Smart Metering Implementation Programme

Testing Issue Resolution Process

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Document Location

The source of this printed document can be found in Smart DCC's Programme Management Office, or with the author if in an unapproved status. Once approved, it will be published on the DCC website.

Revision History

Revision Number	Revision Date	Summary of Changes	Name	Changes Marked
V0.1	15/6/2015	Initial Draft based on discussions with DECC & SECAS	Jane Eccles / Gina Dover	-
V0.2	4/7/2015	Modified with comments from DECC	Jane Eccles	-
V0.3	14/9/2015	Modified with comments from industry	Jane Eccles	-
V1.0	15/9/2015	Updated following internal review	Phillip Twiddy	-
V1.1	20/10/2015	Modified to fit in with removal of SREPT to a separate process	Anthony Dent	Yes
V1.2	27/10/2015	Updated following internal review	Anthony Dent	Yes
V1.3	12/02/2018	Updated following internal review	Alan Simmons	Yes
V1.4	12/05/2018	Updated for SMETS1 & Release 2.0	Alan Simmons	-

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Distribution

This document will be available on the DCC Website and distributed to:

Name	Title & Organisation	Release Date	Version
Jill Ashby	For publication on SEC Website		

Associated Documents

This document is associated with the following other documents:

Abbreviation	Title & Reporter's Reference	Source	Release Date	Version
	Test Management Tool User Guide	DCC – Test Assurance Team		
	Redaction & Publication Process	DCC – Test Assurance Team		

Related Documents

Document	Version	Author	Date
Joint Test Strategy	V3.5	DSP	
Smart Energy Code	V4.3	DECC	July 2015
SREPT Issue Resolution Process	V1.0	DCC	October 2015
UEPT EtoE Testing Triage Process Checklist	V1.0	DCC	May 2016

Contents

1 Introduction

1.1 Purpose

The DCC is required to publish a Testing Issue Resolution Process in accordance with the requirements set out in Section H 14.37 of the Smart Energy Code (SEC).

The purpose of the Testing Issue Resolution Process is to support the timely and efficient identification, triage and resolution of Testing Issues. This includes the process for referring Testing Issues where the Testing Participant disagrees with the outcome of the issue resolution process.

1.2 Scope

The document sets out the way Testing Issues[1] that are discovered during the following testing stages can be raised to the DCC and the process by which they will be resolved by the DCC:

- Systems Integration Testing & Device Integration Testing: in respect of Registration Data Providers and participating Device manufacturers;

- Entry Process Testing: UEPT, regardless of the test stage within which the tests are undertaken (note that Testing Issue resolution in SREPT is covered by a separate document: SREPT Issue Resolution Process);

- Interface Testing: for those Parties undertaking additional tests with the DCC during this test stage;

- Device & User System Testing: during the End-to-End Testing Stage (in both UIT-A and UIT-B);

- GFI (GIT for Industry) Testing; and

- Pre-UEPT.

This document also sets out the way Testing Issues can be referred (escalated for further consideration) if the Testing Participant disagrees with the outcome of any stage in the Testing Issue Resolution Process.

Testing Issues may be raised by any Testing Participant on the condition that the Testing Participant complies with the provisions set out in this document and within the SEC.[2]

Access to the DSP-hosted Test Management Tool will be provided to each Testing Participant for the recording and management of all Testing Issues arising on the DCC systems during each of the above test stages, with the following exceptions:

- GFI Testing;

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[1] The SEC refers to testing defects as testing issues. The terms issue and defect are interchangeable in the context of this document.

[2] In the event of any dispute on the process to be followed, the provisions of the SEC take precedence over the provisions set out in this document.

- Entry Process Testing: SREPT where Testing Participants will use the DCC Test Management Tool;

- Testing undertaken by any Testing Participant that does not have a DCC Gateway Connection.   The DSP hosted Test Management Tool is located within the DSP Systems Integration Test (SIT) environment and can only be accessed via a DCC Gateway Connection; and

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Section 3 of this document describes the way Testing Issues should be raised in respect of the GFI Testing.

<u>Notes</u>

1. **It is important to note that the process described in this document must not be used for issues (termed 'Incidents') that are identified during live operation on the DCC's live production environment. These Incidents must be raised with the DCC Service Desk using the DCC Incident Management Process.**

1.3 Definition of Testing Issue

The SEC defines a Testing Issue, in respect of any tests, as:

(a) Anything that is preventing the execution of the tests; or

(b) Once commenced or executed, the test has an unexpected or unexplained outcome or response.

A Testing Issue is raised in respect of any of the following:

- Incomplete or inaccurate test scripts, data or expected results;

- Errors in the performance of test stubs and emulators;

- Errors in the way systems (or system components) operate (both functionally and non-functionally);

- Errors in the way systems have been integrated and/or communications between these systems.

2   Testing Issue Resolution Process

This section provides an overview of the Testing Issue Resolution Process and sets out:

a)   the way Testing Issues can be raised;

b)   the way triage is undertaken by the Systems Integrator and DCC;

c)   referral of Testing Issues to the DCC;

d)   further referral of Testing Issues to the Secretary of State[3] or SEC Panel.

The process has been defined in accordance with Section H14.37 of the Smart Energy Code.

2.1   Raising Testing Issues

The way Testing Issues are raised will vary, depending upon the category of Testing Participant and the type of testing that is undertaken.

2.1.1   Raising Testing Issues – SEC Party

Prior to raising a Testing Issue the Testing Participant must first take all reasonable steps to determine if the issue has been caused by a problem with its own test artefacts, systems or equipment (including Devices). Testing Issues arising on a Testing Participants own systems (back office systems/devices) are not the responsibility of the DCC to rectify and should be raised within the Testing Participants own test/defect management system.

Testing Issues must be raised in the DCC provided Test Management Tool if the Testing Participant considers that the Testing Issue has been caused by a defect (or other error) with the DCC systems or within Test Data or SMKI Test Certificates provided by the DCC. The same Test Management Tool will be used for both UIT environments. The Testing Participant should include an explanation of the reasons why it believes that the error resides on the DCC systems and evidence of any investigation/analysis that it has undertaken. The Systems Integrator (SI) will request further information as necessary to support the triage process and agree the level of support that it requires from the Testing Participant to support resolution of the Testing Issue.

A Test Management Tool User Guide will be provided on the DCC website and training will be provided to each Testing Participant, as necessary.

2.1.2   Raising Testing Issues – Non-Gateway Users / Device Manufacturer during SIT.

Testing Issues which are identified by Testing Participants that are not using a User Gateway Connection, or by Device Manufacturers during SIT, should be raised to the DCC via e: mail (containing the subject description 'Test Issue Non-SEC Party/Non-Gateway User') to the following e: mail address: dspsidefectteam@cgi.com. The Testing Issue will only be accepted by the DCC if it is provided within the excel spreadsheet template that is set out in Section 12, Appendix 2: Testing Issue Referral Template of this document, which may be modified from time to time.

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[3] The Secretary of State has provided guidance explaining the circumstances in which the Secretary of State will consider matters relating to Testing Issues.

DCC will acknowledge receipt of the Testing Issue within 1 working day and ensure that the Testing Issue is provided within the correct format, upload the Testing Issue within the DSP hosted Test Management Tool for triage (or send to the DSP via e:mail, such that the DSP can upload the information into the Test Management Tool) and provide the Testing Issue identifier to the Testing Participant. Testing Issues that are not provided within the specified format, or if the necessary fields are not completed, will be rejected.

2.2 Triage – SIT, DIT & Interface Testing

The SI is responsible for triage of all Testing Issues raised within the Systems Integration Testing, Device Integration Testing   and User Entry Process Testing Stages. Note; SMKI & Repository Entry Process Testing is excluded from this as triage for this testing is undertaken by the DCC. SMKI & Repository Entry Process Testing issues will be raised, triaged and managed in accordance with the SREPT Issue Resolution Process (refer to separate document).

For relevant testing stages the SI will acknowledge receipt of issues [in accordance with the SLAs set out in Section 8.3 of this document] and will then:

- confirm that the Testing Issue is valid;

- confirm the severity and priority of the Testing Issue (modifying the severity and priority rating proposed by the Testing Participant as deemed appropriate. The Testing Participant will be notified where such changes are made, with justification, and, where it disagrees with the Systems Integrators view, can refer the matter to the Issue Resolution Board);

- determine if an equivalent (or similar) Testing Issue has been raised;

- determine the DCC eco-system component upon which the Testing Issue has arisen; and

- allocate the Testing Issue to the relevant Service Provider/Testing Participant for resolution.

The Systems Integrator will agree the level of support that is required from the raiser of the Testing Issue during the triage process, which may include attendance at a Triage Meeting.

Communication with a Testing Participant regarding the triage and resolution of Testing Issues will be provided [in accordance with the SLAs set out in Section 8.3 of this document].

The status of Testing Issues can be tracked by the Testing Participant and DCC via the Test Management Tool (the DCC will provide status reports upon request to Testing Participants that do not have a DCC User Gateway Connection). Note: each Testing Participant will only have visibility of the issues that it has raised – it will not be able to view the Testing Issues that have been raised by other Testing Participants.

On a daily basis, the SI will provide a report to the DCC containing all Testing Issues raised during the day by Testing Stage/Phase including: severity, priority, Testing Participant id, DCC system component impacted, estimated rectification timescales and results of rectification activity.

On a weekly basis the SI will provide the same information to the DCC on a cumulative basis for the Test Phase/Stage to date, including an aged Testing Issue report (setting out the

timescales within which Testing Issues have been rectified) and the number of closed and open Testing Issues during the period.

2.2.1   Triage – End to End Testing & Enduring Testing Stage

The DSP will continue to host the Testing Issue Management Tool for the duration of the End-to-End Testing Stage. The SI is responsible for triage of all Testing Issues arising during the End-to-End Testing Stage, including: User Entry Process Testing (which is undertaken during the End to End Testing Stage), SMKI & Repository Entry Process Testing (which is undertaken during the End to End Testing Stage), Device Testing, User System Testing and Testing of new releases of DCC systems. (Note: This document will be revised to support the Enduring Testing Stage and published on the DCC website at least 3 months prior to the closure of the End-to-End Testing Stage. The document will also be revised and republished in advance of the End-to-End Testing stage to consider experience obtained during the SIT and SRT testing stages). The DCC has produced a supplementary document (UEPT EtoE Testing Triage Process Checklist) to describe the triage process in more detail, including the re-running of a Service Request as part of the triage of Testing Issues raised during UEPT and End-to-End Testing (this is not necessary where the test has been run in a Remote Test Lab using an Instrumented Test Communications Hub (ITCH) and logs were captured when the Service Request was run).

Testing on SMETS2 devices can be done across the two UIT environments once Release 2 goes live, UIT-A and UIT-B. UIT-A will remain on R1.4 code and UIT-B will have the uplifted Release 2 code base. As UIT-B contains the same R1.4 code as UIT-A it is anticipated that a defect found in UIT-A will also be found in UIT-B and vice versa (excluding R2 functionality). Testing on SMETS1 devices will initially be done in UIT-B until such times as the UIT-A environment is uplifted with the latest version of UIT-B code.

Where a record is raised in the Testing Issue Management Tool for a defect identified in UIT-A, the triage team will determine whether the issue impacts UIT-B. If the code is identical in UIT-B a ticket will be raised for UIT-B and classed as a duplicate. If the code in UIT-B is not identical a new defect will be raised for the issue in UIT-B and this item will have its own triage activity.

The DCC will acknowledge receipt of all issues [in accordance with the SLAs set out in Section 8.3 of this document] and will then:

- confirm that the Testing Issue is valid;
- confirm the severity and priority of the Testing Issue (modifying the severity rating proposed by the Testing Participant as deemed appropriate);
- confirm the priority of the issue;
- determine if an equivalent (or similar) Testing Issue (or Issue Resolution Proposal (IRP)) has been raised;
- identify the DCC eco-system component upon which the Testing Issue has arisen; and
- allocate the Testing Issue to the relevant Service Provider for resolution.

The DCC will agree the level of support that is required from the raiser of the Testing Issue during the triage process, which may include attendance at a Triage Meeting.

Communication with a Testing Participant regarding the triage and resolution of Testing Issues will be provided [in accordance with the SLAs set out in Section 8.3 of this document].

The status of Testing Issues can be tracked by the Testing Participant and DCC via the Test Management Tool. The DCC will provide status reports upon request to those Testing Participants who are unable to access the Test Issue Management tool directly.

On a daily basis, the DCC will produce a report containing all Testing Issues raised during the day, including in respect if each Testing Stage/Phase: severity, priority, Testing Participant id, DCC system component impacted, estimated rectification timescales and results of rectification activity.

On a weekly basis the DCC will produce a report containing the same information on a cumulative basis for the Test Phase/Stage to date, including an aged Testing Issue report (setting out the timescales within which Testing Issues have been rectified) and the number of closed and open Testing Issues during the period.

2.2.2 Management of Testing Issues Raised During Overlapping Testing Stages
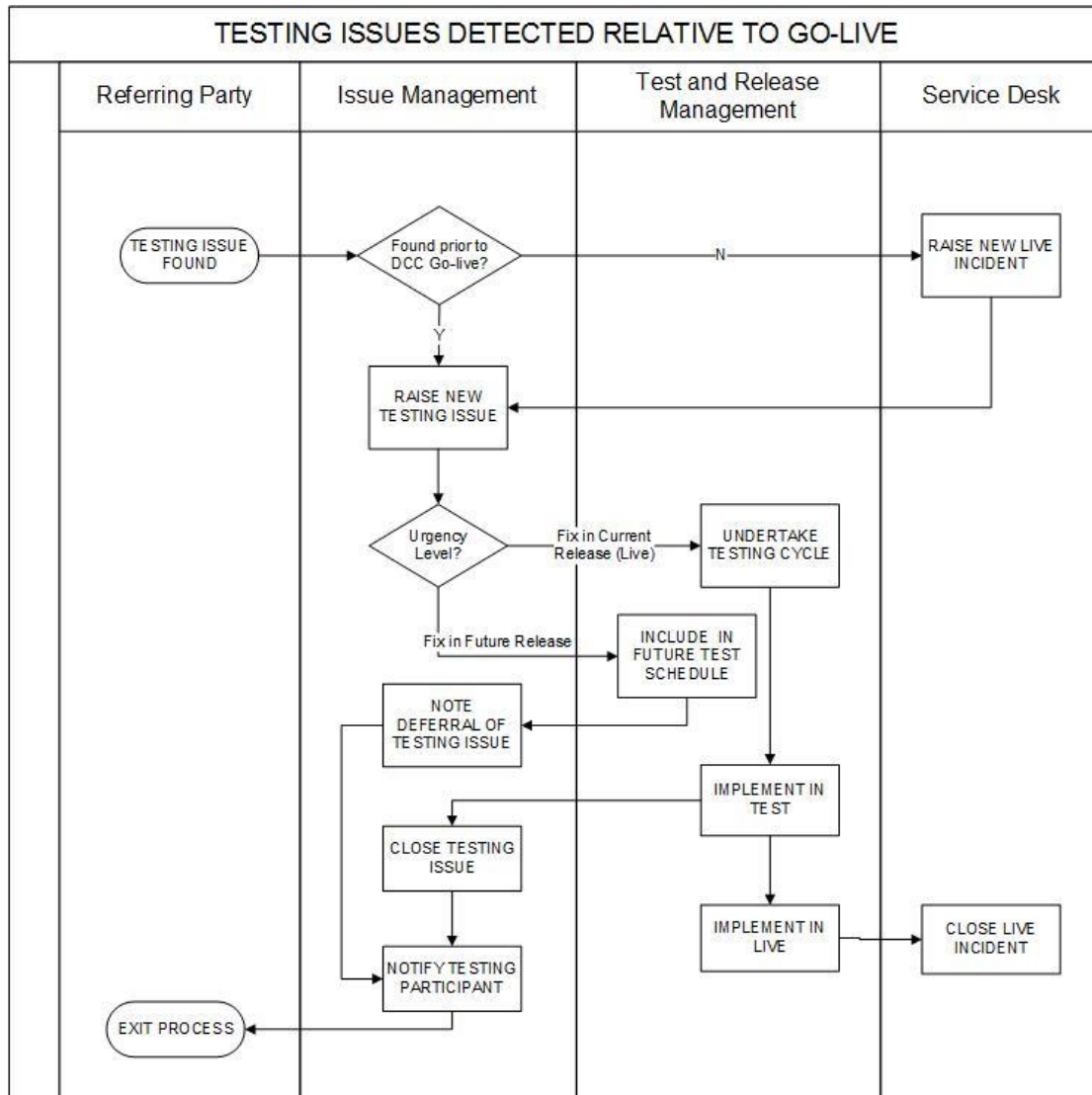
The DCC and Systems Integrator will conduct daily triage meetings, at which the relative priority of the issues raised during SIT UAT, Interface Testing and End to End Testing will be prioritised (for example, with regard to any period of overlap between SIT, Interface Testing and End to End Testing). As a rule, issues affecting SIT will be prioritised over issues that affect Interface Testing only. Likewise, issues affecting Interface Testing will be prioritised over issues affecting End to End Testing.

The DCC will notify all impacted Testing Participants where a Testing Issue raised during one stage of testing could impact a Testing Issue raised during another stage of testing (see Section 5.1).

2.2.3 Management of Testing Issues Raised in UIT Relative to Go-live

Where a defect is detected post DCC Go-live, then again, a Testing Issue will be raised. In addition, the Testing Issues Team will raise a Problem Record with the DCC Service Desk against the production environment. Triage will be undertaken in the SIT environment, and fixes will be proven initially in that environment and promoted to UIT and Production as the fix process progresses. A decision will be made on the criticality of the Testing Issue, about determining whether it should be implemented within the current release, or whether it can be deferred to a later one. Should it be the former, then the standard cycle of testing and promotion through UIT to SIT to production will be followed.

A flow diagram showing the key activities involved in the process is given below:

TESTING ISSUES DETECTED RELATIVE TO GO-LIVE

Referring Party	Issue Management	Test and Release Management	Service Desk

```
TESTING ISSUE        Found prior to                N              RAISE NEW LIVE
   FOUND      ──►     DCC Go-live?  ─────────────────────────►      INCIDENT
                           │                                           │
                           │ Y                                         │
                           ▼                                           │
                     RAISE NEW       ◄──────────────────────────────────
                     TESTING ISSUE
                           │
                           ▼
                      Urgency      Fix in Current      UNDERTAKE
                      Level?   ──► Release (Live) ──► TESTING CYCLE
                           │
                     Fix in Future Release   INCLUDE IN
                           └──────────────► FUTURE TEST
                     NOTE            ◄─────  SCHEDULE
                   DEFERRAL OF
                   TESTING ISSUE
                           │                 IMPLEMENT IN
                           ▼                     TEST
                   CLOSE TESTING                   │
                       ISSUE                        ▼
                           │                 IMPLEMENT IN     CLOSE LIVE
                           ▼                     LIVE    ──►   INCIDENT
                  NOTIFY TESTING
                   PARTICIPANT
   EXIT PROCESS ◄─────┘
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2.3 Testing Issue Referral

Testing Issues can be referred to the DCC Issue Resolution Board for consideration in the following circumstances:

a) agreement cannot be reached on the severity level and priority status of the Testing Issue;

b) a Testing Participant disagrees with the way a Testing Issue should be resolved;

c) the Testing Participant is dissatisfied with the speed at which decisions are made; or

d) where the SI or DCC are dissatisfied with a resolution timescale that has been provided by a Testing Participant or Service provider.

In the case of a), b or c), the Testing Participant must provide justification for its view and the DCC may request further supporting information from the Testing Participant. In the case of d), the SI or DCC should refer to IRB any Testing Issue that threatens proposed functionality not being delivered in time to be part of a scheduled release, for agreement of deferral to a subsequent release.

Testing Issues will be referred by via e:mail to the DCC at the following Testing.Issues@capita.co.uk in the format set out in Section 12, Appendix 2: Testing Issue Referral Template.

DCC will acknowledge receipt of the Testing Issue Referral within 1 working day, confirm that valid grounds for referral exist and collate the relevant background information for consideration. The DCC will notify the Testing Participant or the SI where it considers that the grounds for referral do not comply with the requirements of the SEC.

The DCC will also identify and notify any other Testing Participant that may be affected by the Testing Issue.

The IRB will determine:

a) the severity, priority and response timescale that should apply to the Testing Issue;

b) whether an equivalent Testing Issue has been raised and if a precedent has already been established. In this event, the existing resolution will be provided to the Testing Participant, unless the DCC determines that there is justification for changing the precedent;

c) the organisation responsible for rectifying the Testing Issue. In doing so, the DCC may determine that further analysis is undertaken by the Testing Participant, relevant Service Provider or experts which may be provided by DCC, BEIS or another organisation. This further analysis may include the interpretation of an ambiguity in a design specification, which may lead to the issuance of a clarification note by the owner of the specification or the raising of a change request;

d) whether the error is due to an issue with the design baseline, which could result in a Change Request. In this event the matter will be referred to the DCC Design & Assurance Director for consideration, the Testing Participant will be notified and the Testing Issue will be closed. The relevant Change Request identifier, as assigned by Design & Assurance Director, will be recorded against the original Testing Issue for audit purposes; and

e) whether the Testing Issue should be rectified pre-DCC Live or postponed to a post-DCC Live release (considering the view expressed by the Testing Participant during the referral process). The IRB may refer such matters to the Design & Assurance Director and to a Transitional Governance Group for decision, as required by the Transitional Governance Arrangements.

Progress updates and estimated resolution dates for all Testing Issues will be provided to the Testing Participant via the Test Management Tool. The DCC will provide status reports upon request to Testing Participants without access to the Test Management Tool.

The DCC will maintain a record of all IRB decisions within a precedent register, which will be used as the basis for future decisions.

2.4 Defect Fix & Regression Testing

Defect fixes will be introduced into SIT and Interface Testing in accordance with a schedule that is determined by the SI, and into the End-to-End Testing and Enduring Testing stages in accordance with a schedule that is determined by the DCC and Systems Integrator[4]. The impact on the activities of Testing Participants will be considered where appropriate, and minimised where feasible.

It is anticipated that a defect fix release will be introduced into Systems Integration Testing and Interface Testing on a weekly basis (as a minimum) and on a less frequent basis (other than to rectify Emergency Fixes) into the End-to-End Testing (UIT-A and UIT-B will have separate Release Schedules) and Enduring Testing environments.

Regression Testing will be undertaken by the DCC in the PIT, SIT, Interface Testing, End-to-End Testing and Enduring Testing stages to confirm that the defect fix has not affected the results of testing (including non-functional testing) that has already been executed.

When defect fixes have been formally released into the test environment(s), the DCC will notify Testing Participants that testing can be re-performed in respect of the Testing Issue.

The results of retesting performed by the Testing Participants will be recorded within the Test Management Tool and the Testing Issue closed (if the tests are completed successfully).

2.5 Resolving & Closing Testing Issues

Testing Issues will be resolved and subsequently closed in the following circumstances:

a)   by the SI in the Pre-UEPT, UEPT, Systems Integration Testing, and Interface Testing stages when the Testing Issue is resolved to the satisfaction of the Testing Participant that raised the issue (and the Testing Participant confirms that the Testing Issue can be closed);

b)   by the DCC in the SMKI & Repository Testing, End-to-End Testing stage and Enduring Testing stage when the Testing Issue is resolved to the satisfaction of the Testing Participant that raised the issue (and the Testing Participant confirms that the Testing Issue can be closed);

c)   by the IRB where it is asked to determine the priority and severity of the Testing Issue, and the estimated resolution time. These decisions cannot be further referred by the Testing Participant in accordance with the provisions of Section H14.42 of the SEC

d)   where the IRB determines that the Testing Issue is caused by a Design Issue. The Testing Issue will be closed when a Change Request is raised (and the Change Request id recorded against the Testing Issue).

The reason for closure of the Testing Issue will be recorded in the Test Management Tool.

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[4] In accordance with the Release Management Strategy.

2.6 Further Referral of Testing Issues

Where a Testing Participant disagrees with the way the Testing Issue should be resolved it may request that the DCC refers the matter to the SEC Panel, in accordance with Section H14.43. The Secretary of State has provided guidance explaining the circumstances in which the Secretary of State will consider matters relating to Testing Issues. Accordingly, DCC will refer all Testing Issues directly to the Secretary of State during Transitional Testing and notify the SEC Panel that it has done so.

When doing so the DCC will provide the following information:

- identity of Testing Participant(s)

- date Issue Raised

- description of Testing Issue

- systems Affected

- precedents that may have been applied

- IRB decision and prior triage actions/decisions taken.

- reason for IRB decision

- basis for Referral to Secretary of State (or SEC Panel)

- supporting evidence.
- any other information that is requested by the SEC Panel or Secretary of State.

The Secretary of State (or SEC Panel) will notify the DCC of its determination and the DCC will close the Testing Issue, initiate any action directed by the Secretary of State (or SEC Panel) and update the IRB Precedents register as appropriate.

Testing issues will remain open until the IRB or Secretary of State have made a determination.

Note: BEIS has produced a guide on referring Testing Issues to the Secretary of State, which can be found on the DCC website.

2.7 Secretary of State and SEC Panel Decisions

The Secretary of State, or SEC Panel, may conduct further investigations prior to making a determination regarding a Testing Issue that has been referred. The determination may include a decision that:

a) an aspect of the SEC should be amended;

b) an aspect of the DCC systems is inconsistent with the requirements of the SEC;

c) an aspect of one or more Devices is inconsistent with the requirements of the SEC;

d) an aspect of the User Systems or RDP Systems is inconsistent with the requirements of the SEC;

e) the determination made by the IRB should be upheld.

3   Testing Issue Resolution Process – GFI

Testing Issues which are identified in respect of GFI should be raised to the DCC via e: mail (containing the subject description 'Test Issue GFI') to the following e: mail address Testing.Issues@capita.co.uk. The Testing Issue will only be accepted by the DCC if it is provided within the excel spreadsheet template that is set out in Section 13, Appendix 3: Testing Issue Notification Template – GFI, which may be modified from time to time.

DCC will acknowledge receipt of the Testing Issue within 1 Working Day and ensure that the Testing Issue is provided within the correct format, upload the Testing Issue within the DCC hosted Test Management Tool for triage and provide the Testing Issue identifier to the Testing Participant. Testing Issues that are not provided within the specified format, or if the necessary fields are not completed, will be rejected.

A triage meeting will be convened within 5 Working Days and will include representatives from the DCC and Critical Software Solutions Ltd. The Testing Participant may be invited to the triage meeting and/or may be required to provide additional information.

The outcome of the triage meeting will be provided to the Testing Participant within 2 Working Days and will be one of the following:

- testing Issue accepted – defect fix timescale provided;

- testing Issue accepted – defect fix timescale to be determined;

- clarification provided;

- installation guidance provided;

- testing Issue rejected; and

- request for further information.

Where a Testing Issue is accepted, all other users of GFI will be notified and estimated defect fix timescales will be provided.   A notification will also be placed on the DCC website.

4 Change Process During Testing

Where the IRB determines that a Testing Issue may be due to a design baseline issue (rather than a defect in the way a system has been built against the design baseline) it will refer the matter to the DCC Design Issues Board (DIB) for consideration via the Design Issues Management Process. The status of the issue will be amended accordingly, and (where a change request is raised) the Testing Issue will be closed.

The DCC may manage the development of an initial design solution using an inter-organisation 'design team' comprising representatives from:

- DCC: Design Team, Delivery Team, Test Assurance Team, Service Management Team

- BEIS;

- Service Providers; and

- industry representatives (as appropriate)

The initial solutions that are proposed by the 'design team' will consider multiple Change Requests that may have been raised in respect of the same component of the DCC systems (to avoid duplication of design/rectification activity or development of conflicting solutions in respect of the same system).

5   Suspension Criteria

DCC may suspend testing of either the DCC System or a Testing Participant's testing with the DCC in certain circumstances. Testing Participants will be notified of the suspension and resumption of testing as set out in Section 7.3 of this document.

Possible causes for suspending DCC testing include:

a) severity 1 Testing Issue blocking testing in one or more test stages.

b) Testing Issues are raised in SIT UAT or Interface Testing that could adversely impact testing activities in the End-to-End Testing stage or require the DCC to focus test resolution activities on the Testing Issues that are raised in the SIT UAT and Interface Testing Stage. In this instance the start date of the End-to-End Testing stage may be delayed or testing activities in the End-to-End Testing stage may be suspended.

c) Testing Issue(s) raised that could adversely impact the test execution activities of other Testing Participants and cause a suspension of testing in other test stages.

d) business continuity event affecting the DCC and/or its Service Providers

e) business continuity event affecting a specific Testing Participant and the DCC determines that the testing activities of that Testing Participant should be suspended.

Possible causes for suspending a Testing Participant's testing with the DCC testing include:

a) DCC determines that the activities of a specific Testing Participant have had (or may have) a detrimental impact on the testing activities of other Testing Participants (such as excessive volume of tests conducted by one Testing Participant);

b)   breach of security;

c) Introduction of Devices into the End-to-End Testing stage that are not compliant with the Smart Metering Equipment Technical Specification;

d) Breach of the provision of the SEC, the relevant Testing Approach Document and any SEC subsidiary document;

e) Use of test data in a manner that is inconsistent with the Testing Approach Documents or other relevant documentation;

f) adversely impacting the DCC test environment for any reason;

g) breach of any health and safety restrictions that apply at the DCC Test Labs;

h) misuse of any equipment provided by DCC (including equipment provided as part of a remote test service);

Testing Participants that disagree with the suspension of testing may refer the matter to the Secretary of State.

5.1 **Blocked Tests**

DCC will notify all affected Testing Participants where:

- Testing Issues impact (or have the potential to impact) more than one Testing Participant; and

- Testing Issues arising in one test stage affect tests that are conducted in another test stage.

For example, Testing Issues arising in SIT UAT may affect User Entry Process Testing in the Interface Testing Stage.   In this instance the DCC will advise that specific test scenarios are affected by a Testing Issue and will advise when the Testing Issue has been resolved.

5.2 **Resumption of Testing**

DCC will notify Testing Participants that testing activities can resume as set out in Section 7.3 of this document.   Prior to resumption of testing, the DCC will confirm that the Testing Issue has been resolved (either through a defect fix or the implementation of an agreed workaround).

6   Testing Issue Status

A Testing Issue may be assigned any of the following status:

Test Issue Status	Description
New	Initial status assigned to all new tickets raised.
Triage	Reviewed, prioritisation confirmed and assigned for triage.
Open	Defect has been triaged and has been assigned for investigation.
In Progress	Investigation has completed, defect/ticket, priority/severity accepted and resolution activity begun.
Rejected	Following review/investigation, the defect/ticket is found to be incomplete (insufficient info/evidence) or is not deemed to be valid.
Fixed	Defect has been resolved, successfully tested in the UIT or S1SP environment and is ready for deployment.
Referred (DCC)	The Testing Issue is being assessed within the Testing Issue Referral Process by the IRB or the Secretary of State/SEC Panel
Referred (TP)	Defect has been reviewed and challenged by the fix organisation, discussed with the SI Design Authority and is in a formal review with the SI Triage Panel (TP).
Test Held	Although the fix has been applied to the environment, retesting is either blocked by circumstances outside of the control of the test team (e.g. other defects, environment/data issues), or retest is awaiting scheduling.
In Test	The defect/ticket is being actively retested.
Rework	The defect/ticket has been reassigned to the fix organisation for additional remediation.
Ready for Testing	Resolution deployed to Test environment as part of a formal release and ready for test.
Test Passed	The retest was successfully completed and the defect/ticket has been successfully resolved.
Test Failed	The retest has failed at the same point and the remedial work was deemed not successful.
Closed	The defect/ticket has been confirmed as resolved/rejected and all data has been collated including the established root cause.

7   Reporting & Testing Issue Notification

The following reports will be provided by the DCC:

7.1   Testing Issue Resolution Management Reports

Weekly Reports will be provided to the Secretary of State and SEC Panel, providing cumulative statistics for each test stage, an aged Testing Issue Report (setting out the timescales within which Testing Issues have been rectified), the number of closed and open Testing Issues during the period and the number of defects that have been re-opened. These details will be provided as part of the general weekly report on test progress to the Secretary of State and SEC Panel.

In addition, DCC will provide monthly reports to industry via the various forums held. These reports will detail the number of open defects by severity, age profile and trend analysis as well as summarising the number of open tickets (testing issues but not considered to be defects).

7.2   Testing Issue Reports

DCC will publish details of all Testing Issues raised on the DCC SharePoint[5] on a weekly basis for the benefit of all Testing Participants. The raiser of the Testing Issue will not be identified, and the information will be redacted to ensure confidential information (including information that could lead to a security breach) is not disclosed. The report will contain the following information regarding Testing Issues:

- severity, priority;
- DCC system component impacted;
- if the issue is being considered within the triage process, by the Issue Resolution Board, or has been referred to the Design & Assurance Director or escalated to the Secretary of State; and
- results of rectification activity

7.3   Testing Suspension Notification & Suspension Reports

Testing Participants will be required to provide contact details for a minimum of 2 people prior to commencing testing in any test stage. DCC will immediately notify affected Testing Participants via e: mail if it is necessary to suspend testing for whatever reason. DCC will also publish a Test Suspension Notification message on its website if DCC testing is suspended (but not in the case where testing of an individual Party is suspended).

Further notification messages providing estimated resolution timescales will be published on the DCC website and circulated to affected Testing Participants until Testing can resume.

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[5] Requests for access to SharePoint should be sent to Testing.Issues@capita.co.uk from a company e-mail address and will be provided to the SEC Panel, Secretary of State and organisations with a valid reason for access.

An 'End of Testing Suspension' notification will be provided directly to all affected Testing Participants and published on the DCC website.

DCC will provide a weekly Testing Suspension Report to the SEC Panel and Secretary of State, which will include number of times testing suspended by test stage; duration of suspension; and cause of suspension.

8   Testing Issue Categorisation

Severity and priority ratings are set out in the Joint Test Strategy and are provided below for reference.

8.1   Severity

The Severity of a Testing Issue relates to the impact the issue would have on the **business** if released into production.

Severity	Description
1	A Test Issue which: o Prevents a DCC User or large group of DCC Users from using the DCC User Systems; o Has a critical adverse impact on the activities of the DCC; o Could cause significant financial loss and/or disruption to the DCC services or DCC Users; or o Results in any material loss or corruption of Data. Non-exhaustive examples: o A Test Issue leading to Non-availability of the DCC Data Services; o A Test Issue leading to Non-availability of the CSP Core solution element(s); or
2	A Test Issue which: o Has a major (but not critical) adverse impact on the activities of the DCC but the service is still working at a reduced capacity; or o Causes limited financial loss and/or disruption to the DCC Non-exhaustive examples: o A Test Issue leading to Non-availability of the Network Management Centre; o A Test Issue leading to loss of resilience of the SMWAN Gateway; o Large areas of functionality will not be able to be tested; or o
3	A Test Issue which: o Has a major adverse impact on the activities of the DCC but which can be reduced to a moderate adverse impact through a work around; or o Has a moderate adverse impact on the activities of the DCC. Non-exhaustive examples: o Moderate service interruptions in the business process or functionality of the DCC Systems and / or service

Severity	Description
4	A Test Issue which: o Has a minor adverse impact on the activities of the DCC. Non-exhaustive examples: o Minor service interruptions in the business process or functionality of the DCC Systems and / or service.
5	A Test Issue which: o Has minimal impact to the activities of the DCC. Non-exhaustive examples: o Trivial Test Issues with workarounds which are noted for future releases but minimal impact of running existing services; or o

8.2 Priority

The priority of a Testing Issue is the impact of the issue on **testing** progress – it is a measure of how quickly the issue needs to be fixed to allow development and testing to continue.

Priority	Description (as per Smart Meters Programme Schedule 6.2 - T&A)*
1 - Urgent	Has a severe impact on testing. Must be fixed immediately. A critical set of functionalities scoped to be tested cannot be completed and needs this issue fixed before testing can continue.
2 – High	Has a major impact on Testing. Should be fixed within a day of the issue being logged. A major set of functionalities can only be tested by use of a complicated work-around which is slowing down test progress.
3 - Medium	Has a medium impact on testing. The issue could be fixed before release of the current version in development. Incident affects pass success on some tests, but the issue can be by-passed for other tests by means of a simple work-around.
4 - Low	Has a minor impact on testing. The issue would be fixed if there is time, but it could be deferred until another build release. This issue is normally cosmetic in nature and does not affect the key delivery of the Business requirements.

8.3 Testing Issue Service Level Agreements

[Note: Service Level Agreements will be subject to contractual agreements with the Service Providers].

9   Responsibilities

The Systems Integrator is responsible for the provision of the Test Management Tool as set out in the Joint Test Strategy and within the test approach documents for each stage of testing. The Systems Integrator will also manage the triage process for all Testing Issues that are raised during Pre-UEPT, UEPT, Systems Integration Testing and the Interface Testing Stage.

The DCC is responsible for the management of the IRB and for the further referral of Testing Issues to the Secretary of State/SEC Panel. The DCC will also manage the triage process for all Testing Issues that are raised in the SMKI & Repository Testing, End-to-End Testing Stage, the Enduring Testing Stage and in relation to GFI. DCC will provide the reports that are set out in this document, including the publication of redacted Testing Issues on the DCC website.

The DCC will also manage the resolution of Design Issues that are raised in relation to the design documents.

Each Service Provider (including the Trusted Service Provider, provider of Parse & Correlate and providers of DCC Enterprise Systems) are responsible for supporting the timely resolution of issues through the triage process and Testing Issue referral process.

The Secretary of State is responsible for making determinations on Testing Issues that are referred during the Transitional Testing stage.

BEIS will be required to support the resolution of Testing Issues that arise in relation to the SEC, SEC Subsidiary Documents and the GB Companion Specification.

10 Issue Resolution Board: Terms of Reference

10.1 Chair

10.2 Membership

Organisation	Position
DCC	Test Issues Manager
DCC	D&A Director
DCC	SI Programme Manager
DCC	Delivery Director
DCC	Head of Information Security
DCC	Test Governance Manager
DCC	Technical Architect
SI	SI Test Manager

- Alternates will attend as necessary

10.3 Attendees

Organisation	Position
DSP	Technical Manager
CSP (C/S)	CSP (C/S) Test Lead
CSP (N)	CSP (N) Technical Lead
TSP	SMKI Lead Test Manager
Critical Software	CSW Technical Lead
Enterprise Systems	Enterprise Systems Test Lead
BEIS	
SECAS	Head of Code
SI	SI Solution Architect

Attendees will be invited to relevant meeting.

External Testing Participants will be invited to attend as necessary.

10.4 Scope

The IRB will meet as and when required (and anticipated to be daily) to consider Testing Issues that have been referred to the DCC in relation to the following test stages: SIT, SRT, Interface

Testing, End-to-End Testing, Enduring Testing and Operational Acceptance Testing. The IRB will also consider Testing Issues in relation to User Entry Process Testing and SMKI & Repository Entry Process Testing, Release 2 and SMETS1.

10.5 Purpose

The IRB may be required to make determinations on Testing Issues where:

a) A Testing Participant disagrees with the severity or priority rating that has been applied to a Testing Issue;

b) A Testing Participant is dissatisfied with a resolution timescale that has been provided by the SI/DCC;

c) The Systems Integrator is unable to reach a determination during Triage; or

d) The Testing Participant is dissatisfied with resolution provided during Triage.

The IRB will not resolve any Testing Issues that it reasonably considers have been caused by an omission or error in the SEC or any subsidiary documents, including design specifications. These will be reported to the DCC Design & Assurance Director for further analysis and progression through the DCC Change Control process.

The IRB may decide to defer an issue that is dependent on the resolution of another Testing Issue or if the Testing Issue is low priority and/or low severity and the IRB considers that other Testing Issues should be prioritised.

The IRB will monitor the progress of Testing Issue Resolution including: number of defects raised, and number of defects closed by Service Provider and other Testing Participant.

10.5.1 Precedent Register

The IRB will record determinations in a precedent register and will ensure that subsequent determinations are made in accordance with any precedents that have been set unless there is a justifiable reason to vary the precedent.

10.5.2 Records

The IRB will maintain a record of the reasons why it reached each determination, including expert advice that may have been provided to the IRB. The record will be provided to the Testing Participant, SEC Panel and Secretary of State upon request.

10.6 Determinations

The IRB will comply with the provisions set out in the SEC when making a determination. The IRB may:

a) Uphold the way Testing Issues have been resolved during the triage process;

b) Make its own determination on the way a Testing Issue should be rectified;

c) Direct a Service Provider to more quickly provide a determination in respect of a Testing Issue.

In making a determination the IRB may request further evidence to support resolution of the Testing Issue and may seek expert advice, including independent expert advice, as necessary.

10.7 **Inputs**

Details of Testing Issues that are referred to the IRB will be circulated in advance of the meeting by the DCC.

10.8 **Secretariat**

The DCC Test Assurance Team will be responsible for providing the secretariat for the IRB and will:
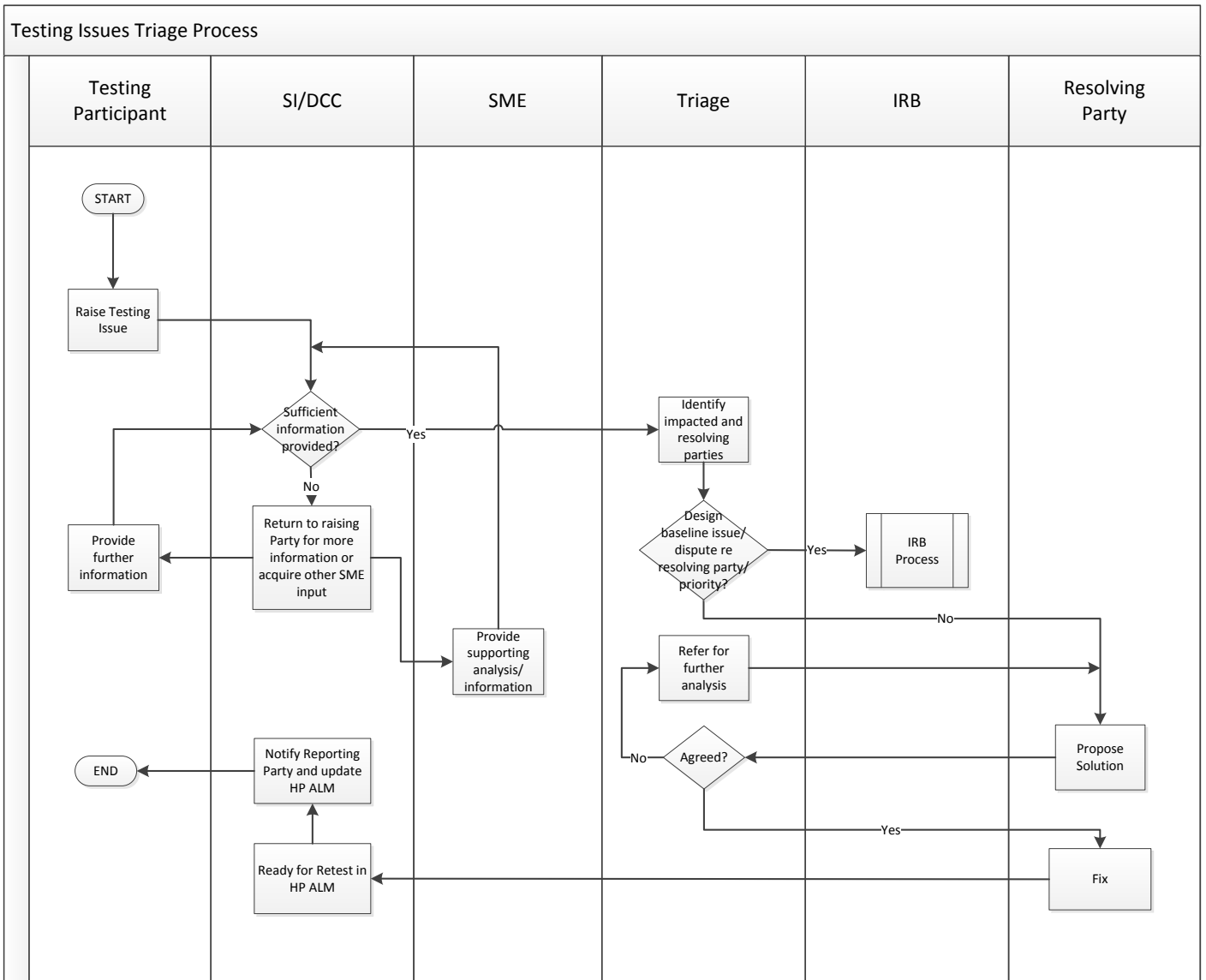
- Issue invites and book appropriate meeting rooms.

- Produce the agenda (where changes are required to the standing agenda above) and issue papers.

- Maintain and distribute the decisions and actions log.

Papers should be distributed at least 24 hours before the meeting.
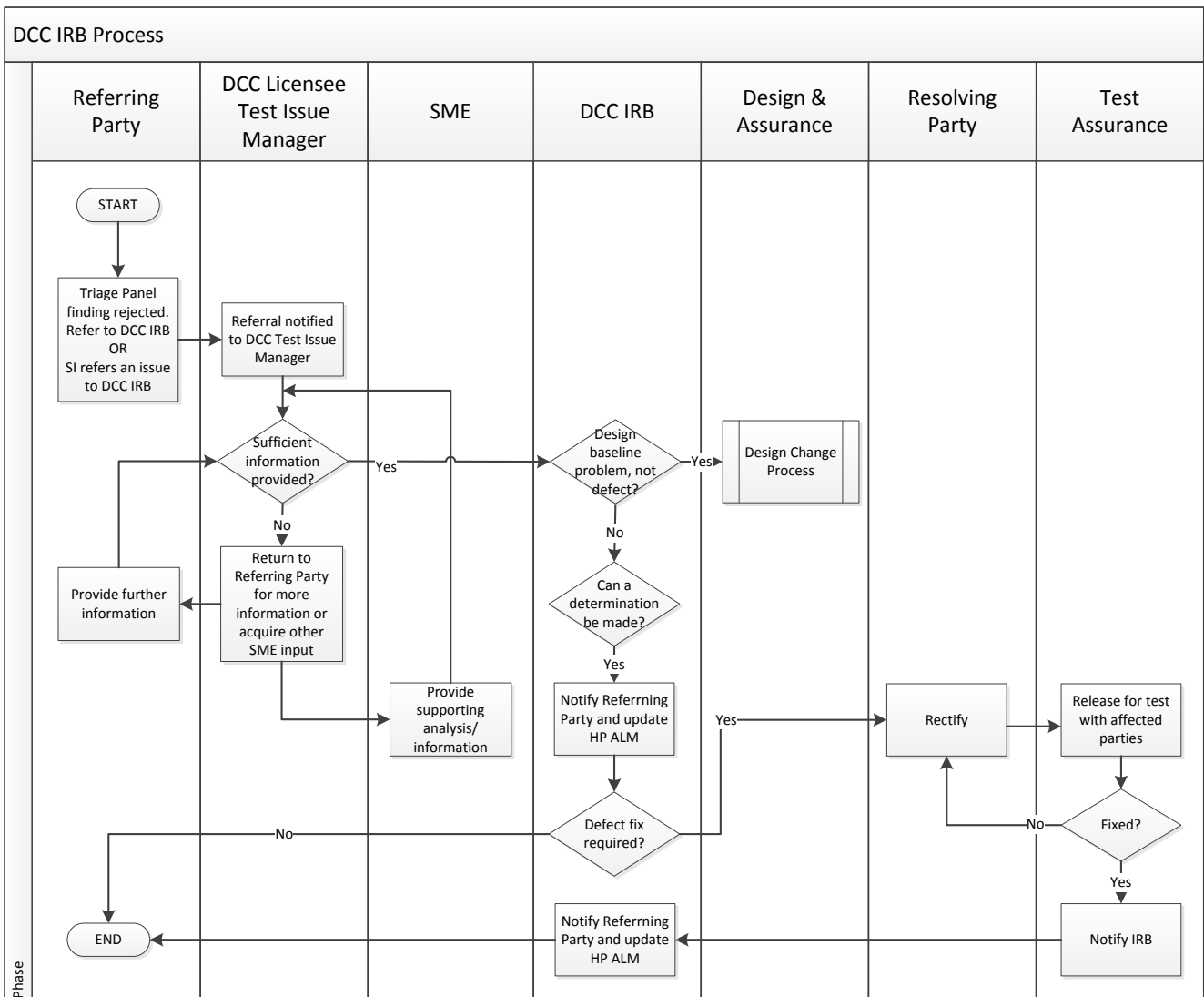
Actions and decisions will be distributed within 24 hours of the meeting.

11 Appendix 1: Testing Issue Processes

The diagram below describes the Testing Issue Triage Process from issue referral to resolution.

Testing Issues Triage Process

The diagram below describes the IRB process from issue referral to resolution.

DCC IRB Process

Referring Party	DCC Licensee Test Issue Manager	SME	DCC IRB	Design & Assurance	Resolving Party	Test Assurance

START

Triage Panel finding rejected. Refer to DCC IRB OR SI refers an issue to DCC IRB

Referral notified to DCC Test Issue Manager

Sufficient information provided? — Yes

Design baseline problem, not defect? — Yes — Design Change Process

No

No

Provide further information

Return to Referring Party for more information or acquire other SME input

Can a determination be made?

Yes

Provide supporting analysis/ information

Notify Referrning Party and update HP ALM

Yes — Rectify — Release for test with affected parties

No — Defect fix required?

No — Fixed?

No

Yes

Notify Referrning Party and update HP ALM

Notify IRB

END

Phase

12 Appendix 2: Testing Issue Referral Template

See "Testing Issue Referral Template" at:

https://www.smartdcc.co.uk/implementation/test-assurance/testing-issue-resolution/

13 Appendix 3: Testing Issue Notification Template – GFI

See "GFI Issue Reporting Template" at:

https://www.smartdcc.co.uk/implementation/test-assurance/testing-issue-resolution/