

NGN/PM/AV/1 - APPENDIX F EXTRACT

DETAILED ASSESSMENT UIP SUBMISSION CHECK LIST – NEW MAINS AND SERVICES

DETAILED ASSESSMENT OF UIP SUBMISSION				PAGE 1 OF 4
CHECK LIST	Site			
	Site Reference No.			
TASK	NOTE	ACCEP- TABLE Y,N,N/A	ACTIONS / COMMENTS	CHECKED BY
Name of Designer				
Competent/NOT Competent ¹	F.1			
Site Plans				
A location plan with site entrance	F.2			
Detailed Site Plan	F.3			
Pipe sizes/lengths identified	F.4			
Nodes marked and numbered on plan	F.5			
Demand Details				
Details of individual customer loads	F.6			
Details of diversity assumptions	F.7			
Nodes /Demand Assignment	F.8			
Phasing of Demands	F.9			
Pressures				
Correct source pressure used	F.10			
Correct design Min Pressure used	F.11			
Pressure Drop	F.12			
Design Program				
The analysis program used for design ¹	F.13			
Pipe Diameters ¹	F.14			
Pipe Efficiencies ¹	F.14			
Altitudes ¹	F.14			
Gas Constants ¹	F.14			
Gas Velocity	F.14			
Materials				
Specification of pipe & Fittings ¹	F.15			
Proposed jointing system ¹	F.16			
Service Information				
Service routes	F.17			
Termination position(s)	F.18			
Emergency Control Valve	F.19			
Positions for Fire Valves	F.20			
Positioning of services governors	F.21			
Meter Housing Ventilation Details	F.22			
Standards Quoted ¹	F.23			

IF THE UIP IS REGISTERED FOR DESIGN UNDER THE GIRS SCHEME FOR DESIGN THEN ITEMS MARKED ¹ ARE NOT REQUIRED

IF THE UIP IS REGISTERED FOR CONSTRUCTION/COMMISSIONING/CONNECTIONS (ROUTINE) UNDER THE GIRS SCHEME THEN ITEMS MARKED ² ARE NOT REQUIRED.

WHERE A UIP DOES NOT HOLD A COMBINED DESIGN AND CONSTRUCTION/COMMISSIONING/CONNECTIONS (ROUTINE) GIRS REGISTRATION THE UIP MUST BE GIRS REGISTERED FOR PROJECT MANAGEMENT AND USE GIRS REGISTERED SUB-CONTRACTORS, OTHERWISE ALL ITEMS RELATING TO THE SUB-CONTRACTED ACTIVITY, DESIGN ¹ OR CONSTRUCTION/COMMISSIONING/CONNECTIONS (ROUTINE) ² INDICATED ABOVE ARE REQUIRED FROM THE UIP

TASK	NOTE	ACCEP -TABLE Y,N,N/A	ACTIONS / COMMENTS	CHECKED BY
MAINS INFORMATION				
Mains route	F.24			
Risk Assessments ¹	F.25			
Are special crossings involved	F.26			
Have necessary Easement applications been made?	F.27			
Standards Quoted ¹	F.28			
MP/IP Supplies (PRIs)				
Capacity of Regulator/Governor	F.29			
Velocity	F.30			
Settings of Safety Devices	F.31			
Zone Classification	F.32			
Housing	F.33			
Corrosion protection	F.34			
Standards Quoted ¹	F.35			
Construction Requirements				
Operator Competence ²	F.36		Competent/NOT Competent	
Construction Method Statements	F.37			
Risk assessments ²	F.38			
Quality control of Materials ²	F.39			
Procedure for defective materials ²	F.40			
Site Investigation ²	F.41			
Excavation ²	F.42			
Working in vicinity of gas mains ²	F.43			
Procedure for damage and/or gas escapes ²	F.44			
Pipelaying ²	F.45			
Pipe jointing including Quality Control ²	F.46			
Pipe protection including corrosion control. ²	F.47			
Backfilling ²	F.48			
Reinstatement ²	F.49			
Calibration of testing machines ²	F.50			
Pressure testing ²	F.51			
Installation of PRI's ²	F.52			
Details of IGE/GL/5 Procedure	F.53			
Details of Construction (Design and Management) Regulations 1994	F.54			
Details of Environmental Study	F.55			

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TASK	NOTE	ACCEP -TABLE Y,N,N/A	ACTIONS / COMMENTS	CHECKED BY
Quality Assurance				
Are the following provided and acceptable				
Company Policy on Quality i.e. ISO 9000 ²	F.56			
Competency of persons responsible for QA ²	F.57			
Audit Process ²	F.58			
Procedure for control of critical phases of construction ²	F.59			
Procedure for Auditing of Equipment ²	F.60			
Procedure for Material storage, quality and conformity checks ²	F.61			
Procedure for the control of deviations/variations from validated design ²	F.62			
Procedure for conformity of PRI's and housing ²	F.63			
Safety Requirements				
Company Health & Safety Policy ²	F.64			
Management structure for dealing with technical & safety issues ²	F.65			
Roles & Responsibilities of Consultants or Contractors ²	F.66			
Procedure for working near to gas mains ²	F.67			
Procedure for actions to be taken in the event of a gas escape and/or damage ²	F.68			
Procedure for testing & purging ²	F.69			

IF THE UIP IS REGISTERED UNDER THE GIRS SCHEME FOR CONSTRUCTION/COMMISSIONING/CONNECTIONS (ROUTINE) THEN ITEMS MARKED ² ARE NOT REQUIRED.

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TASK	NOTE	ACCEP -TABLE Y,N,N/A	ACTIONS / COMMENTS	CHECKED BY
Certification File				
The following must be provided	F.70			
Records of delivery, consignment and compliance of materials ²	F.71			
Easement Agreement or Form of consent	F.72			
Planning Permission (excluding below ground pipes)	F.73			
NRSWA Notices	F.74			
Consumer Permission Letter	F.75			
Certification of Transfer Rights	F.76			
Quality control records ²	F.77			
Variations	F.78			
Butt Fusion Printouts ²	F.79			
Records of compliance with method ² statements and site personnel	F.80			
Certification of Customer Works	F.81			
Draft 'as laid' drawings	F.82			
GL5 Documents (if applicable)	F.83			
Completed test certificate	F.84			
Meter Point Reference Number	F.85			

Completion File				
The following should be provided				
As Laid Drawings	F.86			
Correspondence File	F.87			
Valve Sketches and Records	F.88			
Cathodic Protection	F.89			
NRSWA Notices	F.90			
Test Certificate	F.91			
Meter Point Reference Number	F.92			

ACCEPTED OR REJECTED (DELETE AS APPROPRIATE)			DATE
PRINT NAME	TITLE	SIGNATURE	

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Supporting Notes for Appendix F

The UIP submission must contain either job specific details, and/or must make reference to UIP registration scheme (GIRS). The UIP submission must be checked in accordance with the checklist to ensure acceptability of the detailed design prior to authorisation under the relevant CP QMS process. Each item must be checked for acceptability in accordance with the following notes and a Y, N or N/A recorded next to each item, any comments plus the initials of the person carrying out the checking. The checklist must be retained in the NGN record file. Where a UIP is accredited with the Gas Industry Registration Scheme (GIRS) for Design and/or Construction/Commissioning/Connections (Routine) generic items do not need to be submitted for validation. These items are identified in appendix E by superscript and shading i.e. ¹ or ². Where a UIP does not hold a combined Design and Construction/Commissioning/Connections (Routine) GIRS accreditation, the UIP must be GIRS accredited for Project Management and use GIRS accredited sub-contractors, otherwise all items relating to the sub-contracted activity, Design ¹ or Construction/Commissioning/Connections (Routine) ² are required in the UIP submission.

Where job specific submissions are received from NON GIRS registered companies these must be fully assessed for compliance with the required standards and the following criteria and a record made of the outcome using the checklist.

Note

- F.1 Evidence of competency must be provided for the system designer. This should be achieved by an appropriate combination of education, training and practical experience relating to the design activity being undertaken. Formal qualifications should include being a member of an appropriate Institution at Incorporated Engineer or higher grade. i.e. IGEM
- F.2 The location plan should be the same as submitted at the preliminary stage.
- F.3 More detailed information relating to the site layout is required for multi-occupancy developments, along with details of the individual customer loads. The detailed site plan should be at a scale between 1:1250 and 1:50.
- F.4 The pipe sizes should be identified in a table, or on the plan. Lengths should also be identified and a sample check of the pipe lengths carried out.
- F.5 Check all nodes are numbered and there are no duplicate node numbers.
- F.6 Check the details of the individual customers as described at the outline design and quotation request stage, including any non-standard consumption patterns. It should be possible to identify the individual properties against a node.
- F.7 Check diversity calculation as described at the outline design and quotation request stage.
- F.8 Sufficient information should be available to determine if the loads quoted at each node are the diversified or un-diversified loads.
- F.9 Details of the phasing of the development and thus the phasing of the demand should be included in the submission.
- F.10 The UIP must have been informed of the design pressure to be used in a mains design. The appropriate use of this design pressure must be checked.

- F.11 The UIP must have been informed of the design minimum pressure to be used in a mains design. The appropriate use of this design pressure must be checked.
- F.12 For services the use of the appropriate pressure drop must be checked. These should be in accordance with the relevant procedure. If a pressure drop greater than 2 mbar is appropriate, NGN must have previously agreed the pressure drop to be used.
- F.13 The following tools are considered suitable for design analysis: -
- SNAP.
 - GBNA.

These programs use the smooth pipe law. Where alternative programs are used a comparison should be performed with the designs given by the Service Design Calculator or a full SNAP run to assess the suitability of the mains design.

- F.14 Checks must be made that the original supplied parameters have been used within the detailed design. Where SNAP is used reference should be made to the following documents for details of: -
- the typical pipe diameters – NGN/PR/NP9
 - the efficiency factors – NGN/PR/NP9
 - the requirements for the use of altitude – NGN/PR/NP14
 - the gas constants, (as provided in original parameters) – NGN/PL/NP16
 - Velocity as per IGE/TD3 & IGE/TD4

Where non-standard parameters are used, or other design packages, further guidance should be sought from NGN Engineering Policy.
The name and signature of the designer must be included.

- F.15 The UIP should use the pipe sizes and fittings as per Advantica Ltd. PL2/E parts 1 to 8 and PL3/E.
- F.16 The pipe jointing system should be included i.e. Butt or electrofusion.
- F.17 The proposed service route should be clearly indicated on the site layout plan in a different colour to the mains. The route of the service and the number of consumers fed should conform to the requirements of a service as defined in the "Specification for defining pipes as Mains, Services or Risers" NGN/SP/NP10.
- F.18 Does the service termination position and meter position conform to the Gas Safety Management Regulations 1996?
- F.19 Are Emergency Valves installed in accordance with the required standards i.e. IGE/TD4?
- F.20 Are Fire Valves installed in accordance with the required standards i.e. IGE/TD?
- F.21 When a design with individual MP/IP services is proposed, it is necessary to assess the location of the individual service governors. They should be assessed for proximity to buildings and susceptibility to traffic damage as per IGE recommendations (IGE/TD3, TD4, TD13 etc).

- F.22 Does the meter compartment and its ventilation details conform to the Gas Safety Management Regulations 1996?
- F.23 To what standard is the service(s) designed, i.e. IGE/TD/4
- F.24 The proposed mains route should be clearly indicated on the site layout plan. The route of the service and the number of consumers fed should conform to the requirements of a service as defined in the "Specification for defining pipes as Mains, Services or Risers NGN/SPNP10". The proximity of the pipes to buildings should be according to IGE/TD3 and must be checked to ensure proximity guidelines are not breached.
- F.25 The risk assessment should cover the following: -
- Pressure regime
 - Pipe material
 - Depth
 - Jointing method
 - Proximity

These should be confirmed in the UIP submission.

- F.26 Where there is a likelihood of damage to the pipe (e.g. an above ground crossing) then steel pipe should be used either to carry a polyethylene pipe or as the gas pipe. This pipe should be wrapped and cathodically protected. Mechanical design details should be provided with the UIP submission. This should include details of the pipe and its supports, together with any cathodic protection.
- F.27 Details of any legal permission to lay pipe systems (e.g. easements, consents to lay) must be provided. The UIP must use the NGN Terms and conditions for easements. Blank documents should be provided on request to the UIP by the NGN Network for use in negotiation. If the UIP has confirmed to NGN they are negotiating with a specific individual or company for an easement, the processing of the request should continue. If there are no details of an easement and it is thought that an easement is required then NGN must write to the UIP advising them "NGN believes an easement is required on this development as the route of the proposed pipes would appear to pass through the property of a third party".
- F.28 Mains should be designed to IGE/TD/3
- F.29 Details of the flow capacity available at the maximum inlet pressure or other pressures specified by NGN and the maximum outlet pressure.
- F.30 The gas velocity at the inlet and outlet flange should be stated.

- F.31 The predicted settings for the safety devices (if fitted), control accuracy and lock up pressure should be stated.
- F.32 Details of any electronic/electrical equipment to be fitted, including the Zone classification must be recorded
- F.33 The type of Housing, for example 'glass reinforced plastic free standing supplied on concrete base', the number of access doors, amount of ventilation and type of explosion relief must be recorded.
- F.34 The corrosion protection procedure, for example the surface preparation method and number of coats of paint applied to the components, must be recorded.
- F.35 Description of the main components together with evidence of compliance with an appropriate standard i.e. IGE/TD/13
- F.36 Evidence must be provided that all persons engaged in the construction of gas distribution systems are competent for the tasks that they are required to undertake. This should be achieved by an appropriate combination of education, training and practical experience relating to the activity undertaken. The Engineer responsible for the works must be experienced in the proposed works and have relevant formal qualifications. Formal qualifications should include Incorporated Engineer or higher and be registration with an appropriate Institution i.e. IGEM. All First Line managers must have the technical knowledge and experience of the work proposed. All Operative Team leaders must hold GD4 or 5 qualifications as appropriate and have experience in constructing distribution networks similar to the task to be undertaken.
- F.37 All method statements must contain sufficient information to enable the works be carried out in a safe and competent manner.
- F.38 A full risk assessment of the Hazards expected during the Construction/Commissioning must be provided
- F.39 Details must be provided on what the UIP proposes to ensure that all materials met the correct quality.
- F.40 This must contain detailed requirements on the procedure to be followed when defective materials are identified.
- F.41 Included within this statement must be the methods and the precautions taken whilst carrying out a site survey.
- F.42 Detailed requirements must include all aspects of safe digging practices including mechanical and hand excavation
- F.43 Safety precautions must include the requirements of the GT and the actions to be taken to avoid damage to gas mains
- F.44 It is a requirement that the UIP includes a copy of NGNs Requirements for Reporting Gas Escapes

- F.45 This must include details on the bedding and surround of the pipe system.
- F.46 This must include the methods to be used for pipe jointing and would normal consist of the parameters to be used for butt and electrofusion jointing for PE pipe. If steel pipe is proposed welding procedures are required.
- F.47 Details must be provided of any corrosion protection for non-metallic pipe systems and must include all proposed preparation and wrapping and cathodic protection systems.
- F.48 This must conform to NRSWA requirements.
- F.49 This must conform to NRSWA.
- F.50 Must specify the type and range of the pressure test instruments and include sample calibration certificates.
- F.51 Must include all the safety aspects necessary when pressure testing.
- F.52 Must include all installation requirements including testing and commissioning.
- F.53 If the system is to operate above 2bar then the IGE/GL5 procedure must be completed using independent competent assessors.
- F.54 If the works are to be carried out under Construction (Design and Management) Regulations 1994, full details must be included.
- F.55 If an environmental study has been carried out, a copy of the report must be included.
- F.56 A copy of the UIP's ISO9000 certificate or Quality Policy must be included.
- F.57 A qualified person must be nominated for Quality. Evidence of competency must be provided. This should be achieved by an appropriate combination of education, training and practical experience relating to the design activity being undertaken. Formal qualifications should include being a member of an appropriate Institution at Incorporated Engineer or higher grade.
- F.58 Details are required of the audit process for quality control.
- F.59 The milestones during the construction process must be highlighted.
- F.60 All critically important equipment must be subjected to regular auditing.
- F.61 Detail procedures must be included for material storage, quality and conformity.
- F.62 The monitoring and submitting of deviations and variations from the validated design must include the company's procedure and the authorisation of any submissions.
- F.63 If PRI's are proposed the QC procedure must be provided.

- F.64 The UIP must provide a Company H&S policy including management structure and responsibilities.
- F.65 The UIP must include Company management structure and personnel responsible for technical and safety issues.
- F.66 If Consultants or Contractors are used then their roles, competencies & responsibilities must be clearly defined.
- F.67 The UIP must submit their procedures for working near to live gas mains.
- F.68 The UIP must submit their procedures to be taken in the event of a gas escape or damage.
- F.69 A full procedure for pressure testing and purging must be included.
- F.70 Complete documentation (except test certificate) must be provided before connection is authorised as follows – Up to 75mbar D-3, 2-7bar D-5 (D = planned date of connection).
- F.71 Copies of Material order and delivery tickets to be included. This exclusion only applies to projects < 2bar.
- F.72 Where applicable, completed and signed copies of all Easements, Wayleaves or Forms of Consent must be included.
- F.73 Where applicable, copies of any Planning permission (excluding below ground pipes) must be included.
- F.74 Where applicable all NRSWA notices must be included.
- F.75 The consumer's permission letter as required in CPQMS must be included.
- F.76 The Certificate of transfer rights as required in CPQMS must be included.
- F.77 All quality control records from site audits must be included.
- F.78 All variations are to be included and dealt with as per IGE/TD/101, Section 8 using the form as per Appendix 5
- F.79 Where applicable all Butt fusion printout to be included
- F.80 All records of compliance with methods statements and qualifications of personnel must be included
- F.81 The Customer certification as required in CPQMS must be included
- F.82 Draft 'as-laid' drawings must be included
- F.83 Where applicable GL5 documentation must be included and verified that the process has been correctly applied.
- F.84 A correctly completed pressure test certificate must be available on the day of the connection prior to the connection occurring, and must be included in the completion file.

- F.85 If the project involves the laying of services, all the Meter Point Reference Numbers must be included
- F.86 The correctly completed 'as-laid' drawings must be available within 5 working days of the date of substantial completion. Records must be provided in accordance with NGN/MP/DR8.
- F.87 A completed correspondence file must be included
- F.88 Completed Valve sketches and records must be included.
- F.89 Where applicable cathodic protection records must be included.
- F.90 Copies of all NRSWA notices (including all information returned to the Local Authority) to be included
- F.91 Completed test certificate, including the signature of the competent person responsible for the test must be included.
- F.92 If the project involves the laying of services, all the Meter Point Reference Numbers must be included and cross-checked against those supplied within the Certification File.

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