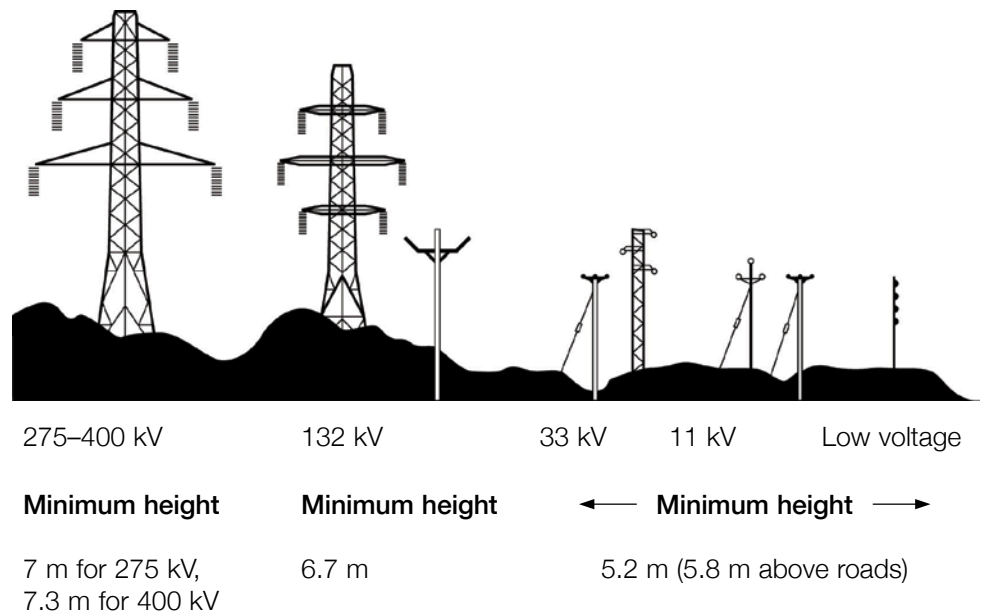


Figure 4 Minimum heights above ground level for overhead power lines

What does the law require?

9 The law requires that work may be carried out in close proximity to live overhead lines only when there is no alternative and only when the risks are acceptable and can be properly controlled. You should use this guidance to prepare a risk assessment that is specific to the site. Guidance on how to carry out a risk assessment is available at www.hse.gov.uk/toolbox/managing/managingtherisks.htm.

10 Businesses and employees who work near to an overhead line must manage the risks. Overhead line owners have a duty to minimise the risks from their lines and, when consulted, advise others on how to control the risks. The line owner will usually be an electricity company, known as a transmission or distribution network operator, but could also be another type of organisation, eg Network Rail, or a local owner, eg the operator of a caravan park. More details about legal responsibilities can be found in Annex 1.

Preventing overhead line contact accidents

11 Good management, planning and consultation with interested parties before and during any work close to overhead lines will reduce the risk of accidents. This applies whatever type of work is being planned or undertaken, even if the work is temporary or of short duration. You should manage the risks if you intend to work within a distance of 10 m, measured at ground level horizontally from below the nearest wire.

Remove the risk

12 The most effective way to prevent contact with overhead lines is by not carrying out work where there is a risk of contact with, or close approach to, the wires.

13 If you cannot avoid working near an overhead line and there is a risk of contact or close approach to the wires, you should consult its owner to find out if the line can be permanently diverted away from the work area or replaced with underground cables. This will often be inappropriate for infrequent, short-duration or transitory work.

14 If this cannot be done and there remains a risk of contact or close approach to the wires, find out if the overhead line can be temporarily switched off while the work is being done. The owner of the line will need time to consider and act upon these types of requests and may levy a charge for any work done.

Risk control

15 If the overhead line cannot be diverted or switched off, and there is no alternative to carrying out the work near it, you will need to think about how the work can be done safely. If it cannot be done safely, it should not be done at all. Your site-specific risk assessment will inform the decision. Things to consider as part of your risk assessment include:

- the voltage and height above ground of the wires. Their height should be measured by a suitably trained person using non-contact measuring devices;
- the nature of the work and whether it will be carried out close to or underneath the overhead line, including whether access is needed underneath the wires;
- the size and reach of any machinery or equipment to be used near the overhead line;
- the safe clearance distance needed between the wires and the machinery or equipment and any structures being erected. If in any doubt, the overhead line's owner will be able to advise you on safe clearance distances;
- the site conditions, eg undulating terrain may affect stability of plant etc;
- the competence, supervision and training of people working at the site.

16 If the line can only be switched off for short periods, schedule the passage of tall plant and, as far as is possible, other work around the line for those times.

17 Do not store or stack items so close to overhead lines that the safety clearances can be infringed by people standing on them.

Working near but not underneath overhead lines – the use of barriers

18 Where there will be no work or passage of machinery or equipment under the line, you can reduce the risk of accidental contact by erecting ground-level barriers to establish a safety zone to keep people and machinery away from the wires. This area should not be used to store materials or machinery. Suitable barriers can be constructed out of large steel drums filled with rubble, concrete blocks, wire fence earthed at both ends, or earth banks marked with posts.

- If steel drums are used, highlight them by painting them with, for example, red and white horizontal stripes.
- If a wire fence is used, put red and white flags on the fence wire.
- Make sure the barriers can be seen at night, perhaps by using white or fluorescent paint or attaching reflective strips.

19 The safety zone should extend 6 m horizontally from the nearest wire on either side of the overhead line. You may need to increase this width on the advice of the line owner or to allow for the possibility of a jib or other moving part encroaching into the safety zone. It may be possible to reduce the width of the safety zone but you will need to make sure that there is no possibility of encroachment into the safe clearance distances in your risk assessment.

20 Where plant such as a crane is operating in the area, additional high-level indication should be erected to warn the operators. A line of coloured plastic flags or 'bunting' mounted 3–6 m above ground level over the barriers is suitable. Take care when erecting bunting and flags to avoid contact or approach near the wires.

Passing underneath overhead lines

21 If equipment or machinery capable of breaching the safety clearance distance has to pass underneath the overhead line, you will need to create a passageway through the barriers, as illustrated in Figure 5. In this situation:

- keep the number of passageways to a minimum;
- define the route of the passageway using fences and erect goalposts at each end to act as gateways using a rigid, non-conducting material, eg timber or plastic pipe, for the goalposts, highlighted with, for example, red and white stripes;
- if the passageway is too wide to be spanned by a rigid non-conducting goalpost, you may have to use tensioned steel wire, earthed at each end, or plastic ropes with bunting attached. These should be positioned further away from the overhead line to prevent them being stretched and the safety clearances being reduced by plant moving towards the line;
- ensure the surface of the passageway is levelled, formed-up and well maintained to prevent undue tilting or bouncing of the equipment;
- put warning notices at either side of the passageway, on or near the goalposts and on approaches to the crossing giving the crossbar clearance height and instructing drivers to lower jibs, booms, tipper bodies etc and to keep below this height while crossing;
- you may need to illuminate the notices and crossbar at night, or in poor weather conditions, to make sure they are visible;
- make sure that the barriers and goalposts are maintained.



Figure 5 Typical passageway through barriers

22 On a construction site, the use of goalpost-controlled crossing points will generally apply to all plant movements under the overhead line.

Working underneath overhead lines

23 Where work has to be carried out close to or underneath overhead lines, eg road works, pipe laying, grass cutting, farming, and erection of structures, and there is no risk of accidental contact or safe clearance distances being breached, no further precautionary measures are required.

24 However, your risk assessment must take into account any situations that could lead to danger from the overhead wires. For example, consider whether someone may need to stand on top of a machine or scaffold platform and lift a long item above their head, or if the combined height of a load on a low lorry breaches the safe clearance distance. If this type of situation could exist, you will need to take precautionary measures.

25 If you cannot avoid transitory or short-duration, ground-level work where there is a risk of contact from, for example, the upward movement of cranes or tipper trailers or people carrying tools and equipment, you should carefully assess the risks and precautionary measures. Find out if the overhead line can be switched off for the duration of the work. If this cannot be done:

- refer to the Energy Networks Association (ENA) publication *Look Out Look Up! A Guide to the Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines.*² This advises establishing exclusion zones around the line and any other equipment that may be fitted to the pole or pylon. The minimum extent of these zones varies according to the voltage of the line, as follows:
 - low-voltage line – 1 m;
 - 11 kV and 33 kV lines – 3 m;
 - 132 kV line – 6 m;
 - 275 kV and 400 kV lines – 7 m;
- under no circumstances must any part of plant or equipment such as ladders, poles and hand tools be able to encroach within these zones. Allow for uncertainty in measuring the distances and for the possibility of unexpected movement of the equipment due, for example, to wind conditions;
- carry long objects horizontally and close to the ground and position vehicles so that no part can reach into the exclusion zone, even when fully extended. Machinery such as cranes and excavators should be modified by adding physical restraints to prevent them reaching into the exclusion zone. Note that insulating guards and/or proximity warning devices fitted to the plant without other safety precautions are not adequate protection on their own;
- make sure that workers, including any contractors, understand the risks and are provided with instructions about the risk prevention measures;
- arrange for the work to be directly supervised by someone who is familiar with the risks and can make sure that the required safety precautions are observed;
- if you are in any doubt about the use of exclusion zones or how to interpret the ENA document, you should consult the owner of the overhead line.

26 Where buildings or structures are to be erected close to or underneath an overhead line, the risk of contact is increased because of the higher likelihood of safety clearances being breached. This applies to the erection of permanent structures and temporary ones such as polytunnels, tents, marquees, flagpoles, rugby posts, telescopic aerials etc. In many respects these temporary structures pose a higher risk because the work frequently involves manipulating long conducting objects by hand.

27 The overhead line owner will be able to advise on the separation between the line and structures, for example buildings using published standards such as ENA Technical Specification 43–8 *Overhead Line Clearances*.¹ However, you will need to take precautions during the erection of the structure. If the overhead line cannot be diverted or switched off then you should take account of the guidance in paragraphs 23 to 26 relating to working underneath such lines.

28 Consider erecting a horizontal barrier of timber or other insulating material beneath the overhead line to form a roof over the construction area – in some cases an earthed, steel net could be used. This should be carried out only with the agreement of the overhead line owner, who may need to switch off the line temporarily for the barrier to be erected and dismantled safely.

29 Ideally, work should not take place close to or under an overhead line during darkness or poor visibility conditions. Dazzle from portable or vehicle lighting can obscure rather than show up power lines.

Working near overhead lines connected to buildings

30 Sometimes, work needs to be carried out near uninsulated low-voltage overhead wires, or near wires covered with a material that does not provide effective insulation, connected to a building. Examples of such work are window cleaning, external painting or short-term construction work. If it is not possible to re-route or have the supply turned off, the line's owner, eg the distribution network operator, may be able to fit temporary insulating shrouds to the wires, for which a charge may be levied. People, plant and materials still need to be kept away from the lines.

Emergency procedures

31 If someone or something comes into contact with an overhead line, it is important that everyone involved knows what action to take to reduce the risk of anyone sustaining an electric shock or burn injuries. Key points are:

- never touch the overhead line's wires;
- assume that the wires are live, even if they are not arcing or sparking, or if they otherwise appear to be dead;
- remember that, even if lines are dead, they may be switched back on either automatically after a few seconds or remotely after a few minutes or even hours if the line's owner is not aware that their line has been damaged;
- if you can, call the emergency services. Give them your location, tell them what has happened and that electricity wires are involved, and ask them to contact the line's owner;
- if you are in contact with, or close to, a damaged wire, move away as quickly as possible and stay away until the line's owner advises that the situation has been made safe;
- if you are in a vehicle that has touched a wire, either stay in the vehicle or, if you need to get out, jump out of it as far as you can. Do not touch the vehicle while standing on the ground. Do not return to the vehicle until it has been confirmed that it is safe to do so;

- be aware that if a live wire is touching the ground the area around it may be live. Keep a safe distance away from the wire or anything else it may be touching and keep others away.

Industry-specific guidance

32 HSE and other organisations publish industry and sector-specific guidance based on this guidance. The main industries and sectors covered by this are construction, agriculture, horticulture, forestry and arboriculture. The Energy Networks Association (ENA), the body representing transmission and distribution network operating companies, also publishes guidance leaflets (see the References section).

Annex 1 The law

1 The Health and Safety at Work etc Act 1974 (HSW Act) places responsibilities on everyone concerned with work activities, including employers, the self-employed and employees.

Regulations:

www.legislation.gov.uk/ukpga/1974/37/contents

2 The Management of Health and Safety at Work Regulations 1999 require that:

- risks are properly assessed and controlled;
- employees are provided with adequate health and safety training;
- employers who share a workplace consult and co-ordinate with each other.

Regulations:

www.legislation.gov.uk/uksi/1999/3242/contents/made

3 Regulation 9 of The Provision and Use of Work Equipment Regulations 1998 requires all people who use work equipment to have received adequate training in the use of that equipment.

Regulations:

www.legislation.gov.uk/uksi/1998/2306/contents/made

Approved Code of Practice:

Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance L22 (Third edition) HSE Books 2008 ISBN 978 0 7176 6295 1 www.hse.gov.uk/pubns/books/l22.htm

4 The Electricity at Work Regulations 1989 require precautions to be taken against the risk of death or personal injury from electricity in work activities. Regulation 14 addresses live work activities, which include working on, or so near, live overhead lines that there is a risk of injury.

Regulations:

www.legislation.gov.uk/ukxi/1989/635/contents/made

Guidance:

Memorandum of guidance on the Electricity at Work Regulations 1989. Guidance on Regulations HSR25 (Second edition) HSE Books 2007 ISBN 978 0 7176 6228 9 www.hse.gov.uk/pubns/books/hsr25.htm

5 The Electricity Safety Quality and Continuity Regulations 2002 require, among other things, owners of overhead lines to ensure that they are at the appropriate height and meet certain standards.

Regulations:

www.legislation.gov.uk/ukxi/2002/2665/contents/made

Guidance:

www.berr.gov.uk/files/file26709.pdf

6 The Construction (Design and Management) Regulations 2007 place duties on construction clients, designers and contractors to plan and organise work so as to avoid danger from energy distribution networks.

Regulations:

www.legislation.gov.uk/ukxi/2007/320/contents/made

Approved Code of Practice:

Managing health and safety in construction. Construction (Design and Management) Regulations 2007. Approved Code of Practice L144 HSE Books 2007 ISBN 978 0 7176 6223 4 www.hse.gov.uk/pubns/books/l144.htm

References

1 ENA Technical Specification 43–8 *Overhead Line Clearances*
[REDACTED]

2 *Look Out Look Up! A Guide to the Safe Use of Mechanical Plant in the Vicinity of Electricity Overhead Lines* Energy Networks Association (ENA)
[REDACTED]

Further reading

Agriculture

Working safely near overhead electricity power lines Agriculture Information Sheet AIS8(rev3) HSE Books 2012 www.hse.gov.uk/pubns/ais8.htm

Safety information for farmers and agricultural contractors ENA 2007
[REDACTED]

Safety information for farmers utilising polytunnels ENA 2008
[REDACTED]

Construction

Guidance is published by HSE under the heading *Electricity – Overhead power lines* at www.hse.gov.uk/construction/safetytopics/overhead.htm

Safe use of Lorry Loaders – Best practice guide the Association of Lorry Loader Manufacturers and Importers (ALLMI) and the Construction Plant-hire Association (CPA) [REDACTED]

Safety information for demolition companies ENA 2008
[REDACTED]

Safety information for scaffolders ENA 2007
[REDACTED]

Quarries

Guidance is published by HSE at www.hse.gov.uk/quarries/hardtargt/electricity.htm

Arboriculture and forestry

Treework web pages: www.hse.gov.uk/treework/safety-topics/power-lines.htm

Safety information for tree trimming near overhead power lines ENA 2008
[REDACTED]

Landscaping and ground maintenance

Safety information for landscaping and ground maintenance workers ENA 2011
[REDACTED]

Railways

Advice in relation to railways is available at www.rail-reg.gov.uk/upload/pdf/rgd-2011-05-web.pdf

Emergency services

Safety advice for the fire service ENA 2007



Safety advice for the police service ENA 2007



Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.

This document is available at: www.hse.gov.uk/pubns/gs6.htm.

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Appendix B. Response to CAH2 Action Point 4 – Wales & West Utilities (WWU) Guidance WW/SP/SSW/22



SPECIFICATION FOR

**SAFE WORKING IN THE VICINITY OF PIPELINES AND
ASSOCIATED INSTALLATIONS OPERATING ABOVE 2
BARG - REQUIREMENTS FOR THIRD PARTIES**

JUNE 2013

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FOREWORD

This Specification was approved, by Chris Clarke, Director of Asset Management and HS&E Dept on 21st June 2013 for use by managers, engineers and supervisors throughout Wales & West Utilities Limited.

Documents are revised, when necessary, by the issue of new editions. Users should ensure that they are in possession of the latest edition by referring to the document library available on the company intranet.

Compliance with this document does not confer immunity from prosecution for breach of statutory or other legal obligations.

BRIEF HISTORY

First published as T/SP/SSW22 Editorial update to reflect merger October 2002 Revised and reissued. Revised and Reissued as T/SP/SSW/22 Editorial update to comply with GRM	October 2001 November 2002 November 2003 June 2004 August 2004	EPSG/L01/283 EPSG/A03/10125 EPSG/T04/1209
Document revised to remove reference to Transco and replace with WWU Ltd.	May 2006	
Document revised to reflect WWU management structure, include IP pipelines and update letters	April 2013	

KEY CHANGES (Identify the changes from the previous version of this document)

Section	Amendments
1	Scope extended from any pipe operating above 7bar to above 2bar gauge
5 & 6	References added to T/PR/P/18
8	References added to wind turbine development near pipelines

USE

This document is provided by Wales & West Utilities Limited for information and reference.

MANDATORY AND NON-MANDATORY REQUIREMENTS

In this document:

must: indicates a mandatory requirement.

should: indicates best practice and is the preferred option. If an alternative method is used then a suitable and sufficient risk assessment must be completed to show that the alternative method delivers the same, or better, level of protection.

SPECIFICATION FOR SAFE WORKING AND DEVELOPMENT IN THE VICINITY OF PIPELINES AND ASSOCIATED INSTALLATIONS OPERATING ABOVE 2 BARG - REQUIREMENTS FOR THIRD PARTIES

INTRODUCTION

This specification is for issue to third parties carrying out work in the vicinity of high pressure gas pipelines (above 2 bar gauge) and associated installations and is provided to ensure that individuals planning and undertaking work take appropriate measures to prevent damage.

Any damage to a high-pressure gas pipeline or its coating can affect its integrity and can result in failure of the pipeline with potential serious hazardous consequences for individuals located in the vicinity of the pipeline if it were to fail. It is therefore essential that the procedures outlined in this document are complied with when working near to a high pressure, above 2 bar gauge, pipeline. If any work is considered by Wales & West Utilities to be in breach of the requirements stipulated in this document then the Wales & West Utilities responsible person will suspend the work until the non-compliances have been rectified.

The Pipelines Safety Regulations state that “No person shall cause such damage to a pipeline as may give rise to a danger to persons” (Regulation 15). Failing to comply with these requirements could therefore also result in prosecution by the Health and Safety Executive (HSE).

The requirements in this document are in line with the requirements of the IGE (Institution of Gas Engineers) recommendations IGE/SR/18 Edition 2 - Safe Working Practices To Ensure The Integrity Of Gas Pipelines And Associated Installations and the HSE’s guidance document HS(G)47 Avoiding Danger from Underground Services.

It is the responsibility of the third party to ensure that any work carried out also conforms with the requirements of the Construction and Design Management Regulations and all other relevant health and safety legislation.

**WHEN CARRYING OUT WORK IN THE VICINITY OF A HIGH PRESSURE PIPELINE
FOLLOW THE FOLLOWING PROCESS**

CONTACT WALES & WEST UTILITIES

Contact Wales & West Utilities to obtain formal consent - Section 2 of this document.
Note: at least 7 days' notice prior to commencement of the work is normally required



CONSIDER SAFETY

Consider the safety requirements - Section 3 of this document.



INFORM Wales & West Utilities AND REQUEST PIPELINE LOCATION

Inform Wales & West Utilities prior to carrying out work and arrange for Wales & West Utilities to locate the pipeline - Section 4 of this document
Note: at least 7 days' notice is normally required



OBSERVE RESTRICTIONS

Observe Wales & West Utilities restrictions on the allowed proximity of mechanical excavators and other power tools and the measures to protect the pipeline from construction vehicles when carrying out the work – Sections 5, 6 and 7 of this document.
Note: Wales & West Utilities may wish to supervise the work, consult Wales & West Utilities to confirm whether or not this is the case.



SPECIFIC ACTIVITIES

If work involves any of the following activities:

- No-Dig Techniques
- Increase in Cover
- Piling
- Demolition
- Hot Work
- Blasting
- Surface Mineral Extraction
- Deep Mining
- Landfilling
- Pressure Testing
- Seismic Surveys
- Wind Turbines

Comply with the requirements in Section 8 of this document



CONSULT WALES & WEST UTILITIES

Consult Wales & West Utilities prior to any backfilling over, alongside or under the pipeline and obtain Wales & West Utilities agreement to proceed. Normally Wales & West Utilities require 48 hours notice prior to backfilling - Section 9 of this document.

IMPORTANT: This flowchart should be used in conjunction with the entire SSW22 document and not in isolation, AND if at any time during the works the pipeline is damaged even slightly then observe the precautions in Section 10 of this document.

IF IN DOUBT CONTACT Wales & West Utilities

1. SCOPE

This specification sets out the safety precautions and other conditions affecting the design, construction and maintenance of services, structures and other works in the vicinity of Wales & West Utilities pipelines and associated installations operating at pressures greater than 2 bar gauge, located in both negotiated easements (see Section 12), in public highways and within the wider area of interest around a pipeline.

2. FORMAL CONSENT

High pressure pipelines are generally laid across country within an easement agreed with the landowner or within the highway.

As the required arrangements for working within an easement and working within the highway differ, this document has been structured to highlight the specific requirements for these two types of area where work may be carried out.

Generally, normal agricultural activities are not considered to affect the integrity of the pipeline, however consult Wales & West Utilities prior to undertaking deep cultivation in excess of 0.5m.

In all other cases no work shall be undertaken in the vicinity of the pipeline without the formal written consent of Wales & West Utilities.

Any documents, handed to contractors on site by Wales & West Utilities must be signed for by the site manager. Wales & West Utilities will record a list of these documents using the form in Appendix A, and the contractor should maintain a duplicate list.

2.1 Within an Easement

The promoter of any works (see Section 12) within an easement must provide Wales & West Utilities with details of the proposed works including a method statement of how the work is intended to be carried out.

Work must not go ahead until formal written consent has been given by Wales & West Utilities. This will include details of Wales & West Utilities protection requirements, contact telephone numbers and the emergency telephone number.

On acceptance of Wales & West Utilities requirements the promoter of the works must give Wales & West Utilities 7 working days' notice, or shorter only if agreed with Wales & West Utilities, before commencing work on site.

2.2 Within the Highway

Work must be notified to Wales & West Utilities in accordance with the requirements of The New Roads and Street Works Act (NRSWA) and HS(G)47.

The promoter of any works within the highway should provide Wales & West Utilities with details of the proposed works including a method statement of how the work is intended to be carried out. This should be submitted 7 working days before the planned work is to be carried out or shorter, only if agreed with Wales & West Utilities. If similar works are being carried out at a number of locations in close proximity a single method statement should be adequate.

Work should not go ahead until formal written consent has been given by Wales & West Utilities. This will include details of Wales & West Utilities' protection requirements, contact telephone numbers and the emergency telephone number.

2.3 Within the Area of Interest

Certain other activities, such as the development of adjacent land with buildings, or other constructions which may have an impact on the safe operation of above 2 bar gauge pipelines, must also be notified to Wales & West Utilities, for example the construction of wind turbines, masts or aerials.

Developers should ensure early consultation with Wales & West Utilities in respect of such development, rather than relying on local authority planning consultation, which may lead to substantial late changes to design or constraints on the planned development.

3. HS&E CONSIDERATIONS

3.1 Safe Control of Operations

All working practices must be agreed by Wales & West Utilities prior to work commencing. All personnel working on site must be made aware of the potential hazard of the pipeline and the actions they should follow in case of an emergency. The Site Document Control Form (Appendix A) should be used to record the list of relevant documents that have been provided by Wales & West Utilities to the contractor.

3.2 Deep Excavations

Special consideration should be given to the hazards associated with deep excavations. The HSE document CIS08 'Safety in Excavations' provides further guidance and is available on the HSE web site www.hse.gov.uk

3.3 Positioning of Plant

Mechanical excavators must not be sited or moved above the pipeline unless written authority has been given by the Wales & West Utilities responsible person.

Mechanical excavators must not dig on one side of the pipeline with the cab of the excavator positioned on the other side.

Mechanical excavators and other traffic must be positioned far enough away from the pipeline trench to prevent trench wall collapse.

3.4 General

Activities associated with working in the vicinity of pipelines operating above 2 bar gauge may have impact on the safety of the general public, Wales & West Utilities staff and contractors, and may affect the local environment. Contractors must carry out suitable and adequate risk assessments prior to the commencement of work to ensure that all such issues are properly considered and risks mitigated.

4. PIPELINE LOCATING

The third party should give 7 working days' notice (or shorter as agreed with Wales & West Utilities) to ensure that the pipeline is suitably located and marked out by Wales & West Utilities prior to the work commencing.

Prior to work commencing on site the pipeline must be located and pegged or suitably marked out by Wales & West Utilities personnel. In exceptional circumstances with the prior agreement of Wales & West Utilities the locating and marking out of the pipeline could be carried out by competent third parties on behalf of the contractor as long as Wales & West Utilities is assured of their competence and the procedures to be followed.

Safe digging practices, in accordance with HSE publication HS(G)47 should be followed as both direct and consequential damage to gas plant can be dangerous both to employees and to the general public.

Previously agreed working practices should be reviewed and revised based on current site conditions. Any changes must be agreed by the Wales & West Utilities responsible person.

The requirements for trial holes to locate the pipeline or determine levels at crossing points must be determined on site by the Wales & West Utilities responsible person.

The excavation of all trial holes must be supervised by the Wales & West Utilities responsible person.

5. SLABBING AND OTHER PROTECTIVE MEASURES

No protective measures including the installation of concrete slab protection should be installed over or near to the Wales & West Utilities pipeline without the prior permission of Wales & West Utilities. Wales & West Utilities will need to agree the material, the dimensions and method of installation of the proposed protective measure. The method of installation must be confirmed through the submission of a formal written method statement from the contractor to Wales & West Utilities.

Where permanent slab protection is to be applied over the pipeline Wales & West Utilities should carry out a survey (Pearson or DCVG Survey) of the pipeline to check that there is no existing damage to the coating of the pipeline prior to the slab protection being put in place. In addition the pipeline records should be consulted to determine whether any other investigations or remedial works would be needed in advance of the slab construction, e.g. reference to T/PR/P/18. Wales & West Utilities must therefore be contacted prior to the laying of any slab protection to arrange this survey. The Safety precautions detailed in Sections 3 and 6 of this document should also be observed during the installation of the pipeline protection.

6. EXCAVATION

6.1 In Proximity to a Pipeline in an Easement

Third parties must not excavate unsupervised, with a powered mechanical excavator closer than 3 metres to the Wales & West Utilities located pipeline or with hand held power tools closer than 1.5 metres. Any fitting, attachment or connecting pipework on the pipeline must be exposed by hand. All other excavation must be by hand.

Consideration may be given to a relaxation of these limits by agreement with the Wales & West Utilities responsible person on site and only whilst he remains on site. In this case a powered mechanical excavator must not be allowed to excavate closer than 0.6 metres to the nearest part of the pipeline.

Where sufficient depth of cover exists, following evidence from hand dug trial holes, light tracked vehicles may be permitted to strip topsoil to a depth of 0.25 metres, using a toothless bucket.

No topsoil or other materials should be stored within the easement without the written permission of Wales & West Utilities.

No topsoil or materials should be stored over the pipeline.

No fires should be allowed in the easement strip or close to above ground gas installations.

After the completion of the work the level of cover over the pipeline should be the same as that prior to work commencing unless agreed otherwise with the Wales & West Utilities responsible person.

No new service shall be laid parallel to the pipeline within the easement. In special circumstances, and only with formal written agreement from Wales & West Utilities, this may be relaxed for short excursions where the service shall be laid no closer than 600 mm to the side of the pipeline.

Where work is being carried out parallel to the pipeline within or just alongside the easement a post and wire fence must be erected as a protective barrier between the works and the pipeline.

6.2 In Proximity to a Pipeline in the Highway

Removal of the bituminous or concrete highway surface layer by mechanical means is permitted to depth of 300 mm, although the use of chain trenchers to do this shall not be permitted within 3 metres of the pipeline. The Wales & West Utilities responsible person may want to monitor this work.

Where the bituminous or concrete highway surface layer extends below 0.3 metres deep it should only be removed by handheld power assisted tools under the supervision of the Wales & West Utilities responsible person. In exceptional circumstances, and following a risk assessment, these conditions may be relaxed by the Wales & West Utilities responsible person.

Third parties should not excavate, unsupervised, with a powered mechanical excavator closer than 3 metres to the located Wales & West Utilities pipeline or with hand held power tools closer than 1.5 metres. Any fitting or attachment must be exposed by hand.

In special circumstances consideration may be given to a relaxation of these rules by agreement with the Wales & West Utilities responsible person on site and only whilst he remains on site only whilst he remains on site and only whilst he remains on site to supervise this work..

The use of 'No dig' techniques is covered in Section 8.1.

Any new service running parallel to the pipeline should be laid no closer than 600 mm to the pipeline (see Section 6.4).

6.3 Crossing Over a Pipeline

Where a new service is to cross over the pipeline a clearance distance of 600 mm between the crown of the pipeline and underside of the service must be maintained. If this cannot be achieved the service must cross below the pipeline with a clearance distance of 600 mm.

In special circumstances this distance may be reduced at the discretion of the Wales & West Utilities responsible person on site.

6.4 Crossing Below a Pipeline

Where a service is to cross below the pipeline a clearance distance of 600 mm between the crown of the service and underside of the pipeline should be maintained.

The exposed pipeline must be suitably supported. The Wales & West Utilities responsible person must be consulted and a stress analysis may be required in order to establish support requirements. The stress analysis should be carried out by individuals with demonstrated expertise in this area, Wales & West Utilities can be consulted for advice on suitable specialists. Wales & West Utilities may request a copy of the stress analysis to confirm its adequacy.

Specific additional constraints apply to Wales & West Utilities pipelines that fall under the requirements of T/PR/P/18.

All supports must be removed prior to backfilling.

The exposed pipelines must be protected by matting and suitable timber cladding.

6.5 Cathodic Protection

Cathodic Protection is applied to all of Wales & West Utilities above 2 bar gauge buried steel pipelines and is a method of protecting pipelines with damaged coatings from corrosion by maintaining an electrical potential difference between the pipeline and anodes placed at strategic points along the pipeline.

Where a new service is to be laid and similarly protected, Wales & West Utilities will undertake interference tests to determine whether the new service is interfering with the cathodic protection of the Wales & West Utilities pipeline.

Should any cathodic protection posts or associated apparatus need moving to facilitate third party works reasonable notice, typically 7 days, should be given to Wales & West Utilities. Wales & West Utilities will undertake this work and any associated costs will be borne by the third party.

7. CONSTRUCTION TRAFFIC

Where existing roads cannot be used construction traffic should ONLY cross the pipeline at previously agreed locations. All crossing points will be fenced on both sides with a post and wire fence and with the fence returned along the easement for a distance of 6 metres. The pipeline shall be protected at the crossing points by temporary rafts of either sleeper or reinforced concrete construction, constructed at ground level. The Wales & West Utilities responsible person will review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.

Notices directing traffic to the crossing points should be erected.

8. SPECIFIC ACTIVITIES

This section details the precautions that need to be taken when carrying out certain prescribed activities in the vicinity of the pipeline. Consult Wales & West Utilities if you are intending to undertake one of the listed prescribed activities and/or you require further advice on whether the work that you are intending to undertake has the potential to affect the pipeline.

8.1 No-Dig Techniques

Where the contractor intends using no dig techniques then a formal method statement must be produced for all work that would encroach (either above or below ground) within the pipeline easement. This method statement must be formally agreed with Wales & West Utilities prior to the commencement of the work. Wales & West Utilities may wish to be present when the work is being carried out and must therefore be given adequate advance notice before the commencement of the work.

8.2 Increase in Cover

A pipeline integrity assessment must be provided for situations involving a final cover depth exceeding 2.5 metres. This assessment should take due account of both soil 'dead' loading and ground settlement due to earthworks. Embankment design and construction over pipelines must give consideration to prevention of any instability. Expert advice may need to be sought which can be arranged through Wales & West Utilities.

8.3 Piling

No piling will be allowed within 15 metres of a pipeline without an assessment of the vibration levels at the pipeline. The peak particle velocity at the pipeline should be limited to a maximum level of 75 mm/sec. In any event the ground vibration shall be monitored by the contractor and the results available to the Wales & West Utilities Responsible person at their request. A typical monitoring device would be the Vibrock V801 seismograph and tri-axial geophone sensor.

Where ground conditions are of submerged granular deposits of silt and sand, an assessment of the effect of vibration on settlement and liquefaction at the pipeline shall be made.

Expert advice may need to be sought which can be arranged through Wales & West Utilities.

8.4 Demolition

No demolition should be allowed within 150 metres of a pipeline without an assessment of the vibration levels at the pipeline. The peak particle velocity at the pipeline must be limited to a maximum level of 75 mm/sec. In any event the ground vibration shall be monitored by the contractor and the results available to the Wales & West Utilities Responsible person at their request.

Where ground conditions are submerged granular deposits of silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the pipeline shall be made.

Expert advice may need to be sought which can be arranged through Wales & West Utilities.

8.5 Blasting

No blasting should be allowed within 250 metres of a pipeline without an assessment of the vibration levels at the pipeline. The peak particle velocity at the pipeline must be limited to a maximum level of 75 mm/sec. In any event the ground vibration must be monitored by the contractor and the results available to the Wales & West Utilities Responsible person at their request.

Where ground conditions are of submerged granular deposits of silt or sand, an assessment of the effect of vibration on settlement and liquefaction at the pipeline shall be made.

Expert advice may need to be sought which can be arranged through Wales & West Utilities.

8.6 Surface Mineral Extraction

An assessment must be carried out on the effect of surface mineral extraction activity within 100 metres of a pipeline. Consideration should also be given to extraction around groundbeds and other pipeline associated plant and equipment.

Where the mineral extraction extends up to the pipeline easement, a stable slope angle and stand-off distance between the pipeline and slope crest must be determined by Wales & West Utilities. The easement strip should be clearly marked by a suitable permanent boundary such as a post and wire fence, and where appropriate, slope indicator markers shall be erected to facilitate the verification of the recommended slope angle as the slope is formed, by the contractor. The pipeline easement and slope needs to be inspected periodically to identify any signs of developing instability. This may include any change of slope profile including bulging, the development of tension cracks on the slope or easement, or any changes in drainage around the slope. The results of each inspection should be recorded.

Where surface mineral extraction activities are planned within 100 metres of the pipeline but do not extend up to the pipeline easement boundary, an assessment, by Wales & West Utilities must be made on whether the planned activity could promote instability in the vicinity of the pipeline. This may occur where the pipeline is routed across a natural slope or the excavation is deep. A significant cause of this problem is where the groundwater profile is affected by changes in drainage or the development of lagoons.

Where the extraction technique involves explosives the provisions of section 8.5 apply.

8.7 Deep Mining

Pipelines routed within 1 km of active deep mining may be affected by subsidence resulting from mineral extraction. The determination of protective or remedial measures will normally require expert assistance, which can be arranged through Wales & West Utilities.

8.8 Landfilling

The creation of slopes outside of the pipeline easements may promote instability within the vicinity of the pipeline. An assessment should therefore be carried out, by Wales & West Utilities, on the effect of any landfilling activity within 100 metres of a pipeline. The assessment is particularly important if landfilling operations are taking place on a slope in which the pipeline is routed.

8.9 Pressure Testing

Hydraulic pressure testing will not be permitted within 8 metres of the pipeline unless suitable precautions have been taken against the effects of a burst. These precautions should include limiting of the design factor to 0.3 for the third party pipeline for a distance of 6 metres either side of the Wales & West Utilities pipeline, and the use of mill tested pipe or sleeving.

8.10 Seismic Surveys

Wales & West Utilities must be advised of any seismic surveying work in the vicinity of pipeline that will result in Wales & West Utilities' pipeline being subjected to peak particle velocities in excess of 50 mm/sec. In any event the ground vibration near to the pipeline shall also be monitored by the contractor whilst the survey work is being carried out.

Where the peak particle velocity is predicted to exceed 50 mm/sec, the ground vibration should be monitored by the contractor and the results available to the Wales & West Utilities Responsible person at their request.

8.11 Hot Work

The Wales & West Utilities responsible person on site should supervise all welding, burning or other 'hot work' that takes place within the easement.

8.12 Wind Turbines

Wales & West Utilities must be advised of any planned development of wind turbines in the vicinity of an above 2 bar gas pipelines to ensure the development does not impact on the future safe operation of the pipeline. Industry guidance states that any wind turbine must be sited no closer than 1.5 times the proposed height of the turbine mast away from the nearest edge of the pipeline.

9. BACKFILLING

Third parties must provide Wales & West Utilities with 7 days' notice, or shorter notice only if agreed with Wales & West Utilities, of the intent to backfill over, under or alongside the pipeline. This requirement should also apply to any backfilling operations alongside the pipeline within 3 metres of the pipeline. Any damage to the pipeline or coating must be reported to the Wales & West Utilities responsible person in order that damage can be assessed and repairs can be carried out.

Minor damage to pipe coating and damage to test leads will normally be repaired by Wales & West Utilities free of charge.

No backfilling should be undertaken without Wales & West Utilities agreement to proceed. When backfilling, the pipeline should be surrounded by at least 300mm of soft fill (i.e. stone dust) containing no stones, bricks, lumps of concrete, etc. The Wales & West Utilities responsible person will stipulate the necessary consolidation requirements.

If the pipeline has been backfilled without the knowledge of the Wales & West Utilities responsible person then he will require the material to be re-excavated in order to enable the condition of the pipeline coating to be confirmed.

10. ACTION IN THE CASE OF DAMAGE TO THE PIPELINE

If the Wales & West Utilities pipeline is damaged, even slightly, and even if no gas leak has occurred then the following precautions must be taken immediately:-

- ◆ Shut down all plant and machinery and extinguish any potential sources of ignition.
- ◆ Evacuate all personnel from the vicinity of the pipeline.
- ◆ Notify Wales & West Utilities using the free 24 hour emergency telephone number **0800 111 999***¹
- ◆ Notify the Wales & West Utilities responsible person or his office immediately using the contact telephone number provided.
- ◆ Ensure no one approaches the pipeline.
- ◆ Do not try to stop any leak.

¹ * All calls are recorded and may be monitored

11. REFERENCES

NRSWA	New Roads & Street Works Act
HS(G)47	Avoiding Danger from Underground Services
IGE/SR/18	Safe Working Practices to Ensure the Integrity of Gas Pipelines and Associated Installations
T/PR/P/18	Working on Pipelines Containing Defective Girth Welds or Girth Welds of Unknown Quality
CIS08	Safety in Excavations (HSE document)

12. GLOSSARY OF TERMS

Contractor:	the person, firm or company with whom Wales & West Utilities enters into a contract to which this specification applies, including the Contractor's personal representatives, successors and permitted assigns.
Easement:	Easements are negotiated legal entitlements between Wales & West Utilities and landowner and allow Wales & West Utilities to lay, operate and maintain pipelines within the easement strip. Easement strips may vary in width typically between 6 and 25 metres depending on the diameter and pressure of the pipeline. Consult Wales & West Utilities for details of the extent of the easement strip where work is intended.
Liquefaction:	Liquefaction is a phenomenon in which the strength and stiffness of the soil is reduced by earthquake shaking or other rapid loading. Liquefaction occurs in saturated soils, that is, soils in which the space between individual particles is completely filled with water. When liquefaction occurs, the strength of the soil decreases and the ability of the soil to support pipelines or other components is reduced.
Pearson Survey:	a survey used for locating coating defects on buried pipeline services.
DCVG Survey:	Direct Current Voltage Gradient, a survey for locating and grading coating defects on buried pipeline service
Promoter of new works:	the person or persons, firm, company or authority for whom new services, structures or other works in the vicinity of existing Wales & West Utilities pipelines and associated installations operating above 7 bar gauge are being undertaken.
Wales & West Utilities responsible person:	the person or persons appointed by Wales & West Utilities with the competencies required to act as the Wales & West Utilities representative for the purpose of the managing the particular activity.
Wayleave:	general term which is considered equivalent to 'easement' in this document.

APPENDIX A

SITE DOCUMENT CONTROL FORM - SAMPLE

Emergency Telephone No. **0800 111 999***
Plant Protection Telephone No. **02920278912**

SITE DOCUMENT CONTROL FORM

Activity Reference:

Activity Location:

Site Manager:

(name & telephone number)

Wales & West Utilities Contact:

(name & telephone number)

The following documents were issued to *(individual's name)*

..... **of**
(company name and address)

by *(Wales & West Utilities representative)*

..... **on**
(date).....:-

Documents:-

(List of documents)

Signed : *(by the recipient)*

Date of signature :

SITE DOCUMENT CONTROL FORM

Emergency Telephone No. **0800 111 999***

Plant Protection Telephone No. **02920 278912**

SITE DOCUMENT CONTROL FORM

Activity Reference:

Activity Location:

Site Manager:

(name & telephone number)

Wales & West Utilities Contact:

(name & telephone number)

The following documents were issued to (Individuals Name)

.....**of**
(company name and address)

by *(Wales and West Utilities representative)*

.....**on**
(date) :-

Documents:-

Signed :

Date of signature :

ENDNOTE

Comments

Comments and queries regarding the technical content of this document should be directed to:

Asset Management & HSE Dept
Wales & West Utilities Ltd
Wales & West House
Spoooner Close
Celtic Springs
Coedkernew
Newport
NP10 8FZ.

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Appendix C. Response to ISH5 Action Point 1 – BT Openreach letter

FAO: **Jonathan Catt**
Burges Salmon LLP

Our ref:
NE/CUI/21/851216

Date: 7th November 2024

Your ref:
WORK.FID9795195

Dear Sir,

RE: OPENREACH DIVERSIONS AT M5 JCN 10 & A4019 WIDENING

Thank you for your recent correspondence.

Openreach Limited are appointed by British Telecommunications plc to manage the protection of their electronic communications apparatus.

We understand from the information provided that you are planning to install infrastructure relating to the M5 jct 10 & A4019 widening scheme under, or in close proximity to, elements of the British Telecommunications electronic communications apparatus (the "BT Apparatus").

We consent in principal that the provisions set out in the attached document provide adequate protections for our interests and as long as this wording are included in your proposed DCO then on that basis we do not intend to take further part in the examination process for your proposed DCO for the M5 jct 10 & A4019 widening scheme.



Protective
Provisions - For Ope

Openreach does offer a consultation service via Infrastructure Solutions Network Rearrangement Team, where we can arrange for a consultant to be appointed to your project and offer further detailed support. When you are ready to proceed, we would be more than happy to discuss this with you. Please call us on 0800 783 2023 option 1, Monday to Friday 8am to 5pm or visit our website at [REDACTED] more details.

With Regards,

Jonathan Gibbons
Repayments Project Engineer
Openreach

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