

UK Link Testing System and Procedures

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Development of this Document

1. This document, the UK Link Testing System and Procedures has been published to provide a framework to Users and Transporters in defining the scope of Industry Testing and User Testing.
2. This document shall be reviewed annually by the UK Link Committee and a recommendation made to the Uniform Network Code Committee whether changes are required to this document or not following such review. This document can only be modified in accordance with the requirements set out in paragraph 12 of Section V of the UNC Transportation Principal Document.
3. The Document Control Section of this document records changes, which have been made to the document. The document is published on the Joint Office of Gas Transporters website, www.gasgovernance.co.uk
4. The current live version of the UK Link Modification or Release Testing Approach Document and User Testing Service Request will be published on the Transporter Agency website. Where a revised version of these documents are proposed they will be issued to the UK Link Committee Distribution Lists held by the Transporter Agency. Following conclusion of a 10 day review cycle, the revised Templates will supersede the previous version unless representations to the contrary are received within this period. In such instances, these comments will be made available to the UK Link Committee for discussion.

1 INTRODUCTION

1.1 Purpose of this Document

This document defines the approach to be followed for the testing of changes to the UK Link Systems and User systems either as a result of a UK Link Modification or Release ('Industry Testing') or for specific Users to test their own systems ('User Testing') – such as new entrants or Users undertaking testing following changes to their systems or processes.

When UNC Modifications are considered the testing requirements must be considered so that any costing products such as Rough Order of Magnitudes can take account of such requirements. Following approval of UK Link Modifications it is expected that the Users and Transporters will define the testing requirements for each UK Link Modification or Release which will be approved at the UK Link Committee. Where there is a shortfall in the amount allocated for testing, this will be defined as a Class 3 UK Link Modification, which will require a UNC Modification in order to allocate such costs.

When a User wishes to undertake User Testing they must submit a User Testing Service Request which defines the scope of proposed testing, required data set and requested timescales. This will be responded to by Xoserve to confirm availability, scope and costs.

Stakeholders participating in Industry Testing or User Testing should complete the registration process and be aware of these guidelines set out in this approach document.

Industry testing will give Users the opportunity to test that changes to systems and processes have been implemented successfully.

1.2 Summary

The Modification Process, as defined in the UNC, facilitates the proposal, assessment and implementation of changes to the UNC. Such changes to the UNC must be reflected in the service agreements and computer systems that support the day to day operational aspects of the UNC requirements. Similarly changes to processes may give rise to changes to computer systems. The nature of some changes can be expected to impact the interactions between the central computer systems and those of participant companies. The UK Link System is defined in the UK Link Manual. Any changes to the specification of the System must be notified via a UK Link Modification. These processes are specified in Section U of the UNC. This document details the test service, that is similar in nature to the Transporter Agency production systems, which can be made available to increase the level of assurance, to individual companies, and to the industry as a whole.

The test service is expected to be utilised by Users so that they may get assurance that:

- any changes to the UK Link System as a result of a UK Link Modification or Release will successfully integrate with their systems or processes (i.e. Industry Testing), or that
- any changes that they have undertaken to their systems or processes will successfully interact with the UK Link System (i.e. User Testing).

The parties that may interact with such a testing environment are UNC parties or their permitted Agents. Dependent upon the need of the User the test service may operate with the same version of the application software that is on the production UK Link System or a version of the application code as specified – e.g. to test a UK Link Release.

The data available is intended to include live data from the UK Link System and some manufactured data in order that Change of Shipper events may be tested. Data principles are set out below.

The Test System supports a single testing instance. This instance will be reserved for Industry Testing in advance of UK Link Modifications but shall be available to other Users for User Testing at other times, subject to availability for informal and self-managed testing.

2 CONTEXT

A specification of the Test System is included within Section 3 of this document.

It is expected that the Test System will be used for the following types of testing:

- For structured testing of new releases of UK Link Systems
- To allow participants to test new versions of their software against the existing systems
- To allow participants to test scenarios or situations prior to their use in live;

This testing environment is not intended for performance testing. The volume of files sent in by market participants should be in proportion to their share of the production portfolio (by meter point) and excessive volumes should not be sent in as testing files.

This will be supported on a lower level of support than the production environment.

2.1 Industry Testing

Industry Testing Scope will be defined in the UK Link Modification or Release Testing Approach Document. This will be approved by the UK Link Committee. It is expected that the Committee will agree the processes and the file types impacted but not the proposed test cases. Users shall be responsible for defining the test cases which they will execute. It is expected that this will also include negative outcomes. The content of the UK Link Modification or Release Testing Approach Document is specified in Section 4.1.

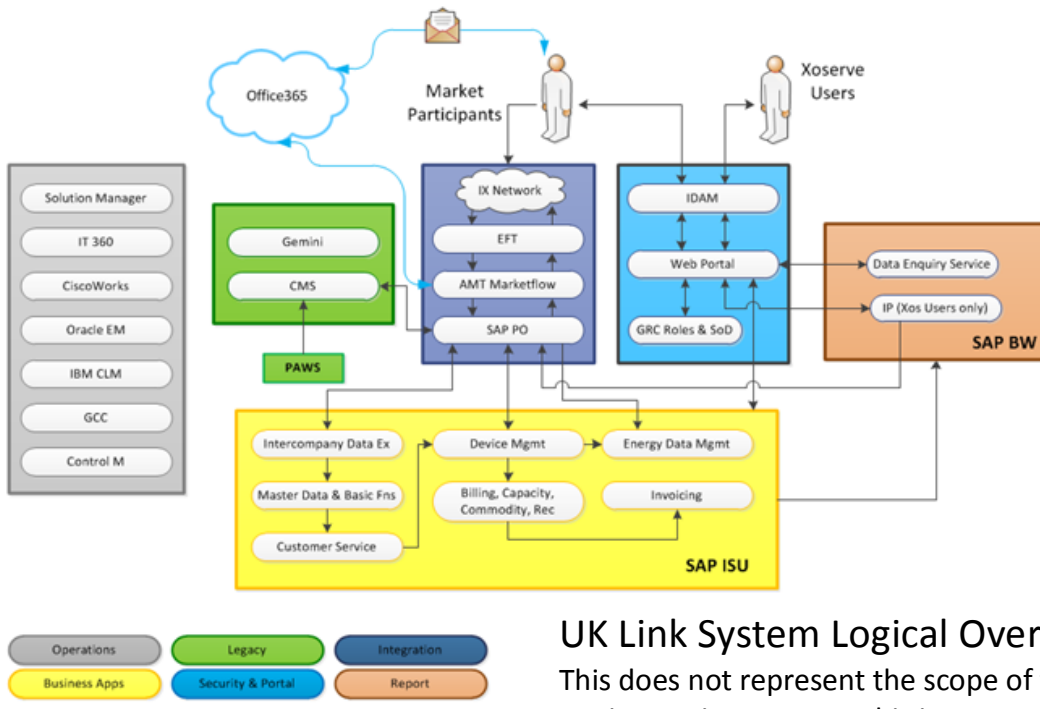
Any elements that have not been specified in the UK Link Modification or Release Testing Approach Document – such as the testing of processes - will not be supported during Industry Testing phases.

2.2 User Testing

Within User Testing periods Users may define their own test objectives and scope. This must be documented in advance between the User(s) and the Transporter Agency via the User Testing Service Request Process. The content of this document is specified in Section 4.2.

Any elements that have not been specified in the Service Request Process Document – such as the testing of processes and files that have not been specified - will not be supported during User Testing phases.

The logical appreciation of the end to end systems involved in System Integration is in Figure 1.



UK Link System Logical Overview

This does not represent the scope of the testing environments – this is set out in Section 3.1 of this document.

3 TEST SYSTEM SPECIFICATION

The following section defines the specification of the UK Link Testing System that may be utilised by Users in either Industry or User Testing. The subsequent sections of this document set out how Users define the 'Testing Scope' – i.e. what elements are included with the testing instances for a UK Link Modification or Release (Section 4.1) or User Testing (Section 4.2).

3.1 In Scope

Systems

Figure 2 provides an overview of systems which, dependant upon the agreed objectives of testing, can be included within the scope of Industry Testing or User Testing.

FIGURE 2 – LIST OF IN-SCOPE SYSTEMS

| SYSTEM |
|---------------------------|
| AMT Market flow |
| SAP ISU |
| UK Link Web Portal |
| Information Exchange (IX) |
| Office365 |

- The UK Link Committee shall define if any of the systems above do not need to be available for a period of Industry Testing in the UK Link Modification or Release Testing Approach Document.
- Users shall, in conjunction with the Transporter Agency, define which of the systems above are to be available for User Testing as part of the .User Testing Service Request Process.

3.2 Out of scope

- The following areas are out of scope for Industry or User Testing:
 - Any systems not referenced above.
 - Excluded UK Link Systems include:
 - Active Notification System
 - Gemini.
 - Non UK Link Systems are excluded from this service, such systems include:
 - Data Enquiry Service
 - Contact Management Service
 - Provision of advice or remedies relating to systems owned or managed by external parties.
 - Testing of Service desk and service management activities;
 - Archiving of data and files;
 - Performance testing – this will be carried out internally by Xoserve;
 - Volumetric testing;

As a result, these areas are deemed out of scope for Industry and User Testing.

- The following areas are out of scope of Industry Testing:
 - Any processes that are not impacted by the proposed UK Link Modification(s) unless specifically defined by the UK Link Committee in the UK Link Modification or Release Testing Approach Document.
 - Any other system and its processes that do not require modification, unless specified as being required in the UK Link Modification or Release Testing Approach Document. Any testing of processes will not be supported.
- The following areas are out of scope of User Testing:
 - Any processes not defined by the User in the User Testing Service Request, and agreed with Xoserve.

3.3 System Specification

- Provision of this testing environment shall not be prioritised over production tasks. i.e. this will be a lower priority resolution in the event of failure.
- Resilience of the testing systems shall not be comparable to the Production systems.
 - System Recovery Objectives shall be on a reasonable endeavours basis, but in the event of Production and Testing Environment failure recovery shall not start until the Production environment has been recovered.
 - Data Recovery Objective will be up to five Business Days – i.e. testing data may be lost from the previous five Business Days in the event of failure.
- Performance of the testing system is not expected to match Production – i.e. response times will be greater than Production in the testing environment.
- Capacity of the testing system is not expected to match Production – i.e. the size of files / number of transactions are reduced in comparison to the Production environment.
- The Test System shall have shared components with the UK Link Production System. The shared components are:
 - a. UK Link (I'X) Network

3.4 Availability

- The environment shall be supported within business hours 09:00 – 17:00hrs on Business Days when the Testing Service is being utilised.
- Out of hours support may be provided on request, but this would be chargeable to the User requesting it and would be provided only with agreement by Xoserve.
- A notice period [of 5 business days] will be provided for planned outages when this environment is not available during working hours.
- The environment may be available to Users outside of office hours, but Users should not rely on this service being available nor will notice of outage outside of working hours be published.

3.5 Code Versioning

- The Test System supports a single testing instance. For example, it is expected that:
 - a. during User Testing this shall reflect the version of Code that is in Production; whereas,

- b. for a period of Industry Testing it is expected that the code shall reflect the proposed version of the Code to be deployed to Production at the Implementation Date of the UK Link Modification or Release.

3.6 Functionality – Available Processes

- It is expected that this environment will have the capability to support the processes conducted on the UK Link System (excluding Gemini) – i.e. is a full scale functional test environment. In the Testing Scope Users will need to specify the testing that they plan to carry out so that the test environment can reflect the necessary functionality. Not all aspects of the environment will be supported and processing may not be performed unless a process is defined within scope of testing.
- Any production batch of an in scope process must run at least once within the period that the production frequency would dictate on the testing environment unless notified to the contrary. E.g. a daily (or more frequent batch process) must run at least once during the working day, a monthly file must run (at least) once a month. If in scope processes rely upon ad hoc or periodic batches these must be identified in the request and will be run at least once within the testing period.
- For the processes defined in the Testing Scope, unless agreed to the contrary, the environment should reflect the 'normal' operation as much as possible – for example, if an invoicing run occurs on a given business day within the month this should happen on this same equivalent day in the test environment.
- Specific events will be suspended if these are not specified in the Testing Scope – e.g. invoices will not be generated unless invoice generation is defined.

3.7 Data – General / Industry Testing

- This environment will not be a full size data equivalent of UK Link Production.
- Data populated will align to recognised UK Link allowable values .
- The environment will have the capability to be populated with data cuts from UK Link Production and a capability to use manufactured data. The environment will have the capability to have a refresh at the start of a testing phase, and as agreed with the testing User(s). Any refresh requirements must be specified as defined in the Testing Scope.
- Where required in the Testing Scope the Test System should be populated with standing data – this data will be defined but is expected to include data available in advance such as End User Category / Annual Load Profiles / Daily Adjustment Factors.
- Where data is required to be populated – e.g. Calorific Values, Weather Data – the data used to populate the testing environment should be published separately if this does not reflect the Production / Live data.
- It is not expected that this environment will need to be maintained with parallel data to UK Link Systems other than via these specified refreshes.
- The effective date of the data cut must be provided to Users, and where required agreed in advance with the User so that Users may align data cut dates.
- Users will be required to confirm that data provided will only be used for testing purposes and that relevant controls are in place. Users will be required to delete data after completion of testing.

3.8 File Transfer Principles / Interfaces

File transfer principles are defined in the UK Link Manual Supplementary Document – UK Link File Transfer Guide. The UK Link Overview Manual specifies how Code Communications are passed. Where possible these communication protocols should be followed.

- Interfaces should be passed by their 'normal' method (i.e. as defined in the UK Link Manual) unless agreed to the contrary in the Testing Scope. E.g. Batch files should be submitted via I'X and routed to the test environment.
- Testing file names received should be unique by User by file type. Any test files via the UK Link Network **must** be prefixed by '**xN**' to denote that it is a test file and to avoid confusing with production files – where x is a character specified e.g. 'T'.
- If defined in the Testing Scope, the UK Link portal will be available.

4 TESTING DEFINITION

4.1 Industry Testing Definition

The following must be agreed by the UK Link Committee to define the scope of Industry Testing. The objectives must be documented in a UK Link Modification Testing Approach or, in the case of a UK Link Release, a UK Link Release Testing Approach document.

This UK Link Modification or Release Testing Approach document must be approved by the UK Link Committee. The testing approach may be approved separate to the UK Link Modification itself.

The UK Link Modification or Release Testing Approach must be approved [6 months] in advance of the Implementation Date of the UK Link Modification or Release unless agreed otherwise by the UK Link Committee.

4.1.1 Systems

The UK Link Committee shall define if any of the systems above do not need to be available for a period of Industry Testing.

4.1.2 Testing Duration and Plan

The UK Link Modification or Release Testing Approach must define the test duration and planned testing execution. In the absence of a specific plan when tests will be undertaken it is assumed that testing will be conducted on a flat profile – i.e. the same number of test cases executed every day.

Any retesting by Users must be planned to reduce the risk of back loading of test cases.

4.1.3 Availability

Any differences from those specified in Section 3.3 must be defined in the UK Link Modification or Release Testing Approach Document.

4.1.4 Software Versions

For Industry Testing it is expected that the software version would be the planned production code following implementation of the UK Link Modification or Release.

4.1.5 Process Definition

A full list of any processes and file types, including the required variants, will be specified for each phase of Testing in the UK Link Modification or Release Testing Approach Document..

It should be noted that not all processes will apply to all organisations. Users may decide which processes of those in scope that they will test.

Where a process is considered relevant Users are able to test business scenarios valid to these processes –

All other processes will not be supported.

Where a process requires the Transporter Agency's initiation or manual intervention, agreement must be reached in advance of testing to ensure that this action is appropriately defined and agreed. The process for doing this will require definition in the UK Link Modification or Release Testing Approach Document and explicit agreement with the Transporter Agency.

4.2 Test Data Definition

The testing data principles are defined below, but the UK Link Modification or Release Testing Approach Document must specify any particular requirements, for example:

- Whether 'manufactured data' population needs to be expanded.
- Whether specific data / scenarios need to be expanded – e.g. additional Prime and Sub Supply Meter Points, manufacture of Class 2 Supply Meter Points, additional iGT data.

It is expected that a population of live data will be available in the testing environment. Normal rules related to provision of this data to the non Registered User applies. Live data may only be disclosed in line with that of the production environment. A portfolio of manufactured data will be provided for the purposes of testing the Supply Point Administration processes.

Where live data is used in the testing environment the UK Link Modification or Release Testing Approach Document must specify a 'Target Data Refresh Date' where the data will be extracted from the production system. This may be inserted as a statement – e.g. 'one month from testing start date'. In such circumstances the Transporter Agency shall confirm the actual planned extract date one month in advance of this being undertaken.

4.2.1 Data Refreshes

In order to ensure that all parties use the same data and enable full testing to take place, the Transporter Agency will be carrying out appropriate data cuts. Organisations carrying out their own data cut need to do so under the same conditions and at the same time in order to minimise data defects. Any specific data refresh requirements must be stated in the UK Link Modification or Release Testing Approach Document.

4.2.2 Manufactured Data Portfolio

A population of data should be manufactured for Supply Meter Points in iGTs Networks as well as the GT Networks.

The Manufactured Data portfolio will be published to Users. It will be refreshed in advance of Industry Testing.

4.2.3 File Transfer Principles / Interfaces

The UK Link Modification or Release Testing Approach Document will specify whether these protocols will be applied or whether alternative methods shall be employed – e.g. a UK Link Batch File being passed via email for the purposes of testing.

The UK Link Modification or Release Testing Approach Document will specify how any files being conveyed by means other than the UK Link Network (I'X) will be named. Any test files via the UK Link Network **must** be prefixed by 'xN' to denote that it is a test file and to avoid confusing with production files – where x is a character specified e.g. 'T'.

4.2.4 Multi Party Testing / Transporter Agency Activity

Functional testing across multi party testing may be specified in the UK Link Modification or Release Testing Approach Document. Such parties include Shipper Users, iGTs, GTs, DMSPs and the Transporter Agency.

Where a party is requested, by the UK Link Committee, to participate they must approve the UK Link Modification or Release Testing Approach Document. Should a party NOT wish to participate options must be considered by participating parties to simulate their activities.

If the Transporter Agency need to perform specific tasks – e.g. perform the role of a UK Link User, or another party – this must be specified in the UK Link Modification or Release Testing Approach Document.

4.2.5 Industry Partnering

In order to ensure that there is balanced testing across the market, partnering could be considered for Users. This can be used for all multi party testing and not solely for the use of transfer of ownership.

If this approach is proposed for a UK Link Modification or Release it must be specified in the relevant Testing Approach document approved at UK Link Committee.

If the Testing Approach requires that Users arrange testing with other Users (either for an individual test or for all testing) and Users do not participate with one another this will be escalated to the UK Link Committee. Users will be identified.

The UK Link Modification or Release Testing Approach document will specify the timeline that Users must agree scope of partnered testing, the relevant data

Partners will need to plan, co-ordinate and organise their own planning and communications and the Transporter Agency will not be part of the bilateral discussions (unless specific part of the process). If the Transporter Agency is required in this process this must be stated in the UK Link Modification or Release Testing Approach document.

4.2.6 Support Schedule

All activity throughout Industry Testing will take place in “real time” and there will be no accelerated timelines, therefore, it is essential that all parties understand the lifecycle and requirements to ensure that full testing can take place. The processes / functional areas within scope of testing will be defined for each testing instance as defined in the UK Link Modification or Release Test Approach Document. Based upon the specified processes the Transporter Agency will arrange for business and technical resources to be available.

4.2.7 Reporting

No general reporting requirements are identified.

The UK Link Modification or Release Testing Approach Document will define the progress reporting planned, if required. This must specify the reporting frequency and what is required in the report – such as planned vs actual testing completed¹, defects raised, processes tested.

If requested in the Testing Approach document defect details, such as count, status, severity and process-related impacts will be documented and shared with the stakeholders.

- Any reporting requirements must be specified in the UK Link Modification or Release Test Approach Document along with the required frequency. Examples of reporting include:
 - triage / progress calls
 - written progress reports

¹ Users would need to provide report their planned vs actual numbers for collation and publication.

4.3 User Testing Definition

This test environment will be prioritised for the purposes of Industry Testing over User Testing. The Test System may not be available to Users due to technical reasons – e.g. planned maintenance or software or data refresh. The Transporter Agency may also utilise this environment. Outside of these times the Test System will be available to Users for participant focused testing. The booking process will ensure that no one, or group of, Users exploit use of the system to the detriment of others.

The most complex aspect of the Test System is the test data and as such is likely to be the area that imposes the most restrictions on Users. Such restrictions might be in the form of the type of data available and, therefore, the nature of testing possible. Similarly the data set up required by one group of Users might not be consistent with the data set-up preferred by another user or group of Users.

The number of Users that may concurrently use the service will depend on:

- The nature and complexity of the testing activities each User wishes to undertake
- The effort required for data set-up in advance of testing
- The availability of the testing environment – either due to other planned testing, including Industry Testing, and maintenance required during any given test Slot / week.

Limits on the number of simultaneous Users wanting to undertake testing in the Test System may be imposed from time to time. These limits will only be imposed for practical reasons. This cap will be kept under review following operational experience.

Detailed descriptions of the nature of testing to be undertaken and the flows expected to be used will be defined within the User Testing Service Request.

This process will be subject to the User Testing Service Request Process between the relevant User(s) and the Transporter Agency. The User Testing Service Request must specify:

- System Scope - Users shall, in conjunction with the Transporter Agency, define which of the systems above are to be available for User Testing as part of the .User Testing Service Request Process.
- Availability
- Test Duration and Plan
- Code Versioning. For User Testing it is expected that this would normally be the current version of the production code. A User may specify an alternative version if required. Where the Transporter Agency are unable to fulfil such a request the reasons for doing so must be provided to the User(s).
- Functionality - Process Definition
- Test Data Definition.
- File Transfer Mechanism / Interfaces
- Activities to be completed by the Transporter Agency / Alternative User participation.
- File Transfer Protocol.
- Reporting

Once booking request is received the Transporter Agency will confirm that the booking slot can be accommodated and send a confirmation to the User making the request.

At least 5 Working Days before the first test slot the User will be contacted to confirm connections to the system.

4.3.1 Reporting – User Testing

For assessment of utilisation, reporting on periods of utilisation shall be reported to UK Link Committee upon request, but no more frequently than quarterly. This will not disclose the identity of the User, nor the nature of their testing.

Where the Transporter Agency has utilised the environment for own use – e.g. for specific testing – and this has meant that Users requests have had to be rejected, this shall be reported to UK Link Committee.

5 REGISTRATION PROCESS

Prior to taking part in Industry Testing any stakeholder wishing to participate needs to register their interest as part of the UK Link Modification or Release Testing Approach Document approval cycle. The User must respond to uklink@xoserve.com when the document is issued for review.

Registration must be completed a minimum of one month before the testing commencement date.

Information required at this point includes:

- Name of organisation.
- Primary and secondary contacts – including full name, telephone and email contact details.
- Email addresses to be used in the event of issue of test Code Communications via email.
- Confirmation of the intention to participate; and any change in stakeholder registration details should be sent to uklink@xoserve.com.

6 DEFECT AND QUERY MANAGEMENT

During Industry Testing, Users can report any suspected defect or query to the Transporter Agency via the processes detailed below.

The UK Link Modification or Release Testing Approach will document any escalation procedures, for example the Transporter Agency will contact Primary and Secondary registered users, by email, if there is an issue affecting all participants.

6.1 Defect management process

- In order to assist in fast and effective resolution of the defect, supporting evidence for each defect may need to be provided, as documented in the UK Link Modification or Release Testing Approach. This may include:
 - Replication steps;
 - Screenshots;
 - Copy of the file; and
 - Test data.

Details of how to provide this information will be provided in the UK Link Modification or Release Testing Approach. A standard template will also be provided to all primary & secondary contacts as per the attached.

The table below provides a description of the four defect priorities. The target resolution time will be defined in the UK Link Modification or Release Testing Approach.

FIGURE 3 – DEFECT PRIORITIES

| Severity | Description | Resolution Time |
|---------------------|--|-----------------|
| P1 - Critical | A failure preventing any testing or usage of the system. Example: Entire Application System / Servers unavailability. | TBC |
| P2 - High | A failure preventing testing or usage of a significant part of the system or for which no workaround exists. Example: (a) Web/portal accessibility is entirely affected and there is no workaround for that process via files. (b) Transfer of ownership process is affected due to a code/data issue and there is no workaround via File or web. | TBC |
| P3 - Medium | A failure affecting crucial system functions but for which a workaround exists, enabling testing and usage of the system to continue. Example: File process activity for read upload is impacted via file process, but there is a workaround with Web portals. | TBC |
| P4 - Low / Cosmetic | A failure, which does not seriously impact functionality and testing/usage of the system can continue; or an error that causes annoyance or a documentation problem with little impact on testing or usage of the system. Example (Low): Failure of a particular batch process which is not impacting the execution of other files related to that process and any queries received from shippers on the data/functionality issues in Market trials phase. Also new user access creation/reset. Example (Cosmetic): Query received from Stakeholders on documentation. | TBC |

6.2 Queries

A query can be any request for information or clarification of understanding.

Where such a process is required this will be defined in the UK Link Modification or Release Testing Approach document. This will provide the relevant contact details and an outline of the proposed process.

6.3 Defect and Query Reporting

Defect reporting processes will be defined in the UK Link Modification or Release Testing Approach document.

7 USER TESTING PROVISIONS AND RESTRICTIONS

The User Testing service will be subject to contract between the User and the Transporter Agency. Users will be required to agree requirements with the Transporter Agency. These requirements will form the basis of the User Testing Scope.

The User Testing service will be booked on a first come, first served basis. An alternative date will be suggested if the requested date is unavailable.

It should be noted that it is reasonable to expect periods when the Test System will not be available due to technical reasons. Re-scheduling of bookings will be required following such periods. Where possible these will be factored into the schedule of agreed bookings.

Requests for access to the Test System should be for half days, with a minimum of 1 and a maximum of 10, for any one company, in any given week. If a User is partnering with a User for the purposes of assisting in testing this must be identified in the Service Request.

The booking arrangements will be kept under review by The Transporter Agency following operational practice and modified in light of the experience gained in the way the Test System is used.

Test Slots are booked at The Transporter Agency's absolute discretion. The Transporter Agency reserves the right to refuse the User a Test Slot at any time and for any reason. The Transporter Agency reserves the right to cancel Test Slots at any time and for any reason.

A Test Slot cost recovery fee will be charged, for each Test Slot, and invoiced to the User. Additional fees as encountered by the Transporter Agency shall be identified and chargeable to the User – e.g. data preparation or refreshes.

The Transporter Agency shall not be responsible for defining or managing the Specified Tests, or checking the results.

The Transporter Agency accepts no responsibility for the User's testing or the results of such testing.

The Transporter Agency makes no guarantee that the UK Link Systems in use by the Test systems shall mirror the UNC Central Systems in use in the live environment, both in terms of the base data and the versions of the software systems. However, The Transporter Agency shall attempt to keep the User informed of such variations.

By requesting a Test Slot and subsequently receiving a Test Slot confirmation the User accepts that it will be liable for the prevailing Test System Charges as endorsed by the UNC Committee and any additional charges reasonably incurred to meet requirements specified in the User Testing Service Request.

The User accepts that use of the Test System is restricted only to the Specified Testing during an agreed Test Slot. Any further testing must be agreed with The Transporter Agency prior to use.

The Transporter Agency reserves the right to place further formal constraints on the use of the Test System prior to or during any Test Slot. These constraints may be varied upon instruction from The Transporter Agency to the User at any time. However, notwithstanding any such constraints, the Specified Tests carried out by the User during its Test Slot shall be at the discretion of the User.

The Transporter Agency reserves the right to monitor the User's activities at any time during a Test Slot.

The Transporter Agency reserves the right to restrict the availability of Test Data to the User.

The User accepts that limited support resources are available to support the Test System and such resources may be constrained from time to time.

Whilst a number of safeguards are in place to separate test flows from live it is the Users responsibility to ensure that these are employed correctly to prevent test data from entering the live service and similarly to prevent live data from entering the Test System.

The User accepts that they must disconnect from the Test System.

8 DOCUMENT HISTORY

Document Control

| Version | Status | Date | Author(s) | Summary of Changes |
|---------|--------|-----------|------------|---|
| 1.0 | Draft | July 2016 | D. Addison | Initial version – output from Modification 0531 |
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