ADVANTICA
A Germanischer Lloyd Company

Version 1.0 *7 February 2008*

WEBMIP FUNCTIONAL SPECIFICATION

Restricted to, National Grid Metering & Advantica

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Executive Summary

National Grid Metering produces meter related works and services quotations for their customers: Gas Suppliers and their Agents. The quotations are produced manually by the Industrial and Commercial (I&C) department in response to enquiries raised by customers. An estimated 8,000 quote enquiries are handled this way each year. The proposed webMIP on-line quotation system will enable I&C to provide automatic quotations for the majority of their customers enquiries without the need for manual intervention. The new system is expected to reduce the number of enquiries handled by the I&C team by 90%, leaving the I&C staff to deal with the more complex bespoke or unusual quotation requests.

WebMIP is a tactical solution, with an expected lifespan of around 18 months. The system will initially operate without reference to any other system. It will then run in conjunction with the back-end functions of 'SAP Blueprint'. The system will eventually be replaced by SAP Blueprint and its web portal interface.

This document details the functional requirements of the webMIP system. It describes the operations and processes required to complete the system and fulfil I&C's business requirements for handling quotes via an on-line internet based solution. It also describes the administration and scope aspects of the webMIP system.

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1 System Scope

The primary objective of the system is to allow Agents to submit enquiries for meter related works and services without the involvement of I&C staff. The secondary objective is to produce one or more meter work quotations to satisfy each submitted enquiry, again without the involvement of I&C staff, and make these quotations available to the Agents for acceptance.

The scope boundary for the system can be defined via the work flow required. The scope starts once an enquiry is initiated and ends once the provided quote has been accepted, rejected or lapsed (after 90 days).

1.1 Within Scope

The following stated requirements are listed as in scope and will facilitate the functions and operation of the webMIP system.

- Collect enquiry details for meter related works in the form of a questionnaire completed by a registered webMIP user (see Appendix A). The meter related works details collected are limited to the following job types:
  - Installation of new meters;
  - Request for OFGEM Meter Accuracy Test (OFMAT);
  - Exchange of meters;
  - Removal of meters, including 'Adversarial' removal of meters;
  - Relocation of meters;
  - Purchase of Automatic Meter Reader (AMR) and/or Energy Management System (EMS) for an existing meter module.
- Facility to upload documents relating to an enquiry. Maximum size of any single file 3 megabytes, maximum combined size of all files relating to an enquiry 10 megabytes.
- The facility to download files stored within the system.
- A bulk upload process with simple validation that will allow users to upload system data items into webMIP.
- The ability to provide an automatic quotation for enquiries that meet the correct requirements (see Automatic quotation scope below).
- Provide the facility for specific I&C users to upload a manual quotation for enquiries that webMIP is unable to produce an automatic quotation.
- To provide the facility for users to accept/reject manually uploaded and automatically created quotations via a web browser.
- To scan uploaded files for viruses and malicious content and remove offending files

1.1.1 Automatic Quotation Scope

The rules in Automatic or Manual Quotation Flow Chart (page 19) show the scope for the production of automatic or manual quotations. In addition to these rules, works where there are no meter modules, housings, etc. known to the system that meet the requirements of the submitted enquiry will result in a manual quotation.

1.1.2 Manual Quotation Scope

Where the system is unable to produce a quotation, the system provides automatic emails to I&C and appropriate agent users, informing them that this is the case. The system supports a manual process of uploading a quotation document generated off-line and making it available to the third-party. The system has no knowledge of the contents of the manual quotation.

1.1.3 Communication Scope

The system will provide communication in the form of email and web page requests. The system will send email to users of the system, these emails may where appropriate include system generated attachments. The system will be capable of emailing quotes to users where appropriate.

1.2 Out of Scope

The system will not provide the following functions or requirements that are deemed to be beyond the scope of the system at this point in time.

- Where the third-party requires communications to be via telephone, fax or the post this is performed manually by I&C staff and not by the webMIP system;
- Managing Procurement, Planning Scheduling and Despatch activities for the I&C value chain;
- Any changes to off-line systems required to accommodate on-line quotations;
- Any changes required to SAP Blueprint in order to accommodate on-line quotations solution;
- Automated interface to any of the existing systems/off-line databases;
- Tracking of the processes used to generate manual quotations;
- Production of 'ad-hoc' management information reports;
- Management of customer queries and complaints;
- Management of any variations that occur on accepted quotations;
- Supplier specific end customer uplifts for quotation pricing;
- Supplier specific end customer customised quotations with letter heads;
- Manage supplier acceptance of quotations where the method of acceptance occurs outside of the system e.g. through telephone, email, fax, etc.;
- Manage quotation preparation for jobs handled manually;
- Quotation generation for jobs received via supplier sent bulk .CSV files;

- Automatic generation of quotations deemed as bespoke or non-standard;
- Facility to validate quotation details and pricing provided by SAP Blueprint.

2 Security

2.1 User Security

User security is provided through:

- User Accounts – to control access to the system to authorised users only;
- User Roles - to control user access to system functionality;

2.1.1 User Accounts

The user provides a valid user name and password to access their system account. Each user name is unique within the system. Each account is associated with a single User Role (see User Roles, below) and, optionally, a single Supplier that the account user works on behalf of. A user may have multiple user accounts: this allows the user to represent more than one Supplier or have multiple roles. For example, Peter Smith may have user name PSMITHMETHANE when representing one Supplier and user name PSMITHBIO when representing a second Supplier.

Advantica retains access to the system for support purposes.

2.1.1.1 Password Complexity

Passwords held within the webMIP system conform to the following rules:

- Minimum length of 8 characters
- Contain a non-alphanumeric character e.g. %
- Contain upper case and lower case characters
- Contain alpha and numeric characters

2.1.1.2 Password expiry

Passwords expire after 30 days. After this time user is able to log in to the system but is forced to enter a new password before they can gain access to system. After 60 days the user is unable to access the system and the account is locked. The account is unlocked either by the webMIP administrator or, where the account is for a Supplier Agent, the associated Supplier Administrator.

2.1.1.3 Forgotten passwords

Forgotten passwords are reset by users with the role of webMIP Administrator or Supplier Administrator. The Supplier Administrator role can only reset the passwords of accounts associated with the same Supplier as that represented by the Supplier Administrator. The webMIP Administrator role is able to reset all account passwords.

2.1.1.4 File Uploads

Files that are uploaded to the webMIP system are scanned for viruses or malicious content. However, it is the responsibility of users to have adequate virus protection before they upload or

download files to or from the system. Files identified as containing a virus or malicious content are removed from the system and the associated enquiry is marked with warning text stating that the file has been removed for security reasons.

Further security details will be defined in the design phase of the project.

2.1.2 User Roles

The different users of the system can be defined within five separate roles:

- webMIP Administrator;
- I&C User;
- I&C Customer Services;
- Supplier Administrator;
- Supplier Agent.

These different roles fall into the hierarchy described in the diagram below:

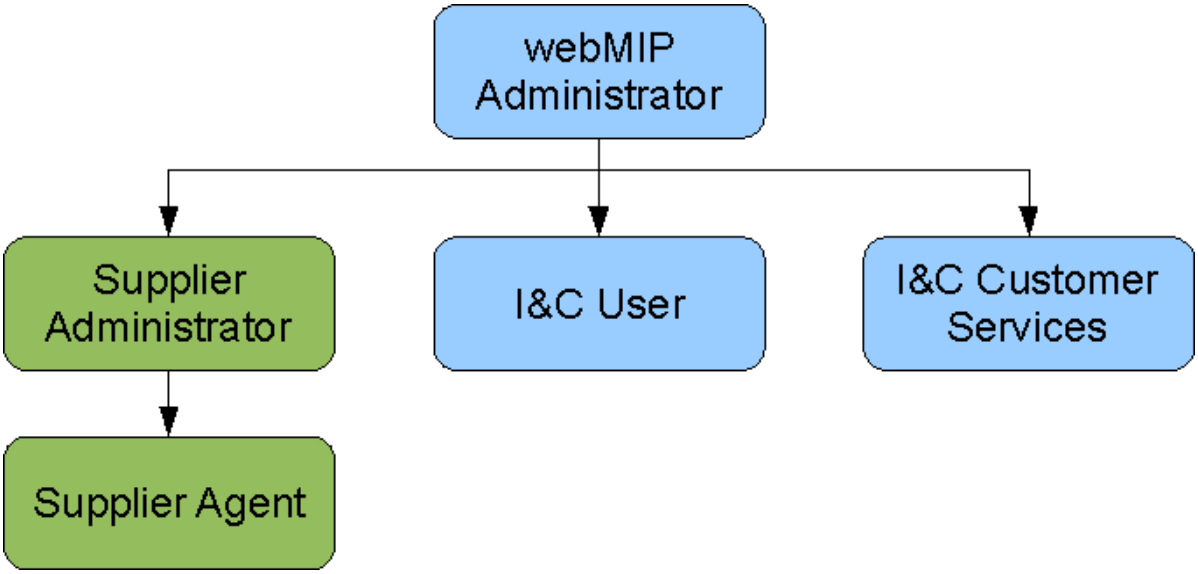

Illustration 1: User Role Hierarchy

2.1.2.1 webMIP Administrator

The webMIP Administrator role is able to control the overall system e.g. editing module and add-on data, running system reports, etc.

The role is able to create, view, update and delete users with the roles of Supplier Administrator, Supplier Agent, I&C User and I&C Customer Services. The webMIP Administrator can also perform all of the functions available to the I&C User and the I&C Customer Services roles. When creating or editing the Supplier Agent, the webMIP Administrator will be forced to associate the Supplier Agent with an existing Supplier Administrator.

The Administration section of this document has further information on the administrative functions that can be performed by the webMIP Administrator role.

2.1.2.2 I&C User

The I&C User role is able to complete all of the main day-to-day tasks required within the webMIP system. The I&C User role is able to:

- Create and enter enquiries on behalf of any Supplier Agent listed in the webMIP system;
- Accept and reject quotes on behalf of a Supplier Agent;
- Upload a manual bespoke quote to the webMIP system;
- View all enquiries and quotes within the system enabling I&C users to to provide support for the Supplier Agents in populating enquiry details and resolving their queries.

Where a user with I&C User role performs work on behalf of a Supplier Agent, they are subject to the same restrictions as the account on whose behalf they are working. For example, they can only create enquiries or accept quotes for the Supplier represented by the Supplier Agent account. The system records activities performed by the I&C User role on behalf of Supplier Agents.

Where a user with I&C User role accepts a quote on behalf of a Supplier Agent, the user records evidence of supplier approval (e.g. Reference to email, document, etc.) against the acceptance.

2.1.2.3 I&C Customer Services

The I&C Customer Services role is able to view all enquiries and quotes within the webMIP system, but is unable to edit or update any data. The role allows the customer services team within I&C to provide support for the Supplier Agents.

2.1.2.4 Supplier Administrator

The role of Supplier Administrator is able to maintain data relating to the supplier to which the user is associated.

The Supplier Administrator role is also able to create, view, edit and delete users with the role of Supplier Agent. Each user created in this way is associated with the supplier represented by the Supplier Administrator.

2.1.2.5 Supplier Agent

A user may have the role of Supplier Agent for multiple suppliers. Each instance of the Supplier Agent role requires a user account dedicated to that supplier.

The Supplier Agent role is able to create enquiries and view or edit enquiries that have been created by other agents associated with the same supplier.

The Supplier Agent role can submit enquiries for quotation and accept or reject quotes for their associated supplier.

When a Supplier Agent creates a new enquiry the system will automatically associate their related Supplier details to the enquiry.

2.1.2.6 Action Matrix

The action matrix listed below outlines some key functions of the webMIP system and the roles that can perform them.

Role *Action*	**WebMIP Admin**	**I&C User**	**I&C Cust Services**	**Supplier Admin**	**Supplier Agent**
Create enquiry	X	X			X
Read enquiry	X	X	X		X*
Submit enquiry	X	X			X*
Delete enquiry	X	X			
Store enquiry	X	X			X*
Upload files to enquiry	X	X			X*
Accept quote	X	X			X*
Reject quote	X	X			X*
Delete quote	X				
Upload files to quote	X	X			
Run system reports	X				
Delete files from enquiry	X	X			
Create I&C users	X				
Delete I&C users	X				
Create Supplier Admin users	X				
Delete Supplier Admin users	X				
Create Supplier Agents	X			X**	
Delete Supplier Agents	X			X**	
View Supplier Agents	X	X	X	X**	X*
Reset User Password	X			X**	
Edit/Read/Delete/Create system data	X				
Perform Bulk Upload	X				

*Only those related to the Supplier that the Agent is associated with.

**Only those created by the same Supplier Administrator

Table 1: Action Matrix

2.1.2.7 Advantica administration

Advantica use the built-in management tools provided by the chosen software solution to manage, maintain and investigate issues relating to the webMIP system. This administration function is considered outside the scope of the webMIP system functions.

For support purposes, an Advantica user may request the creation of accounts with the above roles. 180

2.2 System Security

The security requirements defined in User Security (above) show how the system controls access to functionality. The system has two further forms of security:

- Physical security – relating to the physical security of the environment in which the system resides. There are no defined requirements for physical security, however the check-list in Appendix C.1 will be used by the business and NG IS to confirm the suitability of the physical environment;
- Application development security – the check-list in Appendix C.2 describes a set of controls that were applied, where appropriate, during development of the application.

3 System Process

This section of the document describes the processes and tasks performed by the webMIP system. It details the processes from the initiation of an enquiry to the final quotation and briefly describes some of the processes required to administer the system. The limitations and constraints placed upon these tasks and processes are described previously in the System Scope section of this document.

The quotation process is driven by the supplier agents. There are three main stages to the quote process:

- Enquiry. The user fills in a questionnaire, providing data relating to the meter, the meter site, and environment;
- Quote generation. If the enquiry is submitted for quotation, quotes are generated detailing the costs of suitable meter modules;
- Quote acceptance or rejection. If a quote is accepted by the user then the quote turns into a Job, (at this point the job is outside the scope of webMIP functionality).

The webMIP system provides a quick and easy interface for agents to request a quotation on-line. Agents may also phone, fax, email or post a request for a quote; in these cases the enquiry is entered into webMIP by an I&C User on behalf of the agent. The webMIP system will record the I&C User and the supplier information on such enquiries.

The user logs into the system using a user name and password. If the user has the role of I&C User, the user selects the user name of the Supplier Agent on whose behalf they are entering the enquiry information.

The following Use Cases and Sequence Diagrams show the main processes and objects of the system.

Illustration 2: Use Case Diagram

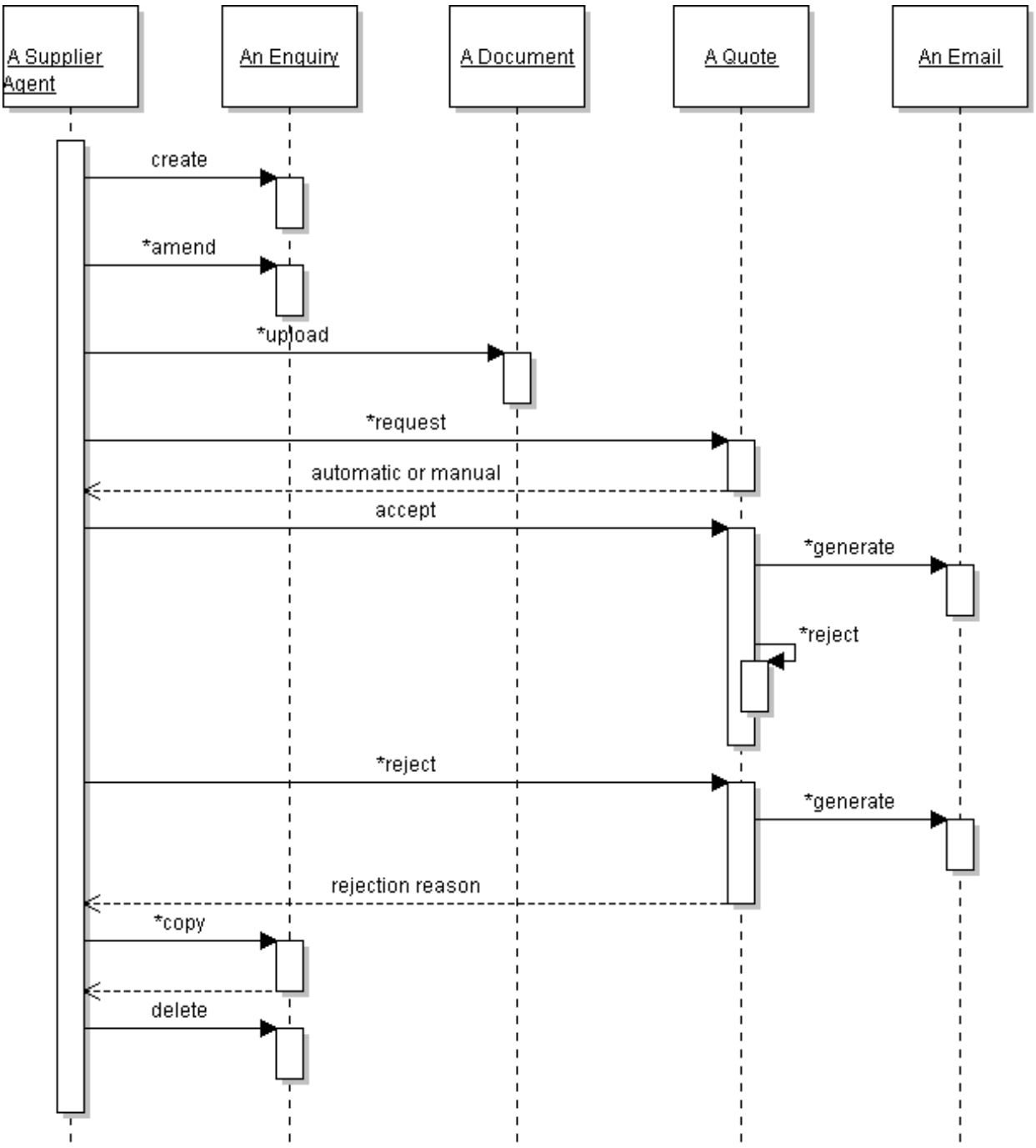

Illustration 3: Sequence Diagram

3.1 Enquiry

The system allows the user to perform the following primary functions:

- Create a new enquiry;
- Amend an existing enquiry;
- Save an enquiry;
- Copy an existing enquiry to create a new enquiry;
- Submit an enquiry for quotation.

The complete list of enquiry data items are described in Appendix A.

3.1.1 Create A New Enquiry

The system generates and records a unique enquiry reference for the new enquiry. The system records supplier-related information against the new enquiry by referring to the user agent details to find the supplier on whose behalf the user performs work. The system records the user details against the enquiry.

The user enters site location information and then fills in the questionnaire.

The questionnaire is presented as a series of questions (either grouped or singular) on a succession of screens. The system saves the answers to questions when the user completes a screen. The system alters the 'flow' of questions depending on the answers given to previous questions. Each question has 'help' associated with it that is presented to the user on request. The user is able to exit from the questionnaire before all the questions have been answered: the user may choose to amend or complete the enquiry at a later date.

When the questionnaire is completed, the user is able to request a quote.

3.1.2 Amend An Existing Enquiry

The user searches for existing enquiries using the unique enquiry reference, transaction reference, post code or MPRN of an enquiry. The system limits the enquiries that can be queried to those associated with the supplier on whose behalf the user performs work: the queried enquiries may have been created by other users. If the enquiry has not been marked as 'quoted for', the user is able to amend the enquiry.

The user may amend the site location information, completed questions from the questionnaire or complete unanswered questions.

When the questionnaire is completed, the user is able to request a quote.

3.1.3 Copy An Existing Enquiry To Create A New Enquiry

The user searches for existing enquiries using the unique enquiry reference, transaction reference, post code or MPRN of an enquiry. The system limits the enquiries that can be queried to those associated with the supplier on whose behalf the user performs work: the queried enquiries may have been created by other users.

The system allows Agents and I&C users to create a new enquiry by selecting an existing enquiry

and copying the details of that enquiry. The system generates and records a unique enquiry reference for the new enquiry. The system amends the new enquiry by applying the current Agents details and removing any files associated with the original enquiry.

The user is able to amend the new enquiry.

3.1.4 Enquiry State

The following state diagram demonstrates the behaviour of the enquiry through the use cases described in Illustration 2.

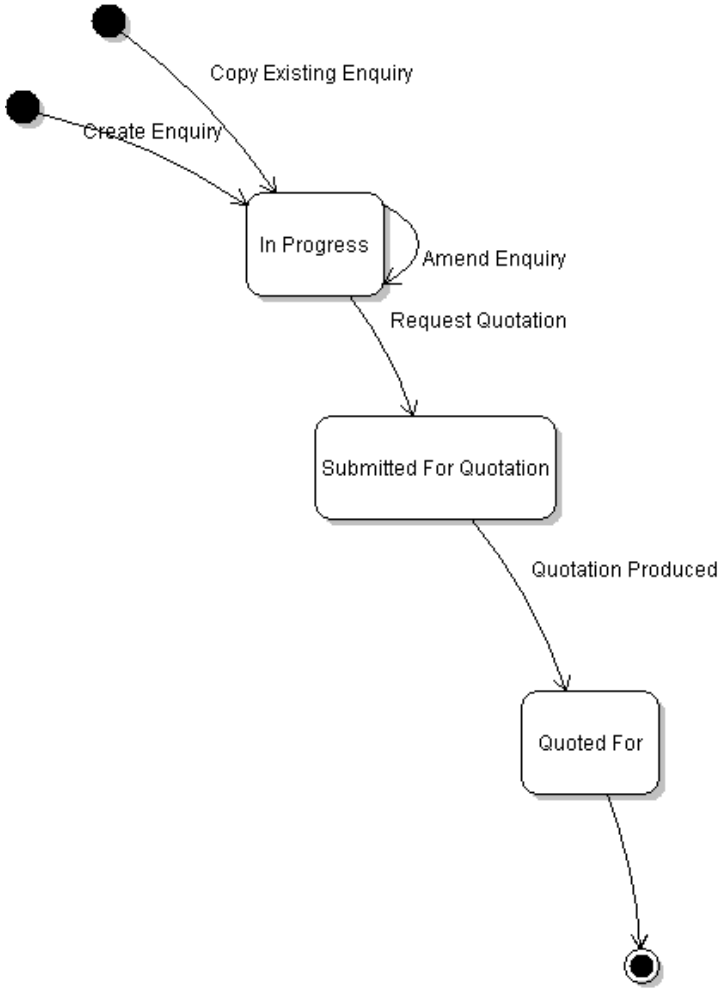

Illustration 4: Enquiry State Diagram

3.2 Questionnaire Flow Chart

In order for the user to receive a quote, a short questionnaire needs to be completed. The webMIP system prompts the user to answer the questions. Some questions within the questionnaire are dependent on answers from other questions. The following three illustrations describe the overall flow of the enquiry questions.

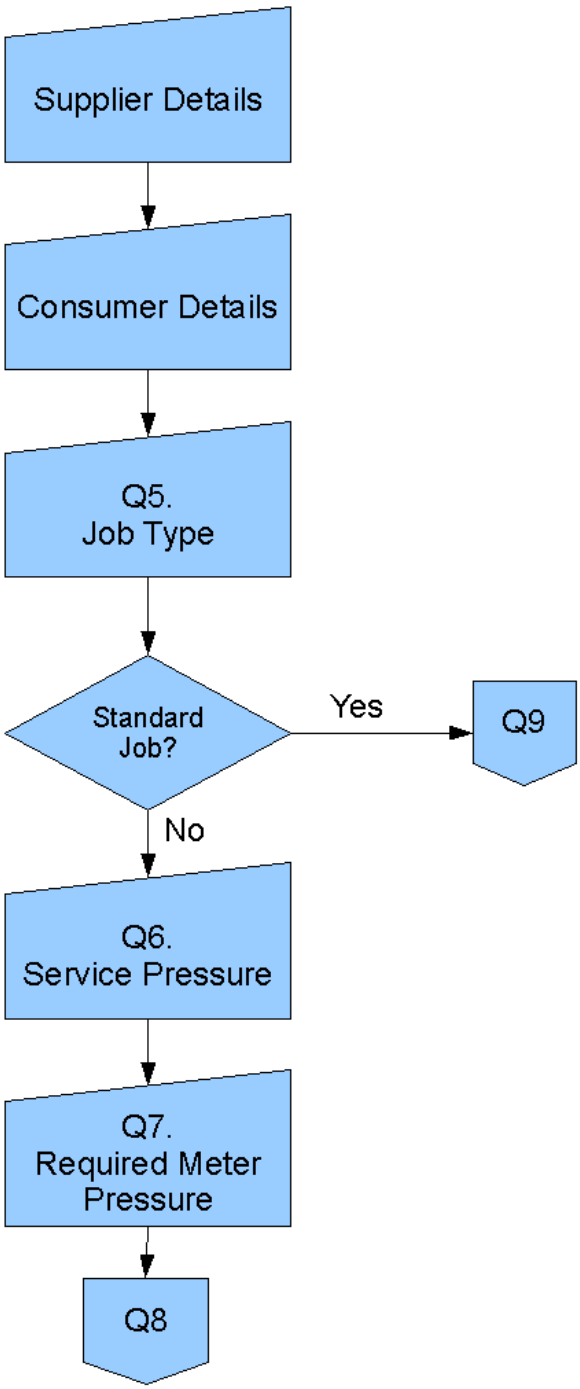

Illustration 5: Questionnaire Flow Chart - Slide 1

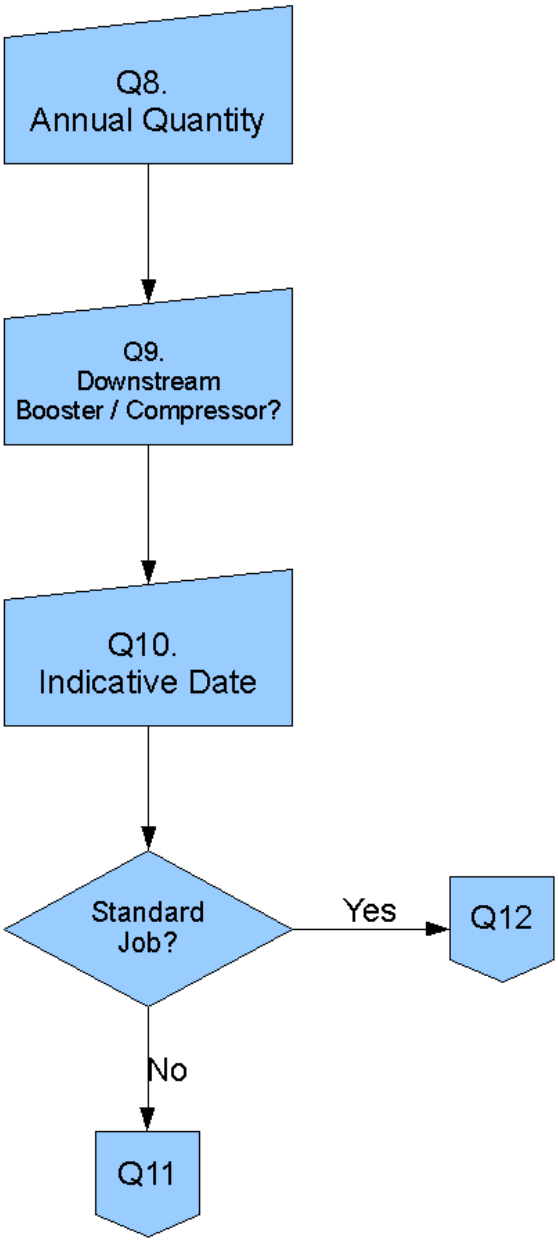

Illustration 6: Questionnaire Flow Chart - Slide 2

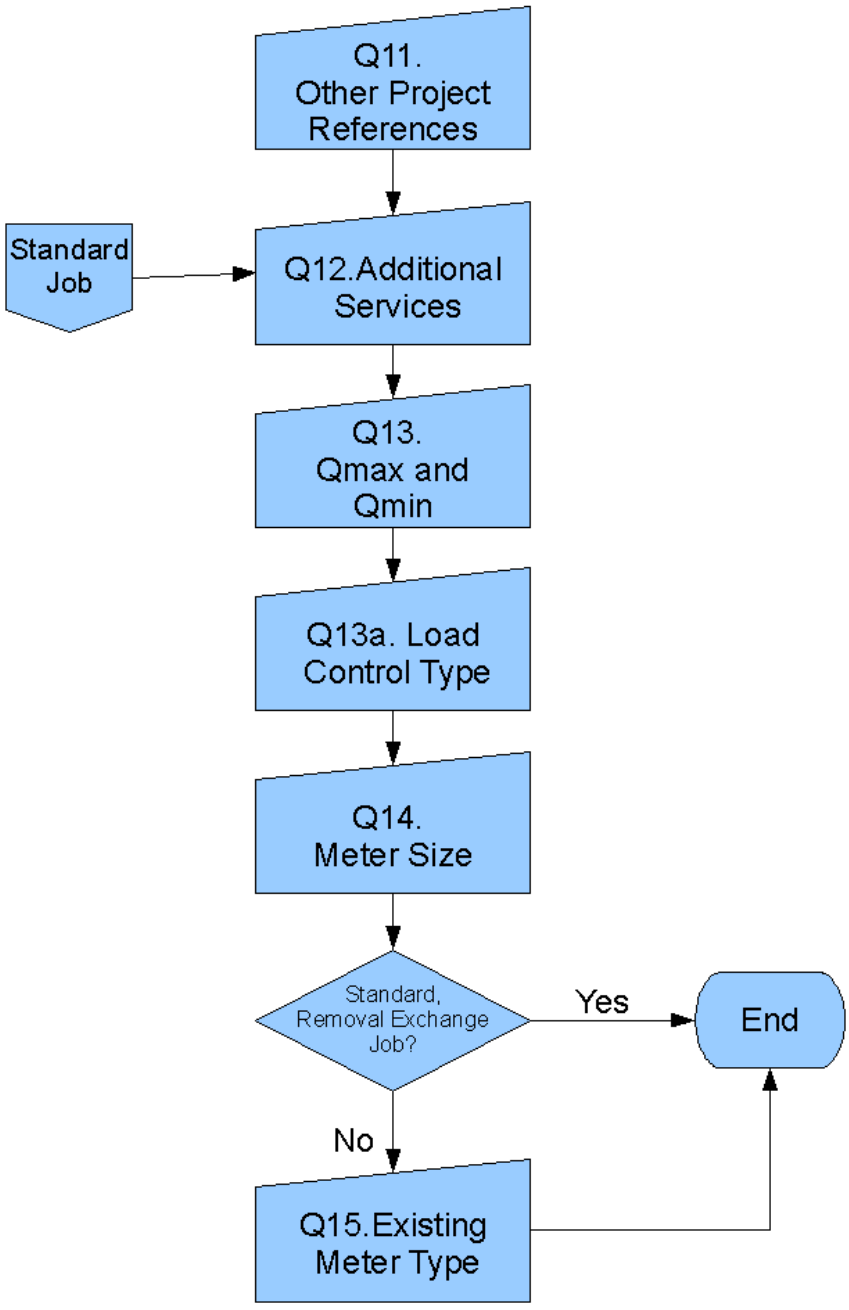

Illustration 7: Questionnaire Flow Chart - Slide 3

3.3 Quote generation

The system generates quote(s) on request against enquiries that have not already been marked as 'quoted for'. There are two methods of quote generation:

- Automatic quotation. The system produces pdf letters for all submitted quotes with all relevant details (and caveats where appropriate) without manual intervention;
- Manual quotation. The system is unable to automatically produce a quote and relies on a manual process to produce the quotation off line and then upload the quotation into webMIP.

The rules in Illustrations 8, 9 and 10 show whether an enquiry results in an automatic or manual quotation. If the meter size is not provided by the user, the system converts the Qmax value into the appropriate U category e.g. U16 and this conversion is used in place of the meter size.

The system is able to produce automatic quotations for adversarial works, however an additional caveat is placed on the automatic quote stating that any purging requirements will be addressed as a variation on the job at a later date.

In addition to the inability of the system to produce an automatic quotation, the requirement for a site survey causes the need for a manual quotation.

The following jobs require a site survey:

- LP and MP Alterations;
- MP Exchanges where an upgrade is greater than one 'U' size e.g. from U16 to U40.

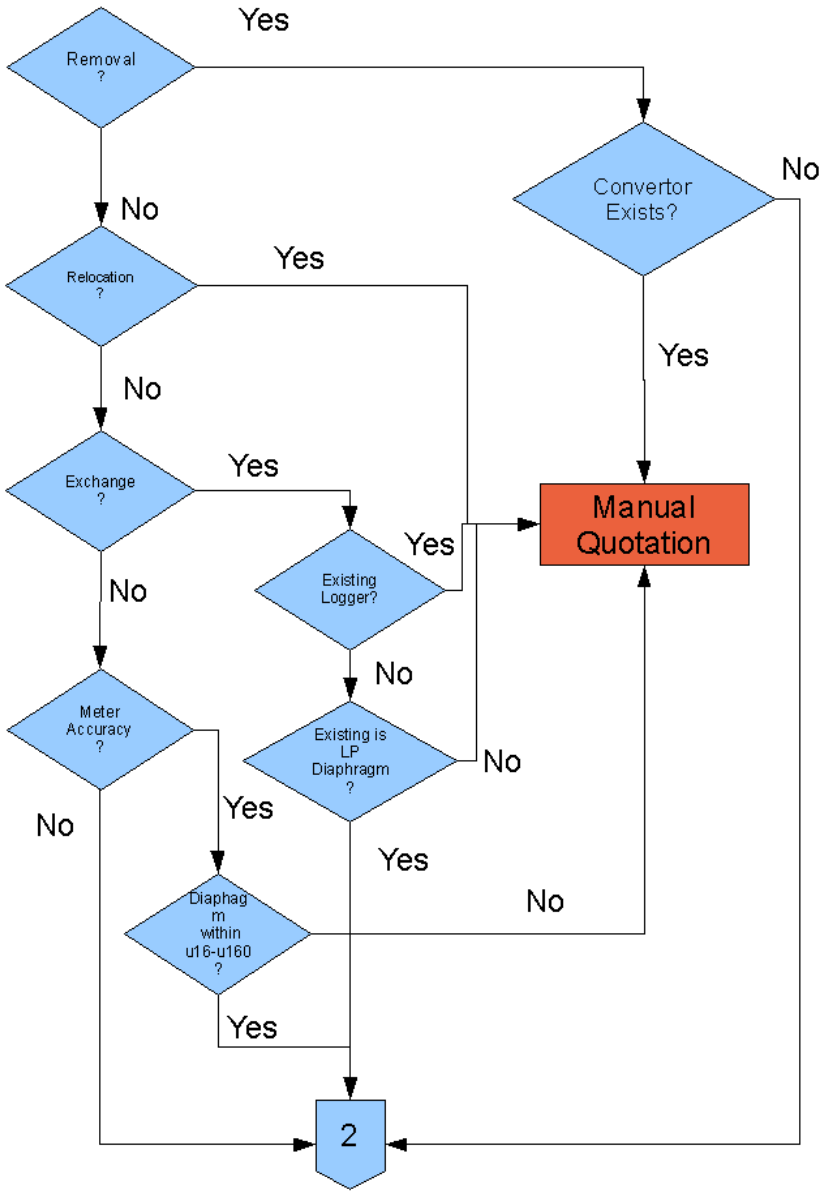

Illustration 8: Automatic or Manual Quotation Flow Chart

Note - webMIP will attempt to quote for all removals if there is a removal price available for the selected meter module. 1

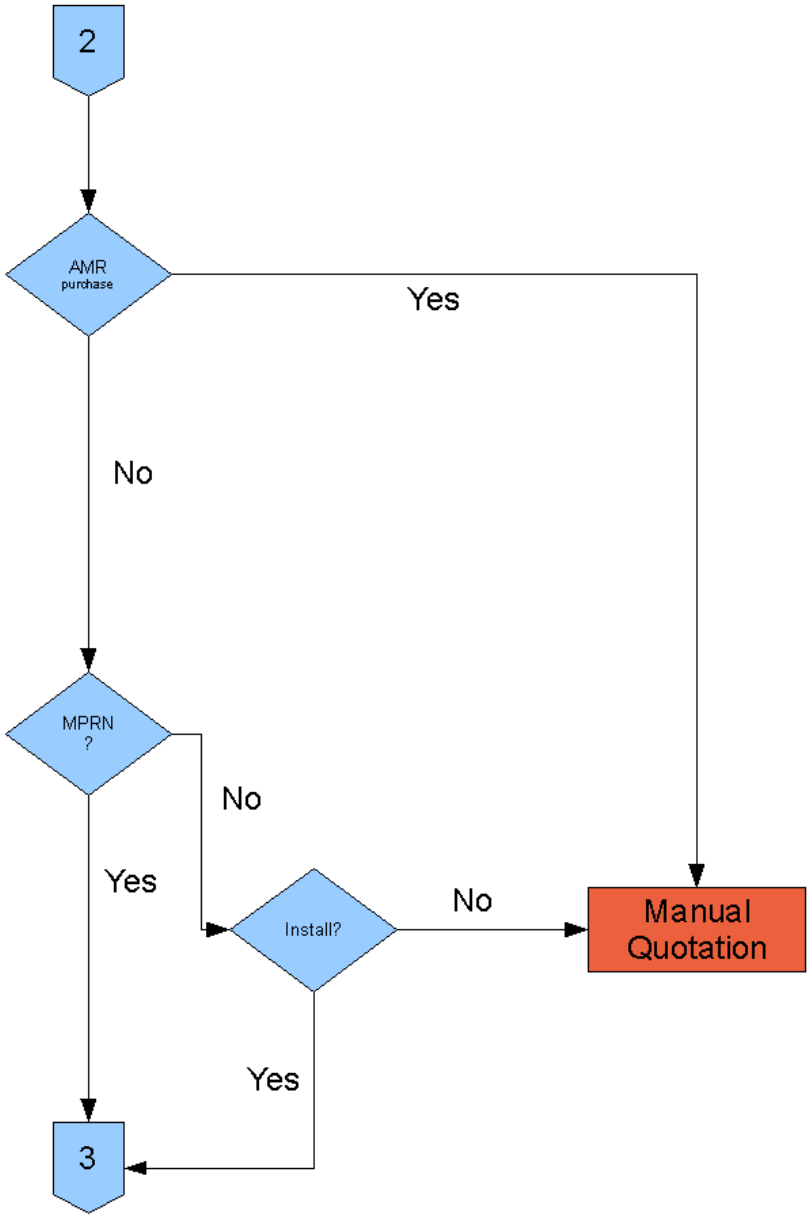

Illustration 9: Automatic or Manual Quotation Flow Chart 2

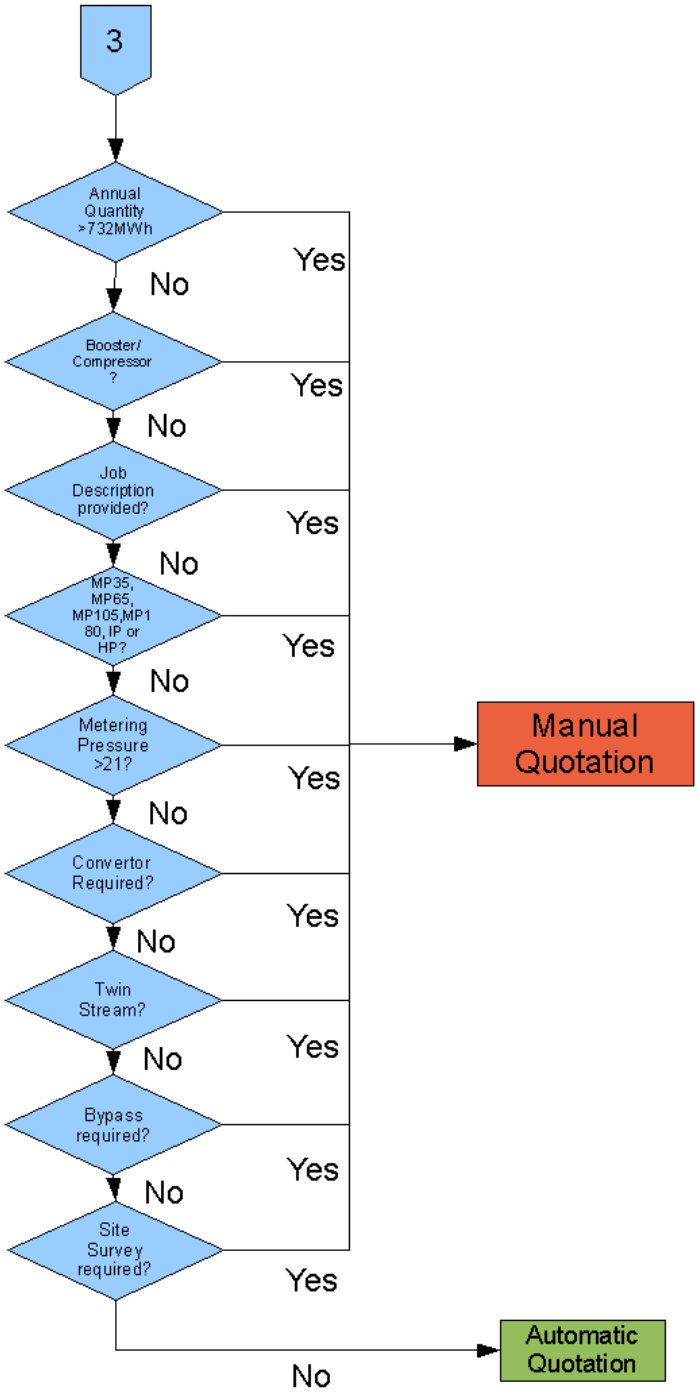

Illustration 10: Automatic or Manual Quotation Flow Chart 3

Note - webMIP will attempt to quote for all removals if there is a removal price available for the selected meter module.

3.3.1 Automatic Quotation

The system produces quotations for new meter modules and for standard work items.

3.3.1.1 Meter Module

Quotations are based on the system's ability to select meter modules that match the enquiry requirements.

3.3.1.1.1 Meter Module Selection

The webMIP system identifies and selects Meter Modules that are suitable for quotation. Meter modules are selected using the following enquiry details:

- Inlet Pressure;
- Outlet Pressure(Required Meter Pressure);
- Qmax;

Each meter module is associated with a single housing and this is selected if the enquiry requests it.

Each meter module is associated with a single base and this is selected if the enquiry requests it.

For Adversarial removal jobs, a caveat is placed in the automated quote stating that any purging costs will be transferred back to the customer after the job is completed in the form of a variation.

For enquiries without a housing option selected, the minimum housing dimension requirements are provided.

3.3.1.1.2 Meter Module Speculative Quote

The system produces a speculative quote for each selected meter module. Users can select each of the quotes provided and accept one. The following items of data are provided with each of the meter modules listed:

- Meter module name – The name/description of the meter module
-
- Total cost – The total cost of the module and the chosen add-ons
- Contract Lead time – The number of days that the job must be completed within (after quote acceptance)
- Qmax – The Qmax value requested by the enquiry, in Kwh
-
-
- Inlet orientation – The orientation of the inlet pipework
- Outlet orientation – The orientation of the outlet pipework
-
- List of Add-ons

3.3.1.1.3 Meter Module Accepted Quote Document

Once a quote is accepted the system produces a more detailed accepted quote document containing a description of the module and the appropriate add-ons. The document contains the following data items:

- Module name – The name of the module
- Qmax – The Qmax value requested by the enquiry, in KWh
- Qmin – The Qmin value for the module, in kWh
- Service Pressure – The service pressure category for the module (eg. LP)
- Required meter pressure – The required meter pressure requested by the enquiry, in mbar
- Job completion date – The number of days that the job must be completed within (after quote acceptance)
- Dimensions – The width, depth and height of the module, in mm
- Weight – The weight of the module, in kg
- Inlet – The inlet orientation configuration
- Outlet – The outlet orientation configuration
- Module Cost – The cost of the module
- Caveats – A list of caveats relating to the job

An additional list of selected module add-ons is provided with the following data items displayed for each add-on:

- Accessory – The name of the add-on
- Cost – The cost of the add-on
- Lead time – The lead time (if appropriate) for delivering/fitting the add-on
- Dimensions – The width, depth and height of the add-on
- Weight – The weight of the add-on in kg

There is an additional total line for the list of add-ons, that totals the collective costs of the add-ons.

The system generates costs for the module dependant on the installation address. The regional structure will be based on postcode data provided by National Grid Metering I&C. See Appendix B for further information.

3.3.1.2 Standard work items

Quotations for standard work items apply standard/fixed prices, including installation prices, for each item requested. Such items include:

- Request for OFGEM Meter Accuracy Test (OFMAT) If the existing meter is a Diaphragm and within U−16 to U−160 then an automatic quote will be attempted otherwise the quote will be manual;
- Removal of meters, including 'Adversarial' removal of meters;
- Relocation of meters;

- Purchase Energy Management System (EMS) for an existing meter module.

The generated quotation refers to the work item and the price charged.

3.3.2 Manual Quote Generation

Where the system is unable to automatically produce a quotation, the system supports a manual process of uploading a quotation document generated off-line and making it available to the user. The system has no knowledge of the contents of the manual quotation.

3.4 Quote acceptance and rejection

The user searches for existing enquiries using the unique enquiry reference, transaction reference, post code or MPRN of an enquiry. The system limits the enquiries that can be queried to those associated with the supplier on whose behalf the user performs work: the queried enquiries may have been created by other users. The user is able to view the quote(s) associated with an enquiry where either the enquiry has been marked as 'quoted for' and the quotes have not lapsed (greater than 90 days) or the enquiry has been marked as 'complete'.

The user is able to select a quote and view the accepted quote document.

The user rejects quotes by selecting from the list and choosing the 'reject' option. The user is asked to enter a reason for the rejection. The user is given the opportunity to fill in a free text field of 250 characters and select from a list of the following reasons:

- Too expensive
- Lead time too long
- Used competitor
- No longer required
- Speculative enquiry
- Customer changed supplier

A rejected quote cannot be subsequently accepted

The user accepts a quote by selecting from the list and choosing the 'accept' option. The system records the details of the user against the enquiry. The system marks the quotation as 'Accepted' and all other quotations related to the enquiry as 'Rejected'. An accepted quote cannot be subsequently rejected. An enquiry cannot have more than one accepted quote. The system uses email to contact the I&C department with details of the accepted quote (see section 6.2.2 of this document for further information). The system also provides the user with details of the manual process to be followed from this point. The system will also inform the user that the actual job SLA starts after all drawings and documents required to complete the job have been uploaded or delivered to I&C.

Quotes that have not been accepted or rejected lapse after 90 days. Quotes that have lapsed cannot be viewed by the user. The system marks the quote as 'Lapsed'.

3.4.1 Quotation State

The state diagram in Illustration 11 demonstrates the behaviour of the quotation through the use

cases described in Illustration 2.

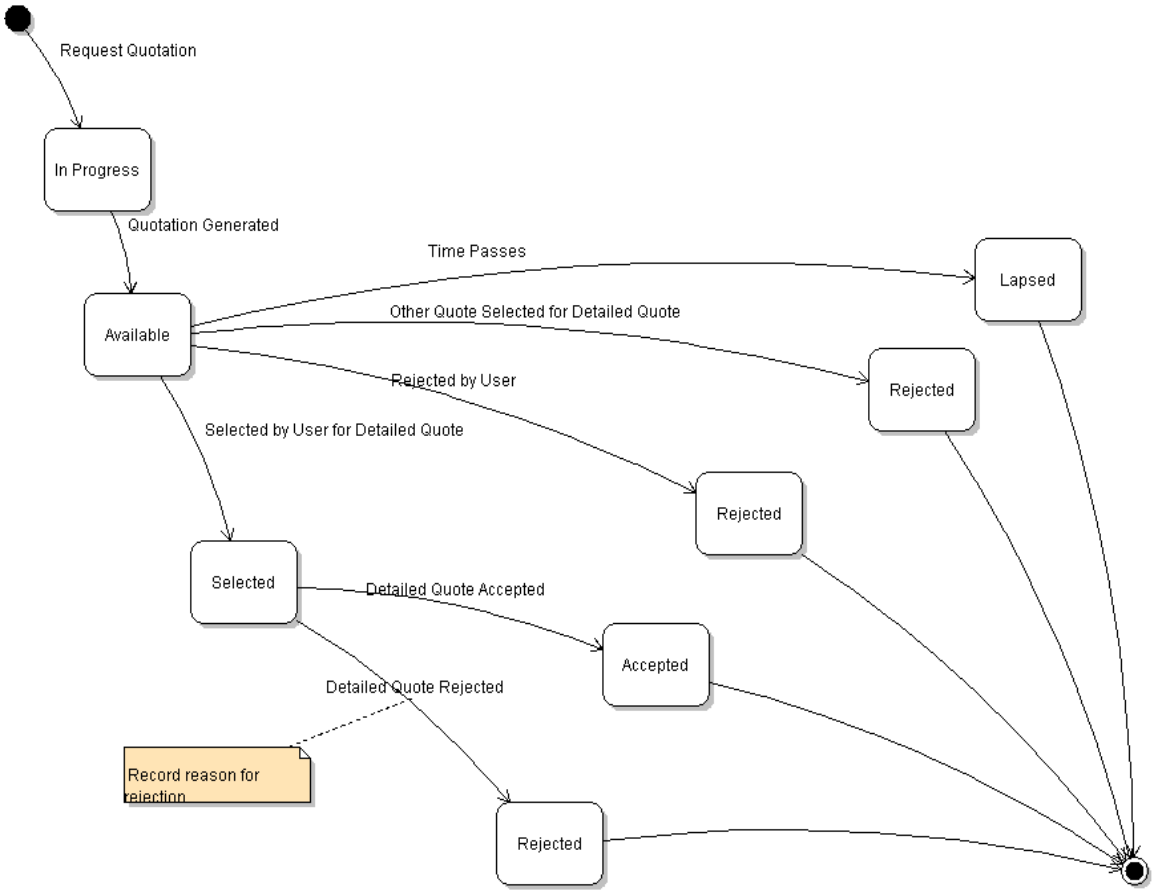

Illustration 11: Quotation State Diagram

3.5 System Process Map

The following illustrations show the overall flow of the Quotation Processes.

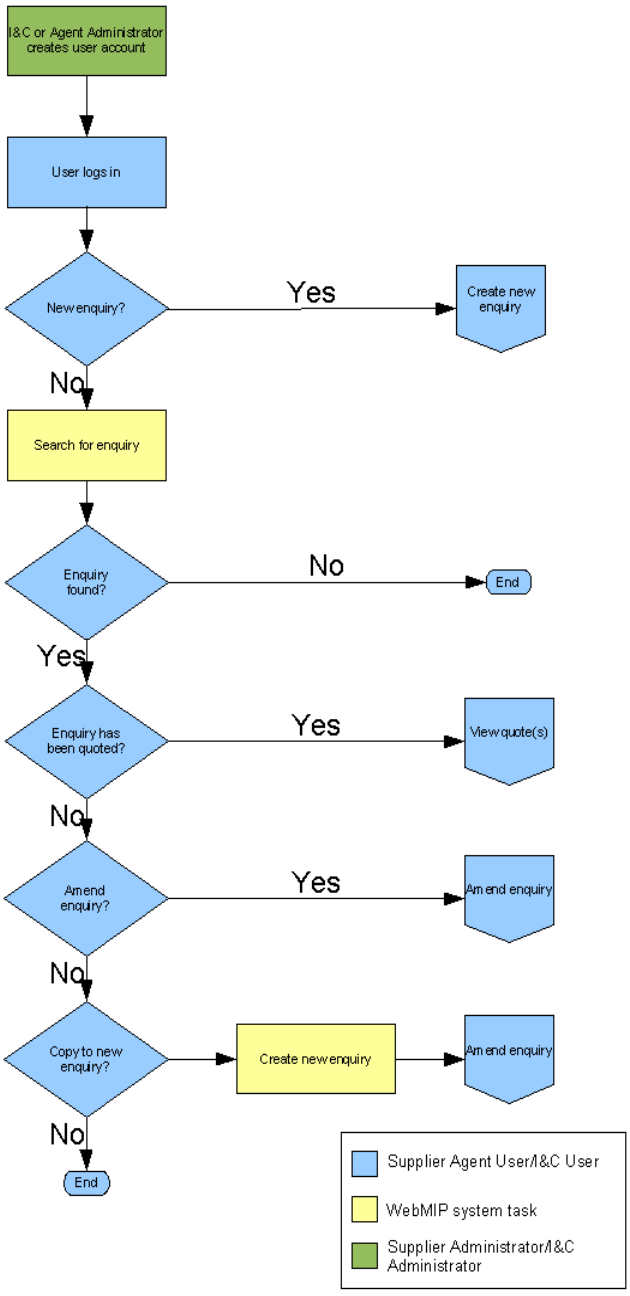

Illustration 12: System Process Map - Slide 1

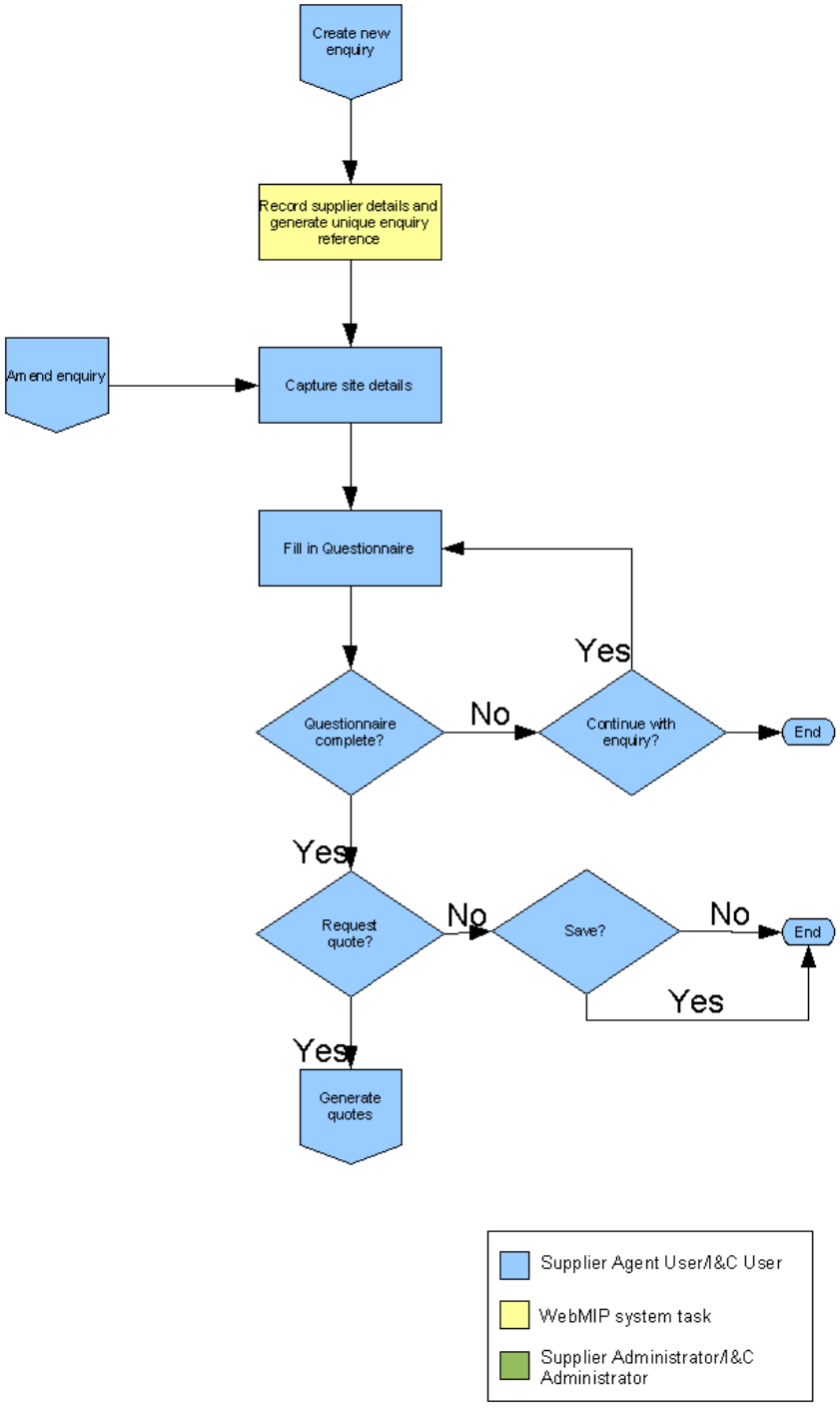

Illustration 13: System Process Map - Slide 2

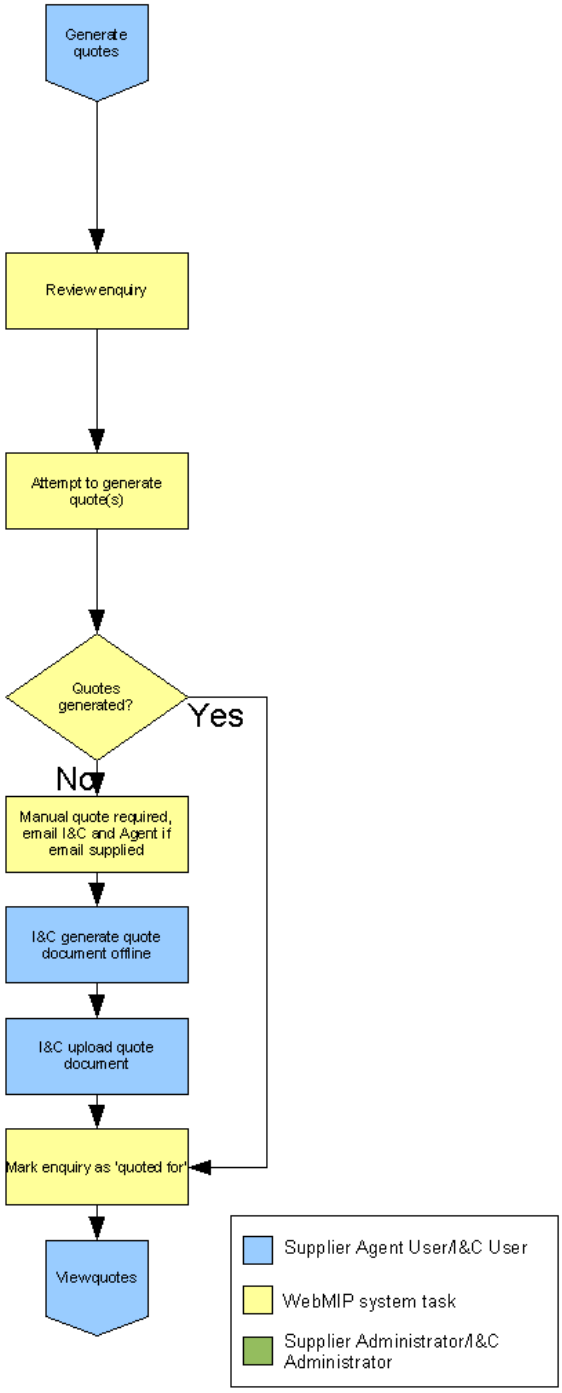

Illustration 14: System Process Map - Slide 3

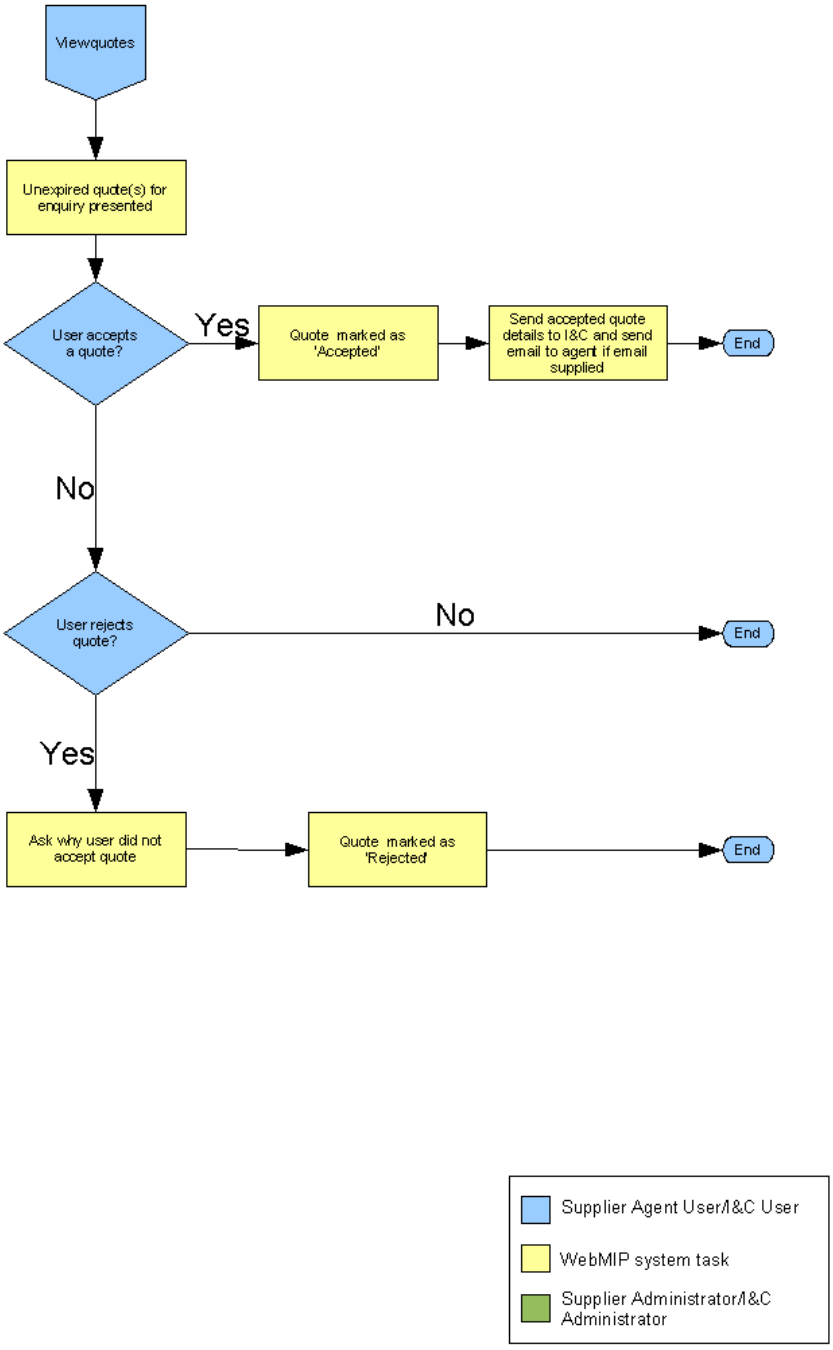

Illustration 15: System Process Map - Slide 4

3.6 Business Rules

The following business rules are applied during the above processes.

3.6.1 Pricing Data

With the exception of Standard add-ons (see Appendix B.6) all cost/pricing information may be regional i.e. the price for an item may differ according to the region in which the installation will take place. Regions are based on post-codes[1]. Where there are no applicable regional costs associated with an item, a non-regional price will be used for that item.

Where the system selects a meter module or associated item and a required supplier price is missing, the system is unable to produce a quotation. The enquiry is treated as a request for a Manual Quote that requires completion by I&C.

Where the system selects a meter module or associated item and a required network price is missing, the system will produce a quotation but there will be a manual process during 'job' entry onto SAP to determine the relevant network costs.

Bypass pricing is handled off-line.

3.6.2 Tripartite Agreement

Where suppliers have not signed up to an agreement with National Grid, known as the Tripartite Agreement, the system is prevented from producing quotations (both automatic and manual) for specified job types where the consumer postcode is within a specified set of postcodes. Where a request for quotation is made and is prevented by the absence of a Tripartite Agreement, the user will be informed.

4 Reporting

The webMIP system contains reporting options for all users of the system. Most of the reports take the form of lists of data from which decisions and choices are made. I&C build their own reports using the data export function of webMIP.

The following is a list of the purpose built reports that are included within the webMIP system.

4.1 Data Export

The system provides the webMIP administrator user with the ability to export all data in the webMIP system as and when required. The data is categorised by the logical groupings in which it is held within webMIP. The data is exported in CSV format and then used by I&C.

4.2 Automatic Quotes

The system generates quotes on request. The system initially generates a speculative quote document for each meter module that matches the enquiry requirements. When a quote is accepted, the system generates an accepted quote document containing a description of the module, appropriate add-ons and detailed drawings. The quote is generated as a PDF file. All quotes are generated with National Grid Metering headers and footers.

Quotes without a housing or base option selected supply the minimum housing/base dimension details but no costing details are provided.

4.2.1 Speculative Quote

A speculative quote is a quote automatically generated by webMIP after the user has submitted their enquiry for quotation. The quote contains the following data:

- Base dimensions and generic diagram;
- Housing dimensions and generic diagram;
- Module dimensions and generic diagram;
- Module technical specifications;
- The Agent/supplier address details;
- Break down of costs and items (each line with an item and associated costs).

4.2.2 Accepted Quote

The accepted quote is provided to the user after accepting a speculative quote. The quote contains further refinement and detail than the speculative quote. The quote contains the following data:

- Base details and dimensions with detailed diagram;
- Housing details and dimensions with detailed diagram;
- Module details and dimensions with detailed diagram;

- Module technical specifications;
- The Agent/supplier address details;
- Break down of costs and items (each line with an item and associated costs).

4.3 User specific Reports

4.3.1 View Of Accepted Quotes

The system provides a list of accepted quotes displayed in date accepted ascending order. The report is available to the webMIP administrator, I&C User and I&C Customer Services users. The fields displayed for each quote are as follows:

- Quote reference number;
- Supplier Name;
- Agent name;
- Date quote accepted.

4.3.2 View Of Quotes Pending Manual Quote

The system provides a view of all quotations with a status of 'In Progress'. The quotes are displayed in date-submitted ascending order. The report is available to the webMIP administrator, I&C User and I&C Customer Services users. The following fields are displayed for each quote:

- Quote reference number;
- Supplier Name;
- Agent name;
- Date submitted for quotation.

4.3.3 Supplier Administrator

The Supplier Agent role will have a view of all related Supplier Agents.

4.3.4 Supplier Agent

The Supplier Agent role has following data views available:

- Enquiries that they have created or have been created by other agents associated with the same supplier;
- Quotes that they have created or have been created by other agents associated with the same supplier, these will be viewable for up to 90 days from generation.

4.3.5 I & C Customer Services

The I & C Customer Services role has the following data views available:

- All enquiries that have been created within the system;
- All quotes that have been created, these will be viewable for up to 90 days from

generation.

4.3.6 I & C User

The I & C User role will has the following data views available:

- All enquiries that have been created within the system;
- All quotes that have been created, these will be viewable for up to 90 days from generation.

4.3.7 The WebMIP Administrator

The webMIP Administrator role has the following data views available:

- All enquiries that have been created within the system;
- All quotes that have been created.

5 System Administration

The webMIP system holds data used in the process of providing quotations for Supplier agents. This data requires administrative functions to keep it correct and up-to-date. The system also manages the users and provides a method for producing system reports.

5.1 System data

The webMIP administrator role is able to administer system data to ensure that values, descriptions and other details are correct and up-to-date. The role can also create, read, update and delete the system data.

The data administered includes the following:

- Meter Modules. See Appendix B for details;
- Housing. See Appendix B for details;
- Base. See Appendix B for details;
- Pricing data. See Appendix B for details;
- Users. See section 2.1.1 User Accounts;
- Caveats
- Postcodes. See Appendix B for details
- Drawings
- Reporting. The system allows the webMIP administrator role to run the system data reports. The webMIP administrator role selects the system data sources and exports them as CSV files.

5.2 Bulk Upload

The webMIP system provides a bulk upload function for the uploading of system data. This function is only available to the webMIP Administrator user role. The bulk upload function will accept a CSV file containing data described in Appendix B . When the bulk upload routine is completed the entire system data set will be replaced by the data provided in the uploaded CSV file. If the uploaded file does not pass the webMIP bulk upload validation routine then the bulk upload will fail and the existing system data will remain in place. This routine and validation process will be shared with NGM during the Design Phase.

5.2.1 User Acceptance

A process out side of the scope for webMIP will allow I&C to attempt a bulk upload run, on an environment other than the production webMIP environment to confirm that the upload is successful. This way the bulk upload can be tested without impacting on the live system.

6 System Communication

The webMIP system communicates with the users through their web browser and Email. Screens are provided for the administration, enquiry and quotation process. In addition to these screens webMIP is able to email users at key points during the on-line quotation life cycle. Where the third-party requires communications to be via telephone, fax or the post this is performed manually by I&C staff.

6.1 Web Browser

The system uses a web browser user interface for all functions associated with the user viewing or entering data. The system screens and contents will be discussed in detail during the design stage of the project. The screens representing the webMIP system will provide an interface for the users to enter the data described in Appendix A.

6.2 Email

The webMIP system uses email to communicate with the I&C team and Agents.

When webMIP delivers an email, the 'From' part of the email refers to a mailbox within I&C. This allows I&C to check email failures (bounced or returned email) and ensures that user responses to system generated emails are received by I&C.

The email aspects of the webMIP system are used at specific points within the quotation life cycle. There are two key points at which email is employed; the request for quotation and the quotation acceptance.

6.2.1 Request For Quotation

During the quotation stage (request for quote submitted) the system communicates either directly to the agent user and/or the I&C team. The method depends on the type of quote:

6.2.1.1 Automatic Quotes

Enquiries that can be automatically quoted for are presented to the user once their on-line request has been submitted. If the user has specified email as a preference for communication the system will email the quote details to the user. If an I&C user enters the details of the enquiry on behalf of the agent then the communication preference set on the agents profile will be used. If any other communication option is selected as a preference, the system sends an email to the I&C team; the I&C team then performs the communication manually.

6.2.1.2 Manual Quotes

Where the system has been unable to produce an automatic quote, the system emails the I&C team requesting that a manual quote be produced. The system also sends an email to the user stating that a manual quote will be provided.

6.2.2 Quotation Accepted

When a quote is accepted the system can send up to three types of email depending on the type of quote and the agent users communication preference settings:

6.2.2.1 I&C

If the enquiry produces an automatic quote, the e-mail contains: all data entry for the job, including the selected design; details that may be used for planning/scheduling and procurement; internal cost details that NGM have to pay the networks for enquiries. In all cases (automatic or manual) the e-mail contains the Quote Reference No. The e-mail for Manual quotes will include all data entry fields within Web MIP to allow the I&C user to print the output without having to access the Web MIP system unnecessarily.

6.2.2.2 Agent

If the agent accepting the quote has specified email as their communication preference, webMIP sends an email to their specified email address. If the quote is an automatic quote the email will contain a PDF of the final detailed quote, otherwise the email will contain the quote file uploaded by the I&C user. The email also contains a link to the quote held within webMIP, a list of reminder items and details on what to do next.[1]

Appendix A: Data Items

510

A.1 Gas Supplier

Gas Supplier ID (A0064)	A required 10 Character alphabetical code
Gas Supplier Name	A required alphanumerical field of 40 characters in length
Gas Supplier Location	A required address for the gas supplier, including the traditional items associated with an address
Cust Code	A required 3 digit numerical code, that describes the customer supplier.
Contract Reference	The provision and maintenance contract a required alphanumerical code. Limited to 35 characters.

A.2 Supplier Agent

Company Name	A required 40 character data item to record the agents company name
Title (A0088)	A required 6 character item to collect the individual agents title, e.g. Dr, Mr, Miss
Initials (A0089)	A required 2 character item to collect the individual agents initials
Contact Name (A0090)	A required 10 character data item to hold the individual agents name
Address (A0049,A0106)	A required address for the individual agent, including the traditional items associated with an address
Telephone1(A0049,A0106)	A required initial telephone number to contact the individual, a 30 char limit.
Telephone2(A0049,A0106)	An optional data item for an alternative telephone number to contact the individual, a 30 char limit.
Fax(A0049,A0106)	An optional item that allows the agent to specify a fax number, a 30 char limit.

Email(A0049,A0106)	An mandatory alphanumerical item to accept the individual agents email address, the value must be a valid email address. A 241 char limit.

A.3 Job Site Details

Transaction Reference(A0055)	An optional 35 character alphanumerical code that the agent can use to reference to the job enquiry. This value does not have to be unique within the system, if the user searches for the transaction reference then multiple enquiries/quotes may be returned.
Agent	Only available to the I&C user and mandatory for the I&C user. A list of Agents held within the webMIP system. The user must select one.

A.4 Address

Sub-Building Name/Number (A0004)	A 40 character alphanumeric item that must contain a data entry if Building Name/Number is omitted.
Building Name/Number (A0006)	A 40 character alphanumeric item that must contain a data entry if Sub-Building Name/Number is omitted.
Thoroughfare(Road) (A0008)	A 60 character alphabetical data item that must be entered.
Post Town(Town) (A0011)	A 40 character alphabetical data item that must be entered.
Post Code (A0013)	A 10 character alphanumerical data item that must be entered.
Title (A0088)	A required 6 character item to collect the individual agents title, e.g. Dr, Mr, Miss to be selected from a list.
Initials (A0089)	A required 4 character item to collect the individual consumer contacts initials
Contact Name (A0090)	A required 30 character data item to hold the individual consumer contacts name
Telephone1(A0049,A0106)	A required initial telephone number to contact

	the consumer, a 30 char limit.
Telephone2(A0049,A0106)	An optional data item for an alternative telephone number to contact the consumer, a 30 char limit.
Fax(A0049,A0106)	An optional item that allows the agent to specify a fax number, a 30 char limit.
Email(A0049,A0106)	An optional item to accept the individual agents email address, a 241 char limit.

A.5 Contact Address

515

Sub-Building Name/Number (A0004)	(only required if job address different to contact address)A 40 character alphanumeric item that must contain a data entry if Building Name/Number is omitted.
Building Name/Number (A0006)	(only required if job address different to contact address)A 40 character alphanumeric item that must contain a data entry if Sub-Building Name/ Number is omitted.
Thoroughfare(Road) (A0008)	(only required if job address different to contact address)A 40 character alphabetical data item that must be entered.
Post Town(Town) (A0011)	(only required if job address different to contact address)A 40 character alphabetical data item that must be entered.
Post Code (A0013)	(only required if job address different to contact address)A 7 character alphanumerical data item that must be entered.
Second Contact	A boolean entry that allows the user to specify if there is a second contact for the site.
Title (A0088)	(only required if second contact specified)A required 6 character item to collect the individual agents title, e.g. Dr, Mr, Miss to be selected from a list.
Initials (A0089)	(only required if second contact specified)A required 4 character item to collect the individual consumer contacts initials
Contact Name (A0090)	(only required if second contact specified)A

	required 30 character data item to hold the individual consumer contacts name
Telephone1(A0049,A0106)	(only required if second contact specified)A required initial telephone number to contact the consumer.
Telephone2(A0049,A0106)	(only required if second contact specified)An optional data item for an alternative telephone number to contact the consumer.
Fax(A0049,A0106)	(only required if second contact specified)An optional item that allows the agent to specify a fax number.
Email(A0049,A0106)	(only required if second contact specified)An optional item to accept the individual agents email address.

A.6 Second Contact Address

515

Second Contact address is the same as job address/first contact. It is only required if second contact specified. A selection entry allows the user to specify whether the address is the same as the site of the intended works or the first contact.

Sub-Building Name/Number (A0004)	(only required if job address and first contact address different)A 40 character alphanumeric item that must contain a data entry if Building Name/Number is omitted.
Building Name/Number (A0006)	(only required if job address and first contact address different)A 40 character alphanumeric item that must contain a data entry if Sub-Building Name/Number is omitted.
Thoroughfare(Road) (A0008)	(only required if job address and first contact address different)A 40 character alphabetical data item that must be entered.
Post Town(Town) (A0011)	(only required if job address and first contact address different)A 40 character alphabetical data item that must be entered.
Post Code (A0013)	Only required if job address and first contact address different)A 7 character alphanumerical data item that must be entered.

A.7 Site Detail

Asset Location Code (A0059)	A 10 character alphanumerical data item that must be entered, it will be one value from a list of the following specified entries: 00 Unknown 01 Cellar 02 Under Stairs 03 Hall 04 Kitchen 05 Bathroom 06 Garage 07 Canteen 08 Cloakroom 09 Cupboard 10 Domestic Science 11 Front Door 12 Hall Cupboard 13 Kitchen Cupboard 14 Kitchen under sink 15 Landing 16 Office 17 Office Cupboard 18 Outside WC 19 Pantry 20 Porch 21 Public Bar 22 Rear of Shop 23 Saloon Bar 24 Shed 25 Shop Front 26 Shop Window 27 Staff Room 28 Store Room

	29 Toilet 30 Under Counter 31 Waiting Room 32 Meter box Outside 98 Other 99 Outside
Care category	An optional 2 character numerical data type for all job types the user can select from the following list: 03 SEUC Unclassified 04 Aged 60+ 05 Blind 06 Braille User 07 Poor Sight 08 Deaf 09 Poor Hearing 10 Poor Speech 11 Poor Sense of Smell 12 Arthritic Hands 13 Arthritic All 14 Poor Walking 15 Wheelchair 16 Bedridden 17 Mental Handicap 18 Confused 19 Serious Illness 20 Other 21 Heart Condition 22 Breathing Difficulty
Asset Location notes (A0158)	
Mechanism for delivering Location notes	A optional selectable list of values including Post, Fax, Email and Upload. Depending on

	the selected option the system will provide either the Coventry Address for I&C, the I&C fax number, A mailto link to the I&C mailbox or a file upload option.
Attach files	(only required if Mechanism for delivering Location notes is set to Upload)An optional data item that allows users to attach a number of photos,drawings,plans etc. to the enquiry, the file size limit will be 10 megabytes in total with individual files being restricted to 3 megabytes.
Access Instructions (A0075)	An optional data item of 210 alphanumerical characters.
Access Password	An optional 30 character alphanumerical data item.
MPRN (A0072)	An optional 30 digit numerical data item. The MPRN is optional, but ideally I&C would like to collect the number. New installs do not require the number to be entered because the number may not have been generated at the time of the enquiry. However for all other jobs this should normally be entered, but sometimes it is unavailable. The user must enter additional information in these instances.
Additional Information, including UIP reference	Required only if MPRN is left blank and the job type is not a new install. A 250 character alphanumerical data item.

A.8 Job Information

The job information section records data relating to the job requirements including meter requirements and the meters environment. Like the job site details, once the job information details are submitted they are stored by the system so that the agent or I&C users can then refer back to them. Each enquiry must have just one associated set of job information.

Job Type (Q5)	A list of possible jobs (Install, Exchange, Removal, Alteration, OFMAT, EMS, AMR, Capacity Change, Adversarial, Standard Install, Standard Exchange, Standard Removal, Other), if the user selects 'Other' then they must provide some data for the Other Type data item. The Job Type can be changed on the enquiry until the enquiry is submitted for quotation. The Standard job types are categorised differently by webMIP, they show the users intention to create a standard quotation for

<table>
<tr><td></td><td>an automatic quote. Standard job types exempt the user from entering certain questions in the enquiry questionnaire.</td></tr>
<tr><td>Other Type</td><td>Required only when the user selects 'Other' from the Job Type list. An alphanumerical data item of 30 characters.</td></tr>
<tr><td>Internal Job Type Reference</td><td>A hidden field automatically generated by the webMIP system. Only when the questionnaire has been successfully completed will webMIP attempt to generate the Job Type Reference. The Job Type Reference is an alphanumerical field of 40 characters in length. The webMIP system will use the Job Type and Service pressure data items on the questionnaire to determine the Job Reference Code, the result will be one of the following values :-
<table>
<tr><th>Job Reference Code</th><th>Description</th></tr>
<tr><td>FIX QO LP</td><td>Install Low Pressure Meter Module</td></tr>
<tr><td>FIX QO MP</td><td>Install Medium Pressure Meter Module</td></tr>
<tr><td>EXC QO LP</td><td>Exchange Low Pressure Meter Module</td></tr>
<tr><td>EXC QO MP</td><td>Exchange Medium Pressure Meter Module</td></tr>
<tr><td>EXC QI MP</td><td>Pressure Increase of Medium Pressure Meter Module</td></tr>
<tr><td>REM QO LP</td><td>Removal of Low Pressure Meter Module</td></tr>
<tr><td>REM QO MP</td><td>Removal of Medium Pressure Meter Module</td></tr>
</table>
If webMIP is unable to determine a Job Reference Code then the value will remain blank(null).</td></tr>
<tr><td>Gas Act Owner(GAO)</td><td>A drop down list of:
- Supplier
- GT
- Consumer
will be presented to the end user as a guidance.Required if the Job Type is of Exchange, Removal, Standard Exchange or Standard Removal, otherwise it should be optional. A 1 character alphabetical data item.</td></tr>
</table>

<table>
<tr><td>Supplier</td><td>Required if the Job Type is of Exchange, Removal, Standard Exchange or Standard Removal otherwise it should be optional. A 210 character alphanumerical data item.</td></tr>
<tr><td>Consumer</td><td>Required if the Job Type is of Exchange, Removal, Standard Exchange or Standard Removal otherwise it should be optional. A 40 character alphanumerical data item.</td></tr>
<tr><td>Appointment preference</td><td>Only relevant to the Standard job types that will be automatically quoted. An optional data item that allows the user to specify an preferred time in the day for the visit. The default value will be 8am-8pm. Users can select one value from a list of the following options:
8am-1pm,
12pm-8pm,
8am-8pm.</td></tr>
<tr><td>Service Pressure (Q6)</td><td>Required for Job Types . User will be able to select one option from a list of the following items, LP, MP35, MP65, MP105, MP180, MP270, IP. The service pressure is not needed for Standard (automatically quoted)Job Types as an assumed pressure category is taken. There is only 1 Service Pressure field required for all jobs</td></tr>
<tr><td>IP details</td><td>Required if the service pressure is IP. A 250 character alphanumerical data item. The default value is blank(null).</td></tr>
<tr><td>IP mbar</td><td>Optional, available when service pressure is set to IP. A Numerical data item that allows up to 3 decimal places. The values that are accepted must be between 2000 and 7000. The default value is blank(null).</td></tr>
<tr><td>Required Meter Pressure (A0164) (Q7)</td><td>A required numerical data item for jobs, except all standard jobs, which will default to 21mbar. Allows numbers between 0 and 7000 and 3 decimal places are permitted. The value to be stored will be in mbar. If the service pressure is 'LP' then the default for meter pressure will also be 21. The following service pressures also place further constraints on the accepted meter pressure values:
<table>
<tr><th>Service Pressure</th><th>Calculation for constraint</th><th>Constraint</th></tr>
<tr><td>MP35</td><td>0.8 x 35</td><td><=28</td></tr>
<tr><td>MP65</td><td>0.8 x 65</td><td><=52</td></tr>
<tr><td>MP105</td><td>0.8 x 105</td><td><=84</td></tr>
</table></td></tr>
</table>

	MP180	0.8 x 180	<=144
	MP270	0.8 x 270	<=216
Annual Quantity (AQ) (Q8)	A Required numerical data item for all jobs . The value for annual quantity will be recorded as KWh. The default value for is blank(null). If the field contains a value over 732,000 the enquiry will be not be automatically quoted.		
Specific conversion factor	A 1 Character hidden field that is used to determine if a conversion factor is required. This will typically be associated to jobs that require a large capacity. The user will not interact with this field as webMIP will determine the value. The default value is 'N' if the Annual Quantity field is greater than 732,000 KWh then the value will be 'Y'		
Booster/Compressor (Q9)	A boolean data entry with a default status of null. The user will specify a 'Y' or 'N' value. A value is required for all job types, however booster/compressor is not needed for Standard Job Types. If the user answers 'Y' the enquiry will become bespoke and a manual quotation will need to be provided.		
Indicative Substantial Completion Date(A0138) (Q10)	A date format data item, dates will be entered in the format dd/mm/yy, e.g. 21/10/07. This is an optional item for all job types. The date will be stored in webMIP in the format 'YYYYMMDD' the value will be 8 characters in length.		
Other Related Jobs(Project Reference) (Q11)	An optional alphanumerical data item of 40 characters.		
Additional Services (Q12)	A list of options that the user has to request or decline. All of the additional services require a mandatory response. Each option requires the user to select 'Y' or 'N', by default the options will be blank(null). The options that will be available are as follows : • Housing - If 'N' is selected the user must fill in an associated alphanumerical data item of 250 characters • Base • Converter – If a Converter exists and the enquiry is not Removal/ Std Removal/ Adversarial Removal, then a manual quote is required. If a Converter exists and the enquiry is Removal/Std Removal/Adversarial Removal, then an automatic quote is required. Logger – If a logger is attached and the enquiry type is an Exchange, then a manual quote is required. If a logger is attached and the enquiry type is not an Exchange, then a standard caveat		

	is attached to the quote. ● AMR – The AMR option will only be available for Tripartite users. ● EMS ● By-pass - One of the following data items must be selected ○ Not Required ○ Essential (Hospital, prison, etc.) ○ Institution (School, college, etc.) ○ Animal welfare ○ Manufacturing process requirement ○ Complicated pipework system ○ Other. If 'Other' is selected then the user must fill in an associated alphanumerical data item of 40 characters, to describe the reason. ● Twin stream.
Logger/Converter	A 1 character alphabetical data item that is hidden from the user. The webMIP system will select the value for this field. If Logger is selected from the additional services data item then webMIP will store a 'L' if Converter is selected then webMIP will record a 'C'. The default value will be blank (null).
Job Description/Special Instructions (Q9a)	An optional 500 character alphanumerical data item that the user can specify any job specific requirements. If the user has entered data in the job description/special instructions data item then an automatic quote will not be possible, the users should be warned of this prior to submitting their data.
Measuring Capacity QMAX (A0112) (Q13)	A mandatory numeric data item that accepts numbers between the range of 0 to 999,999.999, up to 3 decimal places are allowed. The default value will be blank(null). The value stored will be measured in KWh.
Measuring Capacity QMIN (A0112) (Q13)	An optional numerical data item that accepts numbers between the range of 0 to 999,999.999, up to 3 decimal places are allowed. Should not be available for standard jobs. The default value for QMIN is blank(null). The value stored will be measured in KWh. A warning message will pop up to the end user if they select a design with a Qmin that is higher than the Qmin indicated on the enquiry. It will say:

	Please note! The module you have selected has a minimum flow rate that is greater than the requirement input on the enquiry screen.
Load Control Type (Q13a)	Mandatory for all install and exchange job types(including standard), optional for all other job types. The default value will be blank(null). The user will be able to select one item from the following list: • Constant • On/Off • Modulating
Meter Size (Q14)	Only relevant for the Standard Install Job Type, an optional data item. If Qmax is empty then Meter Size must have a value selected. The user can select one item from the following list: • U16 • U25 • U40 • U65 • U100 • U160 • Other
Meter Type Existing(A0025) (Q15)	Mandatory for all job types except for Standard Install, Install, EMS, AMR, Other job types, optional for all other job types. The user is able to select one item from the following list: • D - Diaphragm (unknown material) • L - Leather • S - Synthetic • U - Ultrasonic • Z - Unknown • R - Rotary • T – Turbine The data item will be restricted to 8 characters in length.
Existing Meter Size (Q15)	Mandatory for all job types except for Standard Install, Install, EMS, AMR, Other job types, optional for all other job types. The user needs to select one from the following list: • U16

	• U25 • U40 • U65 • U100 • U160 • Rotary/Turbine 2” • Rotary/Turbine 3” • Rotary/Turbine 4” • Rotary/Turbine 6” • Other If other is selected then the job will be bespoke.
Existing Pressure Category(Q15)	Mandatory for all job types except for Standard Install, Install, EMS, AMR, Other job types, optional for all other job types. The user needs to select one from the following list: • LP • MP • IP • HP
Existing Asset Serial Number (A0022)	A 30 character alphanumerical data item that is Mandatory for the following job types: Exchange, Standard Exchange, Removal, Standard Removal, OFMAT, Alteration, EMS and AMR. The default value will be blank(null)
Existing Model Code/Number(A0083)	A 20 character alphanumerical data item that is optional for all data types, however it is not relevant to the 'install' or 'Standard Install' job types.
Market Sector Code(A0161)	An optional data item for all job types, defaulting to the value 'I'. The user can select one item from the following list: • I - Industrial and Commercial • D - Domestic
Other Information	A 250 character alphanumerical data item that is optional for all job types. In addition the facility to add relevant files to the enquiry will also be made available.

Appendix B: System Data

The system data descriptions provided in this appendix determine the information stored within webMIP for Meter Modules, Housing, Base and pricing elements. These elements will be controlled through the administration functions provided by webMIP.

B.1 Meter Modules

A meter module is the logical grouping of:

1. a meter to measure the flow of gas to a property;
2. a relief valve to protect the meter;
3. a slamshut valve to protect the property;
4. a regulator controlling the pressure of the gas flowing through the meter;
5. a filter to remove contaminants from the gas;
6. pipework connected to the inlet of the meter;
7. pipework connected to the outlet of the meter.

A meter module has the following attributes:

- module reference - the 'name' by which the module is referred to;
- service pressure - the pressure at which the gas arrives at the inlet of the module. This is often described as ranges (and subranges) of pressure:
  - LP - Low pressure;
  - MP - Medium pressure;
  - IP - Intermediate pressure;
  - HP - High pressure.
- inlet connection - the connection made with the the service pipe. This is described using the following attributes:
  - orientation - the lie of the connection e.g. 'horizontal left';
  - connection - a standard description of the connector used e.g. '(mm) PN16';
  - height - the position above the base at which the connection will be found;
  - size - the diameter of the connection;
- outlet connection - the connection made with the property. This is described using the following attributes:
  - orientation - the lie of the connection e.g. 'horizontal left';
  - connection - a standard description of the connector used e.g. '(mm) PN16';
  - height - the position above the base at which the connection will be found;
  - size - the diameter of the connection;
- dimensions - describing the physical size and positioning of the module using standard attributes of 'A' to 'H';
- weight - the weight of the module in kilograms;
- relief valve type - describes general characteristics of a relief valve;
- slamshut type - describes general characteristics of a slamshut valve;
- filter type - describes general characteristics of a filter;
- regulator type - describes general characteristics of a regulator;

A module can be requested with the following additional items:

- base - each module is associated with a single base;

- housing - each module is associated with a single housing;
- standard add-ons:
  - AMR - automatic meter reading device;
  - EMS - energy management system;
  - convertor - to display a live conversion on the module;
  - bypass - additional pipework that allows maintenance, replacement, etc. to take place on the meter without disrupting the flow of gas to the property.

A module can be associated with:

- a drawing - a graphical representation of the module;
- costs - the costs of buying and selling the module. This is described using the following attributes:
  - selling price - the price at which the module is sold;
  - delivery cost - the cost of delivery to the buyer;
  - region - the geographical region in which the costs are valid (different regions may have different pricing structures).

B.2 Meter

A meter is a component of the module used to measure the flow of gas to a property.
A meter has the following attributes:

- meter reference - the 'name' by which the meter is referred to;
- measuring capacity. This is described using the following attribute:
  - Qmax - the maximum volume of gas that can be passed through the meter per hour;
- dimensions - describing the physical size and positioning of the meter using standard attributes of 'A' to 'C' and 'Centres';
- weight - the weight of the meter in kilograms;
- connection type - a standard description of the type of the connector used e.g. 'PN16';
- meter type - a standard description of the method that the meter uses to measure flow e.g. 'Rotary'.

A meter can be associated with:

- a drawing - a graphical representation of the meter;
- costs - the costs of buying and selling the meter. This is described using the following attributes:
  - cost price - the price at which the meter is obtained;
  - delivery cost - the cost of delivery[2];
- a manufacturer - the organisation that constructed the meter.

B.3 Housing

A housing encases a module. It is an optionally requested item on an enquiry.
A housing has the following attributes:

- housing reference - the 'name' by which the housing is referred to;
- dimensions - describing the physical characteristics of the housing:
  - length;
  - width;
  - height;
  - weight;
- doors - the number of doors in the housing;

A housing can be associated with:

- a module - each module may be associated with a single housing;
- a drawing - a graphical representation of the housing;
- a manufacturer - the organisation that constructed the housing.
- costs - the costs of buying and selling the housing. This is described using the following attributes:
- cost price - the price at which the housing is obtained;
  - selling price - the price at which the housing is sold to the customer;
  - labour cost – the cost of installing the housing (fixed at 10% of the selling price);
  - delivery cost - the cost of delivery[2];

B.4 Base

A module is situated on a base (often a concrete slab}. It is an optionally requested item on an enquiry.
A base has the following attributes:

- base reference - the 'name' by which the base is referred to;
- dimensions - describing the physical characteristics of the base:
  - length;
  - width;
  - depth;
- standard dimensions 'A' to 'I'[3]

A base can be associated with:

- a module - each module may be associated with a single base;
- a drawing - a graphical representation of the base;
- costs - the costs of buying and selling the housing. This is described using the following attributes:
  - cost price - the price at which the housing is obtained;
  - selling price - the price at which the housing is sold to the customer;
  - delivery cost - the cost of delivery[62];

B.5 Drawing

A drawing is a graphical representation of a physical object. The system stores drawings so that they may be displayed as part of a reporting object.

The system associates drawings with the following:

- module;
- meter;
- housing;
- base.

B.6 Standard add-ons

A number of standard (non-meter module specific) items may be requested to be included with a meter module:

- AMR - automatic meter reading device;

- EMS - energy management system;
- Converter - to display a live conversion on the module;
- bypass - additional pipework that allows maintenance, replacement, etc. to take place on the meter without disrupting the flow of gas to the property.

The system does not record the attributes of these items other than the fixed costs for the AMR, EMS and convertor items.

B.7 Pricing Data

With the exception of Standard add-ons (see Appendix B.6) all cost/pricing information may be regional i.e. the price for an item may differ according to the region in which the installation will take place. Regions are based on post-codes[4]. Where there are no applicable regional costs associated with an item, a non-regional price will be used for that item.

Where the system selects a meter module or associated item and a required supplier price is missing, the system is unable to produce a quotation. The enquiry is treated as a request for a Manual Quote that requires completion by D&Q.

Where the system selects a meter module or associated item and a required network price is missing, the system will produce a quotation but there will be a manual process during 'job' entry onto SAP to determine the relevant network costs.

Bypass pricing is handled off-line.

B.8 Tripartite Agreement

The absence of a Tripartite Agreement prevents quotations being produced for specified combinations of Suppliers, job types and postcodes. The system will identify which Network the site address relates to by the supplied postcodes. When a supplier admin is set up by the webMIP administrator, the tripartite flag will either be 'yes' or 'no'. When a non - tripartite supplier code attempts to submit an enquiry for quotation of an install or exchange in a Tripartite only region - the system will reject and indicate that the customer will need to contact the regions asset owner for metering services

The system will record the Tripartite Agreement attributes as:

- Supplier – a reference to a Supplier that has not signed up to the Tripartite Agreement;
- Job Type - the Job Type(s) that the Supplier cannot be quoted for, one of:
  - Installation of new meters;
  - Request for OFGEM Meter Accuracy Test (OFMAT);
  - Exchange of meters;
  - Removal of meters, including 'Adversarial' removal of meters;
- Installation PostCode – the postcode where the installation is to take place.

B.9 Postcodes

The Post Codes will be loaded into the system as they currently relate to each network as they

appear in the SAP Rainbow system at the time of go-live. In the eventuality that an individual post-code changes to relate to a different network it will be manually updated in system by the System Administrator.

Appendix C: Security Check-lists

C.1 Physical Environment

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
1. Security Governance			
a	Is there an Information Security Policy ?		
b	Is this aligned with ISO 17799?		
c	Is there a documented risk assessment methodology deployed to assess security risks associated with new developments/infrastructure changes?		
d	Are measures in place to provide user awareness of the policy and controls for staff working in the Data Centre?		
e	Are regular security audits or penetration tests undertaken?		
f	Are these internal or external? If external, give details as to type of test, third party who carried out testing, summary of results?		
2.1 Physical - site			
a	Does the site appear to meet security requirements given the importance of the site (consider gates, fences, site access, etc.)?		
b	Is the site located away from obvious hazards, such as flooding, air strip or chemical plant?		
c	Are facilities used for National Grid segregated in a separate area? IF so, how is access controlled?		
2.2 Physical security - computer room			
a	Is the network equipment stored within a separate computer room?		
b	Is the computer room located away from water sources?		
c	Is the computer room located in a difficult to get to location (ie. above ground floor and away from the site perimeter)?		
d	Are measures in place to prevent equipment being visible form outside of the room.		
2.3 Physical - computer room access			
a	Does the room have a locked door?		
b	Is there adequate control over the allocation and circulation of keys, swipe cards or other access tokens?		

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
	Describe.		
c	Are only certain and authorised people allowed to approve distribution of keys or swipe cards?		
d	Is the list of personnel with keys or swipe cards formally reviewed on a regular basis? If so, how regularly?		
e	Are cleaning staff restricted from access to the room, and supervised?		
2.4 Physical - computer room envirnment			
a	Does the room have a fire detection system?		
b	Does the room have a fire suppression system?		
c	Does the room have a flood detection system?		
d	Does the room have a raised floor?		
e	Does the room have a temperature and humidity monitoring system?		
f	Does the room have air conditioning?		
g	Does the room have CCTV?		
h	Are materials that may be a fire hazard or contain hazardous material not stored inside of the computer room?		
i	Are the environmental measurements monitored?		
2.5 Physical - power supply			
a	Does the room have power a single computer from dual, independent panels?		
b	Does the room/computer have a UPS? If so, for how long?		
c	Does the room have a backup power generator? If so, for how long?		
d	Does the computer room have an emergency power cut off?		
e	Is the site supplied by power from different sub-stations?		
2.6 Physical - comms and cabling			
a	Are there multiple physical telecommunication lines into the computer room that are in separate ducts?		
b	Are only approved wireless LANs or other wireless devices in use at the site?		
c	Is all communication equipment housed in a suitable case or cabinet?		
d	Is all cabling housed in a protective covering?		

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
e	Is all cabling cleared labelled, with appropriate hazard and warning signs?		
2.8 Management			
a	Are maintenance schedules on key parts of the infrastructure adhered to (consider fire suppressions system, electrical and UPS batteries, cooling equipment)?		
b	Is the standard change control process used to cover changes to the infrastrcuture and configuration of firewalls, routers, etc?		
c	Is all equipment monitored for faults centrally?		
3. Personnel			
a	Are there clear guidelines for staff on use of IT systems as part of their T&Cs, confidentiality agreements, and a disciplinary process for breach of these?		
b	Is Screening of staff part of the recruitment process? If so, who does the background check?		
c	Are users trained in security requirements and procedures?		
d	Are there procedures for reporting security issues, risks and incidents?		
e	Are the same security controls applied to contractors and consultants?		
4. Change management			
a	How is the change control processed managed?		
b	What are the configuration management procedures for control of software versions through the build, test, and release process?		
c	Procedures are in place for the control of source libraries, development tools, and developed products?		
5. Operational management			
a	Detailed documented operating procedures exists?		
b	Is there a documented security incident response and escalation procedure?		
c	Are operator duties segregated for security purposes?		
d	Are any external management services or facilities employed?		
e	Are software licenses recorded and controlled?		
f	Up to date anti virus software is applied to all servers,		

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
	desktops and laptops, and at the perimeter? If so, provide details.		
g	What data and application back-up and restoration procedures exist?		
h	Are system and security logs regularly reviewed?		
i	What equipment disposal procedures exist?		
j	Are servers and other devices patched in a timely and regular manner? If so, what tools are used?		
k	What are the out-of-hours support arrangements?		
6. Logical access controls			
a	Is there a general policy or procedure governing network and server access rights?		
b	Are there procedures in place governing the use of privileged accounts, and are records maintained of privileged users?		
c	Are there procedures in place for the authorisation of users, maintenance of user records and deletion of user accounts?		
d	Is there a password policy and procedure? If so, does the policy meet up with at least three of the following:		
	Password minimum length of 8 characters		
	Password should be a mix of alpha and numeric characters		
	Password should be a mix of upper and lower case		
	Password should include a special symbol		
e	Passwords expire every 30 days		
f	All system users shall have a unique user identifier.		
g	User identifiers shall not provide any indication of the likely access facilities available to that user.		
h	Following 60 days of inactivity, the access rights of any user shall be disabled.		
i	Are there controls in place for access to different networks and network services?		
j	Are there any user authentication techniques employed other than Passwords and IDs (eg. Token based access)		
k	Is any use made of encryption or digital signatures?		
l	Are staff allowed work out of the office/Data Centre e.g., from home? If so, how is remote connections made?		

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
m	What are the controls on permitted network protocols and connection types?		
n	What controls are in place governing access to software applications?		
o	What are the controls to prevent unauthorised access to the network (eg. 3rd party laptop)?		
p	Automatically generated system logs shall be maintained to record security incidents.		
q	Event logs shall be protected from unauthorised review of their contents.		
r	Event logs shall include unauthorised access attempts, all privileged user activities, access to sensitive information such as password files.		
7. Network management			
a	Is the Data Centre's network physically separate from the main company's network?		
b	If not, is there some logical separation such as firewall? If so, please give as much detail as you can?		
c	From b, is there a formal firewall rule and change management process?		
d	From b, is there regular review of firewall rules?		
e	From b, is there regular penetration tests of these firewalls?		
f	Access by third parties shall only be authorised provided a business need has been identified.		
g	Security controls will be agreed and defined in the contract with the third party.		
h	Are Intruder Detection Systems (IDS) installed, and if so how are these monitored?		
8. Development and maintenance			
a	Is a standard project planning & development methodology used on the National Grid account?		
b	Duties are suitably segregated to ensure that the opportunity for unauthorised activities is reduced.		
c	Data entry, system administration, systems development/maintenance, change management and security administration are segregated.		
d	Are there procedures in place to include hardware and software security requirements in specification		

High level information security questionnaire			
	Question	**Y or N**	**Additional comment or supporting evidence**
	documents?		
e	Does system testing include security requirements - eg data validation, firewall functions and resilience?		
f	Access to program source libraries shall be controlled in a manner that is consistent with the business risks.		
g	Are there software change control processes for applications, operating systems and layered products on servers and network devices?		
h	What quality records are maintained of the overall development & maintenance processes?		
9. Business continuity and DR			
a	Has an assessment of business continuity and disaster risks been undertaken?		
b	Do business continuity plans and DR procedures exist? If so, can we have details.		
c	Business continuity and DR procedures are exercised regularly? If so, how often?		

C.2 Application Development

PROJECT:				
Information Security - technical checklist - controls for web applications				
		R	**A**	**G**
Administration				
1.1	Appropriate user and password procedures are in place for Helpdesk			
1.2	The system does not allow for password retrieval (i.e. passwords have to be reset)			
1.3	The system require some form of verification before resetting a password			
1.4	Users are educated on how to protect their account information			
1.5	Navigation around the application is easy			
1.6	Source code do not reveal inappropriate information			
1.7	Adequate system documentation around authenticationauthorisation and auditing are in place			
Authentication – “who can get in?”				
2.1	The system requires both a username and password			
2.2	The system allows for, encourage, or enforce strong passwords (e.g. minimum 6-8 characters)			
2.3	The system allows for password aging and enforce a password history (e.g.change every 30-90 dayshistory of 12)			
2.4	The system does not permit easily-guessed usernames and passwords (e.g.password cannot equal user id)			
2.5	The system does not allow the harvesting of usernames through the application			
2.6	Error messages do not provide too much information about usernames or passwords			
2.7	The system does not provide the last username that logged on i.e.the user has to re-type username			

PROJECT:				
Information Security - technical checklist - controls for web applications				
		R	**A**	**G**
2.8	Controls exists to prevent brute-force guessing of usernames or password			
2.9	The source code does not contain any hard-coded username or password checks			
2.10	Users cannot change their username			
2.11	Users can easily change their own passwords			
2.12	Users required to re-authenticate before changing a password			
2.13	The system assigns temporary initial passwords that are unique and not easy to guess			
2.14	There is no sharing of administrative user accounts and passwords			
2.15	There is no sharing of other accounts and passwords			
2.16	The system transmits user credentials over a secure channel			
2.17	Passwords are stored using a strong hashing algorithm			
2.18	Users cannot bypass authentication by accessing a module directly			
2.19	The system does not allow authentication to the Web server's operating system or network			
2.20	The system prevent account hopping (e.g. via URL)			
2.21	A third party cannot trick users into authenticating to fake login pages			
2.22	Users cannot customise their security options			
2.23	Users cannot revoke or delete accounts			
2.24	A hijacked cookie will not allow a user logon			
2.25	Sensitive information such as passwords is not stored in cookies			
2.26	Cookies have a reasonable expiration date			
2.27	Input field validation checks have been built in			
Authorisation – “what can they do?”				
3.1	Users have the option to log out of their session in a controlled manner			
3.2	The system destroy session tokens upon logging out or timing out			
3.3	Session expiration mechanisms are in place			
3.4	Users are grouped and have specific and restricted rights privileges			
3.5	Users assignment of groups and their roles have been formally documented and approved			
3.6	There are restrictions to the “back” and “forward” web buttons			
3.7	The “right click” functionality of the web browser is disabled			
Auditing – “what have they done?”				
4.1	Users get to see their account history			
4.2	Users can easily report security incidents			
4.3	All user activity is logged			
4.4	All key changes to system parameters and users are logged			
4.5	The above key changes and any unusual events are reviewed and followed up			
Availability				
5.1	Number of concurrent logins is restricted			
5.2	Reports queries or processes are properly queued and prioritised and assigned appropriate resources			

1 Composition of postcode to region still unknown.
1 (***Question 21,I&C to specify what the user is reminded about)
2 Is this the cost of delivery to NG Metering or cost of delivery to the Supplier?
3 Why are there two sets of dimensions?
4 Composition of postcode to region still unknown.