

**PD 8010****UKOPA Comments****1 General**

It is recommended that guidance regarding the application of the document to existing as well as new pipelines be included, because:

- i) The inclusion of sections on operations, maintenance and decommissioning is a significant addition, and these sections provide the principles of good practice.
- ii) The document makes detailed reference to uprating and recommissioning of existing pipelines, which indicates that the document applies to existing pipelines.

In addition to points i) and ii) above, it is noted that if the scope of the document is confirmed as covering existing as well as new pipelines, clarification that the pipeline routing advice included relates to new pipelines relative to existing buildings, not new buildings relative to existing pipelines should be included. It is recommended that the inclusion of specific guidance on dealing with the development of new buildings relative to existing pipelines be considered.

It is recommended that the scope of the document with respect to maximum design factor be reviewed. The document should recognize that design factors in excess of 0.72 can be considered, set out guidelines on how such considerations should be addressed, and where guidance is currently limited to 0.72, extend the relevant statements to cover higher design factors. (Note there is already a reference to use of higher design factors on Page 40).

It is recommended that the document give greater prominence to the use of risk based techniques as a design tool, and should explicitly recommend the use of the latest design and analysis techniques such as structural reliability analysis.

It is recommended that the document should encourage the use of new technologies and techniques, and if possible new materials (eg RTP).

It is recommended that the limitation of the scope of the document to land pipelines be clarified by including definitions of inland water courses/estuaries. The document is obviously intended for use in such situations (in that it includes references to vortex shedding).

Document wording needs to accurately address changes in legislation/constitution affecting N Ireland and Scotland (eg reference to Scottish Regions)

**2 Specific**

**Page 5, line 3 Capital 'N' in Northern Ireland**

**Page 6, Para 5, line 5 Name and address of The Institution of Gas Engineers has**

**changed to 'The Institution of Gas Engineers and Managers (IGEM) 12 York Gate London NW1 4QG.**

Page 26, 4.3.3.2 add 'or equivalent' following chartered engineer (consistent with previously quoted levels of experience).

Page 29, 4.4.6 line 1 add 'if' after pipeline. Line 3 add 'these' after (to the same scale as the original plans).

Page 38 General Comment. Comment on situation where a corridor of hazardous pipelines exists. In such circumstances an additional hazardous pipeline would increase the consequence of failure and required proximity distance.

**Page 40, Para 2 line 9 delete 'limit state' and replace with 'structural reliability-based' (for consistency).**

Page 40 6.2.1 Some guidance should be included on how to account for variations in material properties associated with temperature, ie de-rating.

**Page 42, 6.3.1 para 3 line 1 Add 'in' following 'anticipated'.**

**Page 43, 6.3.2 3 para line 1 add 'should' following 'practicable'.**

**Page 44, 6.3.3 3 para. Add abbreviations of 'SSSI' and 'AONB' following relevant designations.**

**Page 54 6.5.2.1 This is a definition for actual hoop stress in the pipe and as such the definition for  $t_{min}$  is misleading.  $t_{min}$  should be the specified minimum wall thickness of the selected pipe less the corrosion allowance. The design process would then be the calculation of design wall thickness, the selection of specific wall thickness greater than the minimum and then the use of clause 5.2.1 to calculate the actual imposed hoop stress. This distinction is important for pipeline operation and the use of other techniques such as limit state and in the calculation of other stresses.**

**Page 59, 6.5.5.2 Figure 3. Units of X axis to be changed to SI units (consistency). Note that Figure 3 originated in Edition 2 of IGE TD/1, and a fundamental parameter for the use of this figure is the theoretical maximum defect remaining under hydrotest. In the case of SAW pipe, TD/1 calls for a high level hydrotest (105% SMYS). PD 8010 allows more flexibility in the selection of test levels, and therefore invalidates unqualified use of figure 3.**

Page 62, general comment. Pipelines routed through future construction sites may also benefit from extra depth and /or additional protection.

Page 63, General comment. Consideration to be given to location of existing services.

Page 66, 6.12.1 other important factors: ' valve design, conformance of butt weld root.' General comment, pipelines routed predominately above ground carrying non corrosive mediums may not benefit fully from OLI.

Page 67, 6.15. General comment. Pipe supports to BS 3974.

Page 76, General comment. pipelines installed by thrusting, boring or similar methods will be subject to higher abrasion particularly in flinty ground conditions. Consideration to be given to additional coating protection.

Page 81, para 2 General comment. Gaskets not featuring reinforced steel brace on ID have been known to 'crimp' and cause obstruction to internal bore of pipe.

Page 83, Para 1 add 'operation on maximum pressure differential'. 8.3.6 General comment. This specifically excludes the main body of the trap which I assume can be designed fabricated and tested in accordance with pipeline i.e. PD 8010.

Page 84, Para 3 General comment. Nozzle transitions should be designed to facilitate inspection vehicles. 8.3.8 Para 1 General comment. ...such as sphere tees, filters.

**Page 94, Para 1 change 'N' in Notes to lower case.**

Page 96, 9.5.3.3.2 Add layout of ground beds, cable routes.

**Page 97, 9.5.3.3.4 Add 'design layouts should clearly show all cable routes'.**

Page 100, 9.6.3 General comment. Consideration to be given for increasing CP specification for sections of pipeline that will be installed in inaccessible locations.

Page 101, Para 1 General comment. In some circumstances, it may prove more economic to undertake CIPS and coating surveys simultaneously. 9.6.4 Add 'CIPS surveys should be undertaken as close to on line inspection as possible.

Page 103, Para 1 data required for Construction (lifting & handling) regulations.

Page 106 10.11 General comment. Contractors may be required to liaise with occupiers to agree additional accesses . Para 4 additional accesses.

**Page 10.11.1.2 Add point e) Site establishment.**

Page 108 para 2 line 3 add 'those with T.P.Os' following 'felled'.

Page 109, 10.11.5 .1 Include preparation for protection of identified species, i.e. erection of newt fencing, and conducting an archaeological watching brief.

**Page 110, para 1 .Need to mention Hedgerows Act 1999.10.11.5.2 Add NOTE 3 'Fencing will also be required where plant access is planned crossing existing underground pipelines. Add NOTE 4 'Erection of "goal posts" to facilitate safe access under overhead power lines'.**

Page 111, 10.11.5.3 General comment. Particular attention should be given to safety at road crossings and to ensure compliance with Chapter 8 of the Highways Act i.e. maintain good visibility for vehicles entering or leaving the site,

provision of car parks (no on road parking).

Page 112, 10.12.2 Para 4 Add 'No burning will be allowed on the pipeline spread'.

Page 115 para 4, general comment. Or areas that will not be easily accessible.

Page 124 para 4 Add 'Extra impact protection to be considered for crossing of navigable rivers'.

**Page 125 10.13.5.2 para 1 line 1 add 'at' following 'installed'.**

Page 127 para 2 minimum diameter not less than 95% of dia . Is this consistent with previous statements?

Page 137 DELETE Figure 4.

Page 147, 12.8 General comment. Consideration to be given to CCTV inspection.

**Page 163, Annex A Figure A.1 Boxes not complete.**

**Page 169, para 6 Add 'English Nature'.**

**Page 176, Annex D, Para 2 Replace 'British Rail' with 'Railtrack' CHECK to confirm that they have published these guidance notes.**

**Page 182, Annex D, Para 11, Replace all references to MAFF with 'DEFRA' consistent with previous text.**