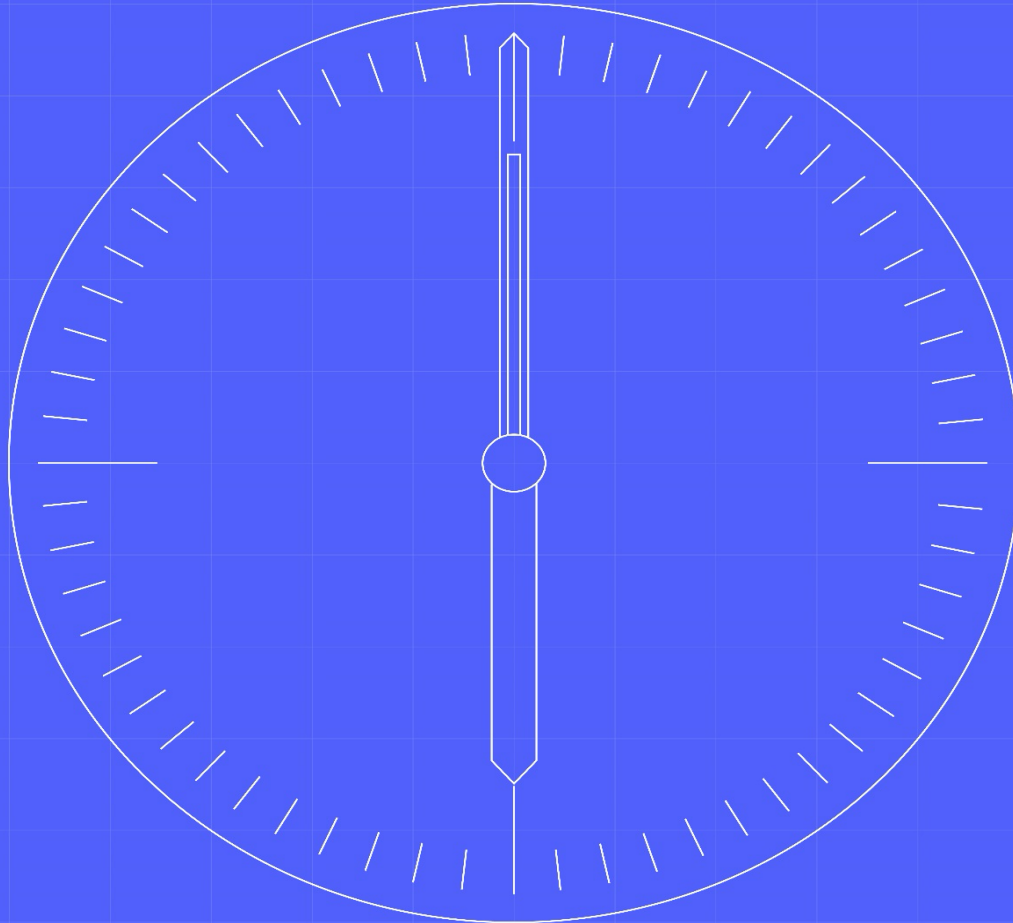




SIT Migration Test Approach & Plan



Document owner

Lee Cox

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1.1 Change Record

Date	Author(s)	Version	Change Detail
23/10/2023	Lee Cox	0.1	Initial Draft
01/11/2023	Lee Cox	0.2	Changes following Programme Review
20/11/2023	Lee Cox	0.3	Changes following Industry Consultation
14/12/2023	Lee Cox	0.4	Section 5.7 updated with new scenario
20/12/2023	Lee Cox	1.0	Up issued to v1.0 following TMAG Approval

1.2 Reviewers

Reviewer	Role
Lee Cox	SI Test Manager
Kevin Davis	SI Test Architect
Cesar Lopes	SI Data Architect
John Wiggins	SI Migration Lead
Adrian Ackroyd	SRO Function Programme Test Manager
Smitha Pichrikat	SRO Function Client Delivery Manager
Warren Fulton	SRO Migration Manager
Kevin Spencer	SRO Industry SME for Migration
Mike Fensome	SRO Design Senior BA
Code Bodies (BSC and REC)	Various

1.3 References

Ref No.	Document/Link	Publisher	Published	Additional Information
REF-01	MHHS-DEL315 - E2E Testing & Integration Strategy	SI Testing	29 th April 2022	
REF-02	MHHS-DEL961 - Migration Design Document v1.1	Migration Design	3 rd April 2023	
REF-03	MHHS-DEL963 – BPM-002 – Change of Service - Metering Service - Forward Migration v1.2	Migration Design	3 rd April 2023	
REF-04	MHHS-DEL969 – BPD002 – Change of Service - Metering Service (Forward Migration) v1.2	Migration Design	3 rd April 2023	
REF-05	MHHS-DEL964 – BPM-003 – Change of Service - Data Service - Forward Migration v1.3	Migration Design	3 rd April 2023	
REF-06	MHHS-DEL970 – BPD003 – Change of Service - Data Service (Forward Migration) v1.1	Migration Design	3 rd April 2023	
REF-07	MHHS-DEL962 – BPM-001 – Change of Supply - Forward Migration V1.0	Migration Design	3 rd April 2023	
REF-08	MHHS-DEL968 – BPD001 – Change of Supply (Forward Migration) v1.0	Migration Design	3 rd April 2023	
REF-09	MHHS-DEL965 – BPM-001 – Change of Supply - Reverse Migration v1.0	Migration Design	3 rd April 2023	
REF-10	MHHS-DEL971 – BPD001 – Change of Supply - Reverse Migration v1.0	Migration Design	3 rd April 2023	
REF-11	MHHS-DEL966 – BPM-002 – Change of Service - Metering Service - Reverse Migration v1.0	Migration Design	3 rd April 2023	
REF-12	MHHS-DEL972 – BPD002 – Change of Metering Service - Reverse Migration v1.0	Migration Design	3 rd April 2023	
REF-13	MHHS-DEL967 – BPM-003 – Change of Service - Data Service - Reverse Migration v1.0	Migration Design	3 rd April 2023	

REF-14	MHHS-DEL973 – BPD003 – Change of Data Service - Reverse Migration v1.0	Migration Design	3 rd April 2023	
REF-15	MHHS-DEL852 - Pre-Integration Test Guidance	SI Testing	18 th August 2023	
REF-16	MHHS-DEL618 - Environment Approach & Plan	SI Testing	13 th October 2023	
REF-17	MHHS-DEL813 - Overarching Test Data Approach and Plan	SI Testing	5 th May 2023	
REF-18	MHHS-DEL1662 - SIT Migration Test Data Approach & Plan	SI Data	2 nd November 2023	
REF-19	MHHS-DEL1332 - Test Management Tool User Guide	SI Testing	16 th June 2023	
REF-20	MHHS-DEL1064 - Placing Reliance Policy	SI Testing	27 th April 2023	
REF-21	MHHS-DEL466 - Defect Management Plan	SI Testing	23 rd May 2023	
REF-22	MHHS-DEL1089 - Release and Configuration Management Approach & Plan	SI Testing	17 th May 2023	
REF-23	MHHS-DEL1139 - MHHS Outline Plan	SI Testing	See MHHS Website	
REF-24	MHHS-DEL466 - Defect Management Plan	SI Testing	23 rd May 2023	
REF-25	MHHS-DEL030 - Programme Governance Framework	PMO	08 th Mar 2023	
REF-26	MHHS-DEL1140 - Milestone Register	PMO	11 th October 2023	

1.4 Terminology

Term	Description
Various	For terminology, see Programme Glossary on the MHHS portal: Programme Glossary (SharePoint.com)

2 Executive Summary

The Market-wide Half Hourly Settlement programme (MHHS), when completed, will contribute to a more cost-effective electricity system, encouraging more flexible use of energy and helping consumers lower their bills.

[REF-01] [MHHS-DEL315 - E2E Testing & Integration Strategy](#) describes the overall, end-to-end (E2E) approach to testing - the manner in which all parties involved in the MHHS programme will conduct testing. It spans initial testing of individual systems through to complete E2E tests ahead of the start of the Migration Period (where the new systems are progressively introduced and old systems progressively retired). The document describes the major phases of testing:

- **Pre-Integration Testing (PIT)**
- **Systems Integration Testing (SIT)**
- **User Integration Testing (UIT)**

The purpose of Systems Integration Testing (SIT) phase is to prove that the component Services are implemented in a way consistent with the MHHS E2E Design and interact in a coherent and consistent manner, in other words to “prove” the MHHS E2E Design. The SIT phase comprises of 5 sub-Test Stages:

- **Component Integration Testing (CIT)**, where all components of the MHHS E2E solution are integrated and tested for compliance with the interface specifications and codes of connection. This includes step-by-step integration of the DIP (including PKI), central systems, Registration Services, Smart and Advanced Data Services, Metering Services, Suppliers, Network Operations, UMSO services and UMSDS.
- **Functional Test**, where together, the systems and their interfaces are tested E2E for compliance with the E2E MHHS Design, using pre-defined E2E business scenarios.
- **Migration Test**, where the migration process specified in the E2E MHHS Design is tested, starting with the “as is” systems and moving through the migration steps to arrive in the final “to be” state, i.e. moving individual metering points from legacy settlement to MHHS settlement arrangements. Both central (market infrastructure) and Supplier, Data Service and Metering Service provider systems will be needed for Migration SIT.
- **Non-Functional Test**, where the non-functional characteristics (including performance and security requirements) specified in the E2E MHHS Design are tested.
- **Operational Test**, where the central systems’ operational functions and processes are tested (including their service management solutions and Business Continuity/Disaster Recovery). Supplier, Data Service and Metering Service provider systems may be needed to support testing but will not themselves be under test.

The Programme has a defined set of documentation which will be produced to support the preparation and conduct of each SIT stage. This Approach and Plan document specifically relates to the SIT Migration Test stage, describing the associated objectives, scope, approach, schedule, management, governance, and assurance of the test stage. This is a child document of [REF-01] [MHHS-DEL315 - E2E Testing & Integration Strategy](#) and therefore it is recommended that for context both documents are read in conjunction.

3 Introduction

3.1 Document Purpose

The SIT Migration Test Approach and Plan (this document) sits within a two tier MHHS Test documentation hierarchy. Please note this document references tier 1 parent documents throughout and doesn't seek to repeat content contained within them, readers will be sign posted to these documents for further detail where relevant. This document also refers to tier 2 child documents that will be produced later.

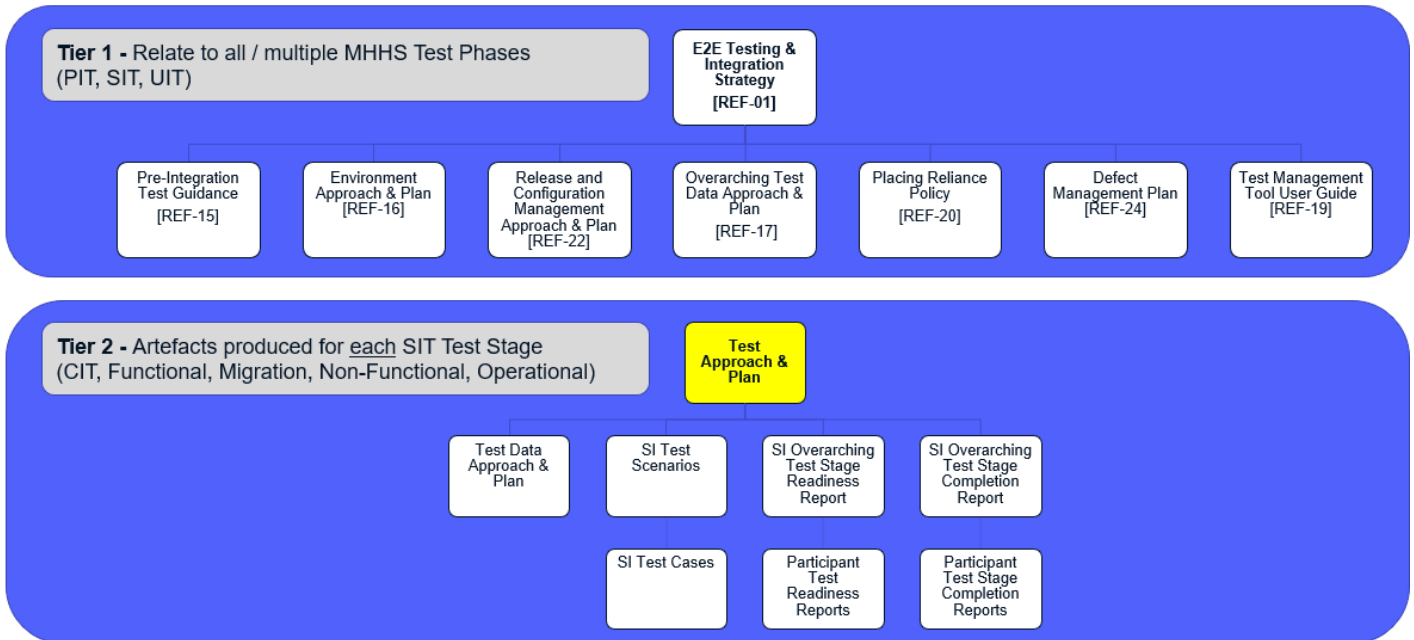


Figure 1 - MHHS two tier test documentation hierarchy

The SIT Migration Test Approach and Plan covers:

- Test Stage Objectives
- Scope
- Management of Migration Processes – Registration Service
- Architecture and Coverage
- Approach (Preparation & Execution), covering:
 - Test Scenario overviews
 - Test Data (to be read in conjunction with the SIT Migration Test Data Approach and Plan)
 - Stubs and Harnesses
 - Test Management Tool
 - Evidence Capture
 - Defects Management
 - Environments & Releases
 - Readiness and Completion Reports
 - Entry and Exit Criteria
- Schedules
- Management & Organisation
- Governance & Reporting
- Assurance.

This document is intended to be read by the following groups:

- SRO Function (SRO)
- Lead Delivery Partner (LDP)
- Migration Working Group (MWG)
- SIT Working Group (SITWG)
- Testing and Migration Advisory Group (TMAG)
- All Programme party teams and resources involved in SIT Migration execution or support.
- BSC and REC Code Body Qualification teams
- Independent Programme Assurance (IPA).

3.2 Reviews and Approvals

The SIT Migration Test Approach and Plan will go through initial LDP review by the following team members:

- Lee Cox, SI Test Manager
- John Wiggins, SI Transition Lead
- Cesar Lopes, SI Data Architect
- Simon Berry, SI Environments and Release Manager

Upon completion of LDP review, any comments and feedback would be incorporated before going to the SRO team formal review by:

- Adrian Ackroyd, SRO Client Programme Test Manager,
- Smitha Pichrikat, SRO Function Client Delivery Manager,
- Warren Fulton, SRO Migration Manager,
- Kevin Spencer, SRO Industry SME for Migration,
- Mike Fensome, SRO Design Senior BA,
- Code Bodies (BSC and REC)

Upon completion of the SRO and Code Body review it will then be distributed to the SITWG and MWG for consultation, where comments will be incorporated leading to a recommendation for TMAG approval by the groups.

Approval will then be requested from:

- Testing and Migration Advisory Group (TMAG).

The document will be made available for information via the programme portal.

3.3 Change Forecast

The SI team will own this document and keep it up to date, with review and approval by MHHS programme governance as appropriate. Each new version supersedes the previous version in its entirety.

At the time of writing the SIT Migration test scenarios and cases have not been authored, once a greater degree of maturity has been reached on these artefacts, they will be analysed to determine the sequencing and timing of SIT Migration Testing. This will be socialised and developed in consultation with the SITWG and the agreed output, if required, will be formalised in a new full version of this document that will be targeted for approval in the May-24 TMAG.

All updates to this document will follow the review and approval process outlined in section 3.2.

3.4 Summary of Changes

N/A for initial draft

3.5 Assumptions and Caveats

3.5.1 Assumptions

Please refer to the [MHHS Collaboration Base](#) for the published RAID log.

3.5.2 Caveats

N/A.

4 Objectives

4.1 Objectives

The objective of the SIT Migration Test stage is to functionally validate the new MHHS migration processes specified in the E2E MHHS Migration Design Artefacts are appropriate to support the migration of MPANs from current “as is” systems, moving through the migration steps to arrive in the final MHHS “to be” state. Additional MHHS reverse migration processes will also be validated to cater for MHHS to legacy Change of Supplier eventualities that occur between the Programme’s M10 and M14 Milestones.

Testing will bias towards MHHS processes (gaining participants in a Forward Migration and losing participants in a Reverse Migration), with a subset of tests including full End-to-End processes operated by legacy market roles (Data Collectors, Meter Operators and unqualified MHHS Suppliers)

4.2 Management of Migration Processes – Registration Service

The Registration Service will operate as the administering service regarding the management of Migration activities. This service will be the definitive record of the status of each MPAN in respect to the settlement arrangements under which it is operated.

Each individual MPAN will be denoted as operating under either the Legacy Arrangements or the MHHS Arrangements. An MPAN will switch status at a defined point within the migration processes. As within the Migration Period (starting at Programme milestone M11/M12 and ending at milestone M15) the Registration Service will be capable of supporting Legacy and MHHS MPANs – which will also include the Migration from Legacy to MHHS and (where appropriate) the Reverse Migration from MHHS to Legacy.

Forward Migration is the process through which MPANs will move from Legacy arrangements to MHHS arrangements. Reverse Migration is the process through which MPANs will move from MHHS arrangements to Legacy arrangements.

5 Scope

5.1 In Scope

Migration is specific to transferring MPANs from the legacy settlement arrangements to the new MHHS arrangements. A Migration Design overview can be found at [REF-02] [MHHS-DEL961 - Migration Design Document v1.1](#)

The scope of SIT Migration Testing is summarised as follows:

1. MHHS Qualification

- Participant Qualification – Update of ISD

2. Forward Migration – CoA

- Traditional Metering
- Advanced Metering
- Smart Metering
- Unmetered MPANs.

3. Forward Migration – CoS

- Traditional Metering
- Advanced Metering
- Smart Metering
- Unmetered MPANs.

4. Reverse Migration – CoS Loss

- Traditional Metering
- Advanced Metering
- Smart Metering
- Unmetered MPANs.

5. Related MPANs

- Traditional Metering
- Advanced Metering
- Smart Metering

6. Import/Export MPANs

- Traditional Metering
- Advanced Metering
- Smart Metering

7. Exception Handling

8. Reporting

- All Reporting associated with Migration will be within scope of this Test Stage. As the Reports are defined, so will they be added to the scope of SIT Migration.

5.2 Forward Migration COA

Forward Migration is the process through which MPANs will move from Legacy arrangements to MHHS arrangements. This will require the transfer of data from the Legacy Roles of Half Hourly Data Collectors (HHDC)/Non-Half Hourly Data Collectors (NHHDC) and Half Hourly Meter Operators (HHMOA)/Non-Half Hourly Meter Operators (NHHMOA) to the new MHHS Roles of Data Services (SDS & ADS) and Metering Services (MSS & MSA). For unmetered testing this will include UMSDS and UMSO Roles.

It is expected that most Forward Migration activities will be initiated by the Supplier for MPANs which are already Registered to them. In which case, the Change of Agent (CoA) Migration process will be utilised.

Forward Migration is facilitated with a combination of Message exchanges from MHHS IFs/PUBs (IF031 through to IF036) alongside Data exchanges via DTN flows. These Process flows enable assignment of new MHHS roles and transfer of all relevant data - Meter Technical Data, Meter Reads, Inventory Data. Details of the Migration Design processes can be found in the following Documents:

- [\[REF-03\] MHHS-DEL963 – BPM-002 – Change of Service - Metering Service - Forward Migration v1.2](#)
- [\[REF-04\] MHHS-DEL969 – BPD002 – Change of Service - Metering Service \(Forward Migration\) v1.2](#)
- [\[REF-05\] MHHS-DEL964 – BPM-003 – Change of Service - Data Service - Forward Migration v1.3](#)
- [\[REF-06\] MHHS-DEL970 – BPD003 – Change of Service - Data Service \(Forward Migration\) v1.1](#)

SIT Migration Testing will exercise Forward Migration CoA processes for the following types of MPANs:

- Traditional Metering
- Advanced Metering (NHH & HH MPANs)
- Smart Metering (NHH & HH MPANs)
- Unmetered MPANs.

As part of assessing the successful completion of Forward Migration COA processes, Settlement Reports within MHHS will be triggered on completion for a subset of tests i.e. not all tests will include these extra validation steps.

5.3 Forward Migration COS

In some cases, Forward Migrations could coincide with a Change of Supplier, thus requiring data to be additionally transferred between Suppliers. In these circumstances a Change of Supplier (CoS) Migration Process will be utilised. Again, transfer to new MHHS Market Roles alongside the exchange of all relevant data is facilitated using a combination of MHHS Ifs/PUBs and DTN Flows. Migration Design processes can be found in the following Documents:

- [\[REF-07\] MHHS-DEL962 – BPM-001 – Change of Supply - Forward Migration V1.0](#)
- [\[REF-08\] MHHS-DEL968 – BPD001 – Change of Supply \(Forward Migration\) v1.0](#)

SIT Migration Testing will exercise Forward Migration CoS processes for the following types of MPANs:

- Traditional Metering
- Advanced Metering
- Smart Metering
- Unmetered MPANs.

This testing also covers the Operational scenario of a MHHS Qualified Supplier inheriting an MPAN from a Supplier that is not MHHS Qualified i.e. a Legacy MPAN CoS to a MHHS Qualified Supplier.

As part of assessing the successful completion of Forward Migration COS processes, Settlement Reports within MHHS will be triggered on completion for a subset of tests i.e. not all tests will include these extra validation steps.

EES indicators pre and post Forward Migration Testing included

5.4 Reverse Migration CoS

Within the Migration Period (starting at Programme milestone M11 and ending at milestone M15) the Registration Service will be capable of supporting Legacy and MHHS MPANs – which will also include the Migration from Legacy to MHHS and (in certain cases) the Reverse Migration from MHHS to Legacy.

The Registration Service will support an MHHS MPAN CoS to a Supplier that is not MHHS Qualified:

- Under this scenario the Registration Service will initiate a Reverse Migration. The MPAN will be automatically reverted to the Legacy Arrangements via the operation of the Reverse Migration process
- Reverse Migration will always occur when a Legacy Supplier Switches a MHHS MPAN

Reverse Migration is facilitated with a combination of Message exchanges from MHHS IFs/PUBs alongside Data exchanges via DTN flows. These Process flows enable re-assignment of legacy Data Collector, Meter Operator and Supplier Roles whilst also transferring back all relevant data.

Design Details for this Process can be found in the following:

[REF-09] [MHHS-DEL965 – BPM-001 – Change of Supply - Reverse Migration v1.0](#)

[REF-10] [MHHS-DEL971 – BPD001 – Change of Supply - Reverse Migration v1.0](#)

[REF-11] [MHHS-DEL966 – BPM-002 – Change of Service - Metering Service - Reverse Migration v1.0](#)

[REF-12] [MHHS-DEL972 – BPD002 – Change of Metering Service - Reverse Migration v1.0](#)

[REF-13] [MHHS-DEL967 – BPM-003 – Change of Service - Data Service - Reverse Migration v1.0](#)

[REF-14] [MHHS-DEL973 – BPD003 – Change of Data Service - Reverse Migration v1.0](#)

SIT Migration Testing will exercise Reverse Migration CoS processes for the following types of MPANs:

- Traditional Metering
- Advanced Metering
- Smart Metering
- Unmetered MPANs.

Note – UMS MPANs can only reverse migrate to HH UMS arrangements.

As part of assessing the successful completion of Reverse Migration COS processes, Settlement Reports within MHHS will be triggered on completion for a subset of tests i.e. not all tests will include these extra validation steps.

EES indicators pre and post Reverse Migration Testing included

5.5 Related MPANs

During Migration, Related MPANs will be treated in line with the business rules set out as part of the MHHS BAU Design throughout the Migration period. Related/Secondary MPANs are both Forward and Reverse Migrated in line with their Primary MPAN utilising a combination of MHHS IFs/PUBs and DTN Flows.

As such, SIT Migration Testing will contain sufficient coverage for Forward and Reverse Migration of Related MPANs against:

- Traditional Metering
- Advanced Metering
- Smart Metering

5.6 Import/Export MPANs

Unlike Related MPANs, the rules that apply to the treatment of Associated Import / Export MPANs as part of Migration will differ to the rules set out as part of the MHHS BAU Design. There will be Migration specific business rules and requirements and the BAU business rules will not become effective until both Associated Import / Export MPANs have been migrated.

Forward and Reverse Migration of Import and Export Meters are done independent of each other. When all linked MPANs are migrated, the Registration Service will undertake auto-alignment of Registration Data.

SIT Migration Testing will contain sufficient coverage against Forward and Reverse Migration of Associated Import and Export Meters in the following areas:

- Traditional Metering
- Advanced Metering
- Smart Metering

Test Scenarios will include Associated Import and Export Meters that have the same Registered Supplier, as well as test scenarios with different Registered Suppliers

5.7 Exception Handling

SIT Migration testing will include Exception Handling Test Scenarios to cover:

- Missing Readings/Deemed Reads
- Cancelled Appointments on Reverse Migration
- Missing MTDs (following exception process)
- Correcting Legacy Data within Registration Service
- Exception Handling of MHHS Messages sent for Legacy MPANs (post Reverse Migration) or Legacy Messages sent for MHHS MPANs (post Forward Migration)
- Any Edge/Failure Tests executed in SIT Functional that are deemed relevant to SIT Migration
- Agent Appointments for a Market Segment that differs to the Market Segment held within the Registration Service

5.8 Reporting

SIT Migration Testing will include verification of the following Reports specific to Migration Processes:

Reporting Service	Report Name	Report Description	Recipients
DIP	Initiated Forward Migrations	A report which will record each IF-031 received for a Migration initiated by a Supplier MPID, by Market Segment and Data Service.	MHHS Programme, Elexon PAF
DIP	Completed Forward Migrations	A report which will record each IF-036 sent for a Migration initiated by a Supplier MPID, by Market Segment and Data Service	MHHS Programme, Elexon PAF
DIP	Completed Reverse Migrations	A report which will record each IF-003 sent for a Migration initiated by a Supplier, by Market Segment and Data Service	MHHS Programme, Elexon PAF
DTS	Incomplete Reverse Migrations	A report which will record where an MPANs related appointment and settlement data has not been updated from a default value via a D0205.	MHHS Programme, Elexon PAF
DTS	NHH Reading	A report to validate that the same readings are utilised to open and close arrangements	MHHS Programme, Elexon PAF
DIP	Incomplete Forward Migrations	A report that will validate each MPAN where an IF-031 was accepted but a subsequent IF-036 has not been sent on or after the effective from date.	MHHS Programme, Elexon PAF

Table 1 - Migration Reports

5.9 Out of Scope

- Pre-Integration Test (PIT) associated with and in advance of SIT Migration Testing, which takes place on the Programme participant's own standalone test environment and is a pre-requisite for entry into SIT Migration. Guidance for this test phase can be found in [REF-15] [MHHS-DEL852 - Pre-Integration Test Guidance](#)
- All the other SIT Stages – these will be the subject of separate Test Approach and Plan documents:

- Component Integration Test
- Functional Test
- Non-Functional Test
- Operational Test
- UIT Test Stages:
 - Qualification Test
 - E2E Sandbox.
- Data cleansing activities and processes prior to Go Live
- Testing of the Transition Design e.g. how Elexon Settlement Systems will dual run during the period of migration
- Explicit testing with a Data Aggregator (DA) Role – Migration based Registration Service Messages sent to DA's is in Scope for testing, however, because there is no material change to a DA, the DA role is out of scope for Migration Testing

6 Test Architecture & Coverage

6.1 MHHS Architecture and Coverage

SIT Migration Testing will be achieved by establishing a test environment where all Central Systems, the Registration Service and at least two Services for each Role are connected via to the Data Integration Platform (DIP), in addition to DCC (CSS only) RECCo (EES) and Electralink (DTN). Note that SIT Participants will have proven DIP connectivity to SIT- A prior to the commencement of CIT/SIT Functional. Connectivity proving to SIT-B ahead of SIT Migration test execution will be required for all Participants. On commencement of SIT Migration, Tests will then be conducted based on the test scenarios and cases in scope. It should be noted that metering components fall outside of the MHHS design scope, and for this reason consumption data generators will be used for the purposes of testing.

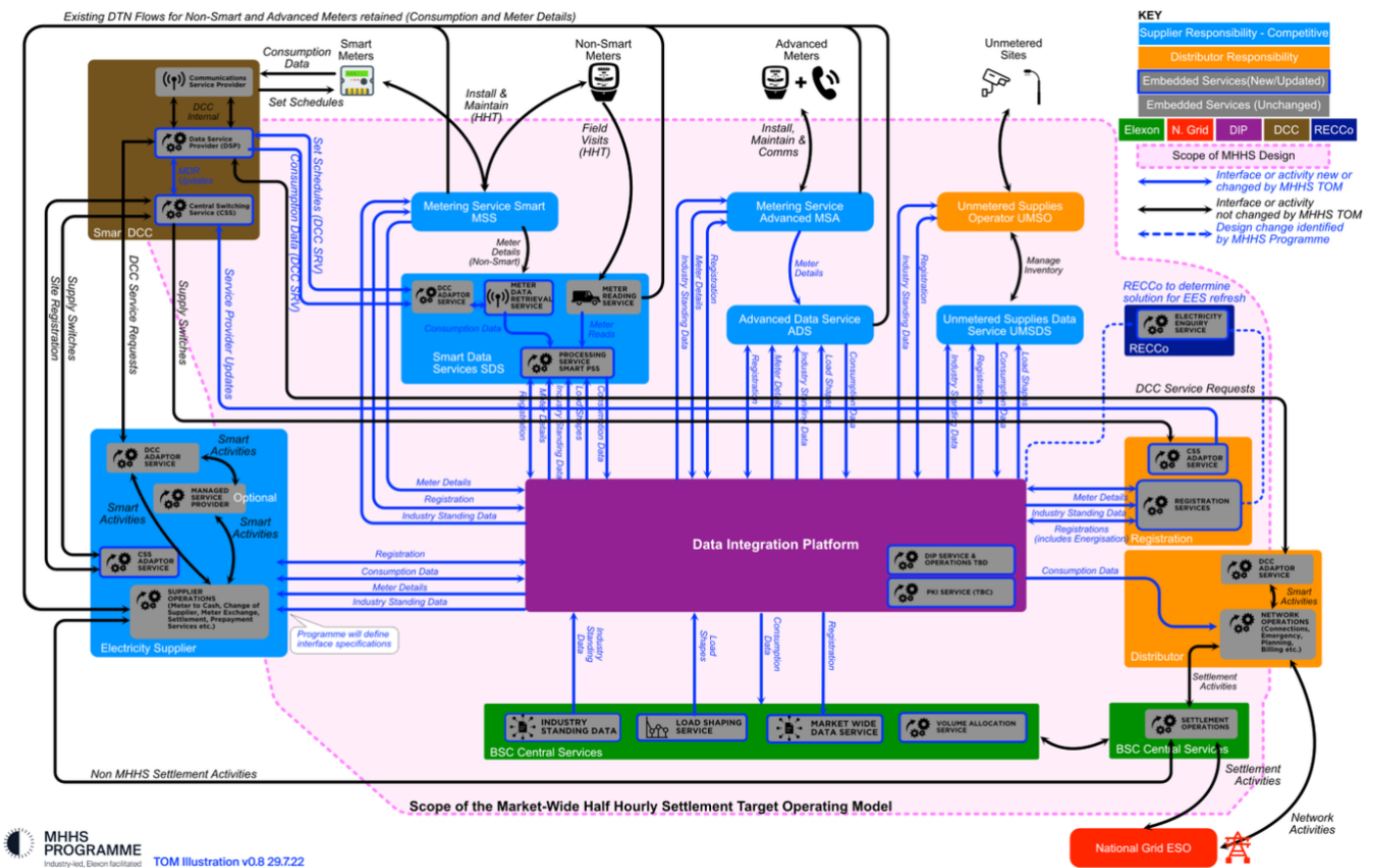


Figure 2 - TOM illustration

6.2 MHHS Environment Requirements

The SIT Migration stage testing will be undertaken within the MHHS SIT-B test environment. SIT participants will be required to connect their SIT B supporting Test Environment (in parallel with retaining connectivity to SIT-A to continue SIT Functional Testing). This is set out in [REF-16] MHHS-DEL618 - Environment Approach & Plan, please refer to this document for the details on:

- Management and tracking environment builds, and associated reference data.
- Planning and allocation in the use of environments for relevant participants, including user access permissions and control.
- Environment Connectivity Proving.
- Maintenance, availability, and monitoring of environments, including the specification of back-ups, exports, refreshes, or roll backs.

- Controlling deployments into environments, including data configuration, version control and release notes.
- Tracking and coordination in resolving environment issues using the defect management workflow.
- Environment requirements for the various stages within PIT, SIT and UIT phases.

7 Test Approach

7.1 Test Preparation

7.1.1 SI Migration Test Scenarios & Migration Test Cases

The SI Test Team will use the MHHS Design repositories to inform MHHS test scenario and test case design. Test Authoring will be aligned to the following Migration Business Processes:

- Forward Migration – CoA
- Forward Migration – CoS
- Reverse Migration – CoS Loss
- Related MPANs
- Import/Export MPANs
- Exception Handling
- Reporting

The Migration Business processes help trace the business journey for each MHHS industry role across the process flow, the underlying systems, the associated message exchanges, and validation rules.

Each participant role can be mapped to its' flows, in relation to each service's participation with the Migration processes, as well as interactions with other roles and participants (process handoffs) across Migration. This is critical for analysing SIT Migration testing requirements.

SIT Migration Scenarios and Test Cases will be developed by the SI Test Team and undergo the following review, consultation, and approval process:

1. LDP Peer Review.
2. SRO, Design Team, and Code Body Review.
3. SITWG Review / Consultation.
4. TMAG Approval.

At the time of writing, SIT Migration Test Scenarios and Test Cases are under development forecast for TMAG Approval:

- SIT Migration Test Scenarios – To be Approved at TMAG Feb-2024
- SIT Migration Test Cases – To be Approved at TMAG Mar-2024

These artefacts will be developed in collaboration with the Code Bodies in support of Qualification Testing.

7.1.2 Test Data

[REF-17] [MHHS-DEL813 - Overarching Test Data Approach and Plan](#) describes how an aligned set of data for Systems Integration Testing (SIT) will be delivered. Please refer to this document for the details of the overall approach to data cuts, data management, allocation, cleansing, storage, archiving and maintenance.

Prior to SIT Migration Test commencement the SI will ensure all necessary data pre-requisites have been implemented and identify sets of suitable data and data generators that participants can use for each of their SIT test cases in scope. Details on process and mechanisms for this are to be documented in [REF-18] [MHHS-DEL1662 - SIT Migration Test Data Approach & Plan](#), which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website, and has been published in conjunction with this document.

7.1.3 Test Management Tool

All SIT Migration Test execution and defects will be managed within the MHHS Azure DevOps (ADO) Test Management Tool.

In preparation for SIT Migration Test all test cases applicable to a participants' role in the test stage will be loaded into their individual ADO test project ready for execution.

7.1.3.1 Test Management Tool Onboarding

The SI will set up all nominated test resources for each SIT participant within ADO and provide the necessary access and user guidance tutorial material, ahead of a participant's entry in the overall SIT Test Phase. At SIT Migration Test start, all Participants will have been active users of the ADO throughout CIT and during the first cycle of SIT Functional Testing. As such, no additional onboarding support is envisaged ahead of SIT Migration Testing.

For reference, details of ADO set up, onboarding and usage is published within [REF-19] [MHHS-DEL1332 - Test Management Tool User Guide](#).

7.1.4 Participant Preparation

In preparation for the SIT Migration Test stage, participants will be required to plan, execute and complete the following activities:

- Pre-Integration Testing relevant to the SIT Migration Test stage – please refer to the [REF-15] [MHHS-DEL852 - Pre-Integration Test Guidance](#)
- Environment Connectivity proving associated with the MHHS SIT-B test environment - please refer to the [REF-16] [MHHS-DEL618 - Environment Approach & Plan](#)
- Test Data allocation has been loaded and verified – please refer to the [REF-17] [MHHS-DEL813 - Overarching Test Data Approach and Plan](#) and [REF-18] [MHHS-DEL1662 - SIT Migration Test Data Approach & Plan](#) which can be found on the [SIT Migration Test & Test Data Approaches & Plans](#) page of the MHHS Website and has been published in conjunction with this document.
- Participants have confirmed they have resources with the requisite skills and system access to support the test stage execution and defect management process – note this will be subject to assurance.

7.1.4.1 Participant's adopting the Placing Reliance Policy

SIT Participants choosing to place reliance as per the [REF-20] [MHHS-DEL1064 - Placing Reliance Policy](#) will have been processed ahead of CIT commencement. Any agreement made between the Programme/Code Bodies and the Participant for CIT, will be re-assessed prior to entry in each subsequent SIT Test Stage.

This re-assessment will take place ahead of SIT Migration Testing, and a decision regarding the appropriateness to continue with the same approach through SIT Migration will be communicated prior to SIT Migration Test Execution commencement.

When the SI-specified SIT Migration Scenarios and Test Cases have been confirmed for SIT Migration, if a Participant has elected to adopt the placing reliance policy in SIT, the Programme will request confirmation that the policy includes SIT Migration.

If yes, the programme will assure this is in line with the original CIT/Stage 1 proposals, with any changes being highlighted to the Code Bodies for assessment and agreement.

Please note this review will be undertaken as part of the SIT readiness requirement for SIT Migration, occurring circa 2 months ahead of SIT Migration test execution.

7.1.4.2 Participant SIT Test Readiness Report

Prior to SIT Migration Test commencement each participant will be required to provide a Participant SIT Migration Test Readiness Report as a self-declaration of their completion status in relation to preparation activities outlined in section 7.2, this will need to include any exceptions and work off plans that have been agreed and must be signed by senior stakeholders within the participants' organisation. Please note the SI will provide a report pro-forma for participants to complete.

The SI will be engaged in Test Assurance engagement and monitoring throughout these preparation activities; however, the report serves as a formal position at the point of SIT Migration Test entry governance.

Participant SIT Migration Test Readiness Reports will be required ahead of SIT Migration Test commencement.

7.2 Test Entry Criteria

The following deliverables have been produced by the SI, reviewed, assured, and approved as appropriate for the SIT Migration Test Stage:

- Test Approach and Plan.
- Test Data Approach and Plan.
- Test Scenarios.
- Test Cases.
- Requirements Traceability Matrix.
- Test execution schedule (SIT participants will be consulted).

The following have been set up and confirmed by the SI as ready for test commencement:

- Test data generators have been made available to relevant test participants.
- Test data has been allocated to participants.
- Test Management Tool
 - Tests have been loaded.
 - Tests have been assigned to relevant participants.
- Defect Management process.
- Environment Management process.
- Release Management process.
- Test governance.
- Test meetings.
- Test Reporting.

For Participants entering SIT Migration Test:

- Evidence of successful PIT Completion for the SIT Migration Test stage has been submitted, assured by the SI and any work off plans agreed and tracked - please refer to [REF-15] [MHHS-DEL852 - Pre-Integration Test Guidance](#) for full details of the PIT exit criteria.
- MHHS SIT-B Test Environment Connectivity proving has been successfully completed and evidence assured by the SI.
- Test Data allocation has been loaded, verified, and assured by the SI.
- Participant users have been onboarded to the MHHS Test Management Tool.

- Participants have confirmed they have resources with the requisite skills and system access to support the test stage execution and defect management process.
- Participants that are adopting the [REF-20] [MHHS-DEL1064 - Placing Reliance Policy](#) in SIT Migration have a confirmed RACI.

7.2.1 SI Test Readiness Report

Prior to SIT Migration Test entry the SI will compile an overarching SIT Migration Test Readiness report on the status of these entry criteria, which will note any exceptions or work off plans that have been agreed and include the SI recommendation to proceed or pause. This report will form the basis on which governance approval to commence SIT Migration Test execution will be sought via the MHHS Governance Framework – please see section 10.1.

7.3 Test Execution

Test execution will be conducted within a single test cycle, retaining the ability for final regression testing ahead of the M10 Milestone.

During test execution the SI Test Team will coordinate and support the execution in particular where hand offs of test cases are required between participants.

Prior to testing SIT Migration, volunteer participants will have been paired with contracted partners where possible or other participants in order to support Forward and Reverse Migration Change of Supply / Service / Agent tests.

It should be noted that as a condition of participation each SIT PP will be required and obligated to support other participants' testing, so a participant should look at the tests for all Roles and be prepared to support those tests where involvement is needed to ensure the test can be run in an end-to-end manner. For core capability providers (Elexon (Helix), DIP, LDSOs / (St Clements), RECCo, DCC, ElectraLink) this will be up until the end of all SIT testing, some non-core capability PPs may be required to continue involvement beyond the completion of their own tests to maintain a minimum viable cohort for the purpose of supporting the remaining participants to complete their SIT testing.

SIT Migration Testing will also require Legacy Agent involvement e.g. Data Collectors to support MHHS Testing

7.4 Minimum Viable Cohort

Since the purpose of SIT Migration is to prove the MHHS Migration design, the SIT Migration objective is achieved when a group representing the Central Systems and all BSC and REC governed MHHS roles has completed the necessary testing, we have called this group the **Minimum Viable Cohort** and its members will be identified prior to SIT Migration Test according to the speed at which they are completing their tests through SIT Functional Testing.

The MVC will consist of:

- **All providers of Central Systems** (DIP, Elexon, CSS, RECCo, Electralink)
- **One of each of St. Clements** (MPRS), **i/DNOs** (UMSO and Network Operations Services)
- **At least two Service Providers** for each of the following market roles:
 - Metering Services Smart (MSS)
 - Metering Services Advanced (MSA)
 - Smart Data Services (SDS)
 - Advanced Data Services (ADS)

- Unmetered Supply Data Services (UMSDS)
- **Two Suppliers** (Change of Supply (CoS)).
- **One HHDC and NHHDC**
- **One HHMOP and NHHMOP**

Note the MVC will be the first set of participants to qualify and Go-live at M10.

All participants will be encouraged to keep pace with the MVC during SIT, as once formed, the objectives of this cohort will be prioritised to exercise the MHHS solution and meet the overall SIT objectives as soon as possible. However, SIT participants not in the MVC will be supported through SIT and will be provided additional time to complete their testing (see section 8.1), as such some MVC participants may be asked to continue to support SIT execution in the later stages to maintain a sufficient MHHS cohort to complete all SIT PP tests.

7.5 Test Prioritisation

Test prioritisation will be carried out according to:

- The need for the test to demonstrate basic functionality as a prelude to more complex testing or during the step-by-step integration of components.
- The risk inherent in the functionality being tested.

Tests for basic functionality will be written and executed first and then the risk assessment will be used to prioritise test preparation and test execution activities for the remaining tests. For the risk-based prioritisation, each test will be prioritised by the relevant stakeholders in terms of its market impact (i.e., if the solution element covered by the test failed in live use, what would be the impact on the solution) and technical probability (i.e., how likely is it that test issues will be present in the solution element). This prioritisation will use a High, Medium, Low scale to group tests into three categories:

1. tests which cover solution elements that a) are very likely to contain test defects and/or b) would cause major market impact if they failed.
2. tests which cover solution elements that a) are likely to contain test defects and/or b) would cause significant market impact if they failed.
3. tests which cover solution elements that a) are unlikely to contain test defects and/or b) would cause only minor market impact if they failed.

Please note consideration will also be given to tests that are required to “prove” the overall design i.e. MVC vs. tests that do not fall into this category but are required for individual participants to meet their Qualification requirements.

7.6 Test Pass and Fail

A test will pass if the actual result matches the expected result. Where this is not the case, an appropriate defect will be raised.

If the subsequent triage process determines that the defect has been raised in error (e.g. due to a misunderstanding), if the test can then be concluded successfully the test will be reset from “fail” to “pass”.

There is also the possibility of marking a test “descoped” by agreement of all parties concerned and on recording of a valid reason.

Where a test has failed, but during triage a workaround for the associated defect has been identified, which in turn reduces the severity of that defect, the associated failed test can be re-executed using the recommended workaround, if this enables the test to be concluded successfully then the test can be set to “passed with workaround(s)”. Special attention will be given to any tests that have been set to this status during execution, and where a full fix becomes available during the SIT test stage the test will be scheduled for re-testing. If any tests remain in this state at the end of testing, then they will be clearly marked in the test completion report and agreement sought by all concerned parties (including Code Bodies) that this acceptable for go-live and that an agreed work off plan is in place.

Under some circumstances tests will be marked as “blocked” if they were due to be executed in the schedule but are unable to be due to a known defect. This status will be used appropriately where it assists in informing management stakeholders of the impact of open defects on testing progress or completion.

Some tests may be set to “deferred” if it has been agreed by all concerned parties that they will be executed in a later cycle, release, or test phase.

7.7 Test Data Usage

Each SIT Migration Test participant will be allocated a set of suitable test data for each test case in scope for their role. All MPANs records used in testing will be allocated a unique reference ID that will be used in all communications including test result and defect logging in ADO.

Full details of how test data will be generated and managed during test execution are to be documented in [REF-18] MHHS-DEL1662 - SIT Migration Test Data Approach & Plan which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website and has been published in conjunction with this document.

7.8 ADO

ADO will be used for:

- Managing test case execution, hand-offs between SIT Participants and evidence capture.
- Tracking and reporting test execution progress and coverage.
- Raising and managing defects (including Environment issues).
- Tracking and reporting defect status and progress.
- Release Management.
- Maintaining requirements to test traceability.
- Tracking and reporting test coverage status.

SIT participants will be expected to keep ADO updated in real time as execution is carried out.

Details of the ADO set up are published within [REF-19] [MHHS-DEL1332 - Test Management Tool User Guide](#).

7.9 Test Evidence Capture

Programme participants conducting SIT Migration Test will need to provide test evidence for the test steps in ADO where it has been indicated as required, note that this will be expected to be captured and uploaded into ADO at the point of test execution, or no later than the end of the business day, any exceptions to this timing of evidence upload will need to be specifically agreed with the SI. This evidence will be used during test assurance to validate actual vs. expected result of the test. In addition, test evidence will be critical for triaging defects, and this may require both the evidence of the failure event, and upstream test step evidence to assist in analysing the failure.

Test Evidence may also be used by Programme participants when responding to the Qualification Assessment Document, to demonstrate adherence to relevant Qualification Requirements.

Screenshots of the test system, messages and or electronic logs of messages must be provided as appropriate and should be annotated with the Test Case reference and test step that they apply to. The evidence requested is standard for any test assurance process and should be like that required by the Programme participants' own quality gate and internal audit.

7.10 Placing Reliance

Where applicable, day-to-day test execution will be managed and coordinated in accordance with the Placing Reliance RACI that has been re-validated during SIT Migration preparation with those participants that have chosen to adopt the policy to meet their test requirement.

Please note that if during test execution a SIT Participant wishes to execute testing differently to what was agreed in their SIT Placing Reliance proposals (please see [REF-20] [MHHS-DEL1064 - Placing Reliance Policy](#) for details), then they must notify the Programme (the Programme will then co-ordinate with Code Bodies), and if deemed necessary this may require them to meet additional SIT-exit or Qualification requirements.

7.11 Defect Management

The MHHS programme defines a defect, in respect of any tests, as:

- Anything that is preventing the execution of the tests; or
- Once commenced or executed, the test has an unexpected or unexplained outcome or response.

A defect is raised in respect of any of the following:

- Failure in the way systems (or system components) operate (both functionally and non-functionally).
- Failure in the way systems have been integrated and/or communications between these systems.
- Failure in the performance of test emulators, simulators, or data generators.
- Failure in relation to different Test environments.
- Failure in relation to the Test specifications, cases, data or expected results.
- Documentation Issue.

All defects will be raised and managed within MHHS Test Management Tool (ADO) and will follow the process depicted below.

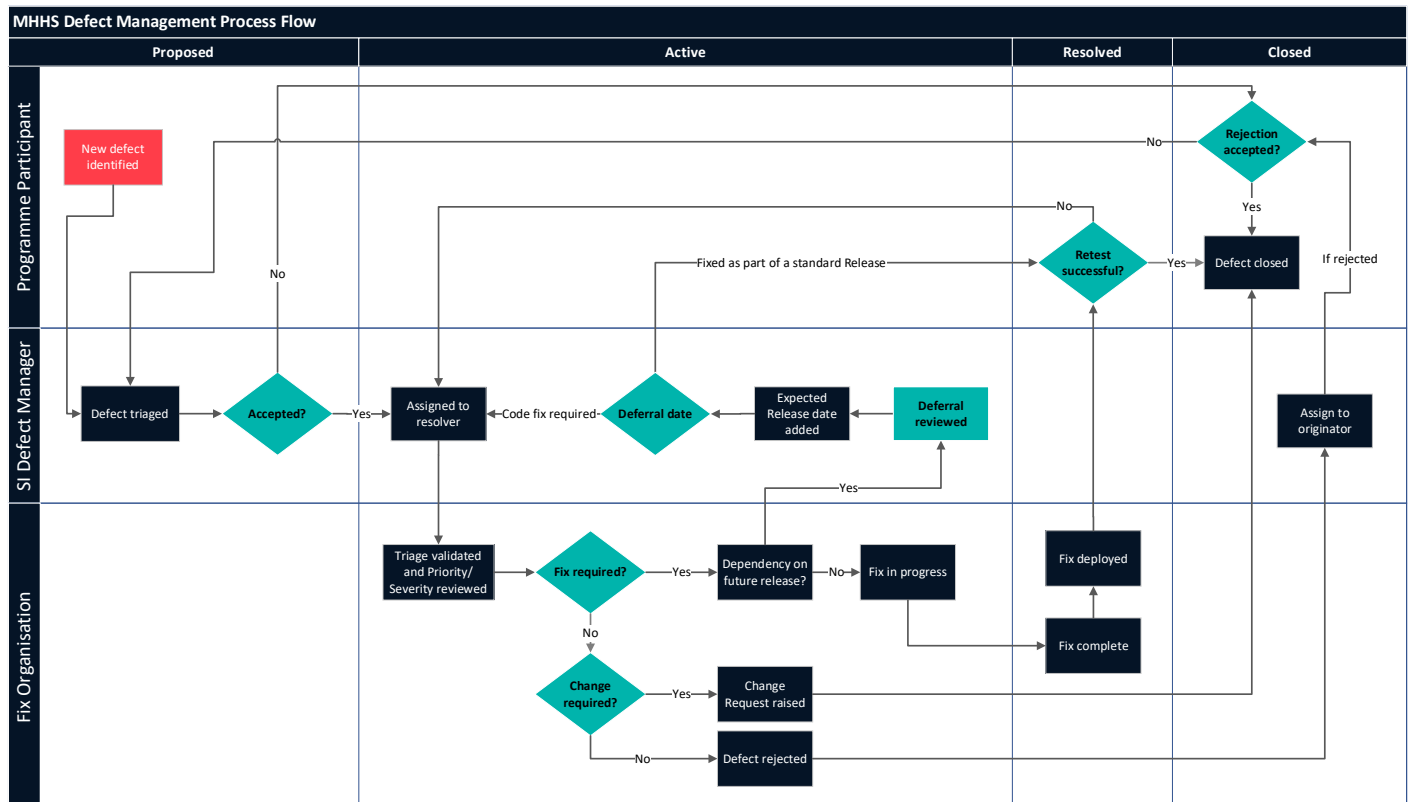


Figure 3 - ADO Defect Process Flow

Defects arising within the SIT Migration Test stage will be managed in accordance with the [REF-21] [MHHS-DEL466 - Defect Management Plan](#).

7.12 Release & Configuration Management

When defects arise that require a code fix, code releases will be managed in accordance with the [REF-22] [MHHS-DEL1089 - Release and Configuration Management Approach & Plan](#).

During the assessment of any release, the appropriate level of retesting and regression will be identified, and the schedule amended to accommodate the changes.

Each participant will be expected to maintain a test environment for the purposes of testing releases ahead of deployment into the MHHS SIT-B test environment (this will be a PIT type environment managed in the participants' own network domain). A condition of release deployment will be evidence of release testing and regression testing having been undertaken which will be reviewed by the SI test assurance team.

7.13 Regression Testing

Test cases will be identified as candidates for a core regression pack during test preparation.

During SIT Migration test execution, regression testing requirements will be assessed throughout on a case-by-case basis in relation to any defects that have been fixed with a code release, including assessment of the impact the release may have on testing that had been previously executed within the test stage.

7.14 Test Suspension and Resumption Criteria

During SIT, any PP has the right to suspend testing where it considers necessary, by agreement with the SI team. Testing will only recommence when agreed between the PP and SI team. Where the SI team believes there are reasonable grounds to suspend all testing, this can be done by agreement with the SRO. In the case of any suspension the IPA, Code Bodies and OFGEM would also be informed.

Reasonable grounds for suspending testing may include any of the following:

- Application components are not available as scheduled.
- A testing issue prevents further useful testing from proceeding.
- A large percentage of planned test cases for a given day fail and significant root cause analysis needs to be undertaken to establish the cause. The outcome of any root cause analysis activity may result in testing being suspended; or
- Test cases to be executed are in a "blocked" status due to an identified testing issue.

Where testing has been suspended, either the SI team or the PP (as appropriate) will produce a test suspension report reflecting the cause of the suspension and the actions to be taken by whom and when, for testing to resume – the test resumption criteria. Testing will only resume once the PP has demonstrated to the SI team or the SI team to the SRO that the test resumption criteria have been met.

7.15 Participant Test Completion Reports

As each SIT participant concludes their testing within the SIT Migration Test stage, they will be required to provide an individual Test Completion Report, this will need to include any exceptions and work off plans that have been agreed.

Please note the SI will provide the test completion report format for all participants to complete, the expectation is that participants will provide test completion reports within 5 working days of when they have completed their stage testing.

The SI will be engaged in Test Assurance engagement and monitoring throughout the execution activities; however, the report serves as a formal position at the point of SIT Migration Test exit governance.

7.16 Test Exit Criteria

- All tests have been run to completion or any exceptions are documented and agreed.
- All priority 1 and 2 tests have passed, and the overall test pass rate is 85% or above or any exceptions are documented and agreed.
- There are no outstanding severity 1 or 2 defects, or any exceptions are documented and agreed.
- Severity 3 and 4 defect, exit thresholds:
 - 10% of test cases allocated x Severity 3 Defects
 - 20% of test cases allocated x Severity 4 Defects
- Work-off plan for any outstanding defects has been produced and agreed.
- Test results and evidence has been captured in the test management tool.
- Defects have been captured in the defect management tool.
- Any required regression testing has been successfully completed.

7.17 Test Exit Defect Thresholds

The following Test Exit Defect Threshold rules will be applied to the SIT Migration Test Stage:

- 0 x Severity 1 Defects
- 0 x Severity 2 Defects
- 10% of test cases allocated x Severity 3 Defects
- 20% of test cases allocated x Severity 4 Defects

Each participant, based on their Market Role, will be allocated a subset of SIT Migration Test Cases for execution.

The 10% and 20% calculations will be based on this allocation, e.g. a participant is allocated 150 SIT Migration Test Cases to execute (Tests where the participant is the subject of the Test and where they are involved in the test), which would result in Defect Test Exit Thresholds being set for that specific Programme participant as:

- 0 x Severity 1 Defects
- 0 x Severity 2 Defects
- 15 x Severity 3 Defects
- 30 x Severity 4 Defects
- Any exceptions to this would need to be documented and agreed.

Each SIT Participant will be informed of their Threshold figures prior to Migration Test Execution commencement.

7.18 SI Test Completion Report

At the end of the SIT Migration Test for both the 'MVC' and 'Other SIT PP' cohorts, the SI will produce an overarching test stage completion report which will cover:

- Test Execution Results (Anonymised as appropriate i.e., identified by market role rather than organisation).
- Summary of Test Status (Planned vs. Actual).
- Passed with Workarounds (If applicable).

- Failed Tests (If applicable).
- Descoped or Deferred Tests (If applicable).
- Status of work off plan from previous phase / stage (If applicable).
- Defects Summary (Anonymised as appropriate i.e., identified by market role rather than organisation).
- Raised and closed (Inc closure reason analysis).
- Outstanding Defects with their status and work off plan.
- Outstanding Defects (By Priority and Severity).
- Outstanding Defects (By Test Participant - identified by market role rather than organisation).
- Defects Analysis (Anonymised as appropriate i.e., identified by market role rather than organisation)
 - By Category.
 - By Closure Reason.
- Defect Lessons Learned and Improvement Plans for the next phase / stage.
- Test Exit
 - Exit Criteria Status.
 - Work Off Plan (Note Code Bodies will be consulted in ref to role-based Qualification requirements).
- Overall Test Execution Observations, Lessons Learned and Improvement Plans for the next phase / stage (If applicable).
- Conclusion and Recommendation.

This report will form the basis on which governance approval of the completion of the SIT Migration Test stage for both the 'MVC' and 'Other SIT PP' cohorts will be sought via the MHHS Programme Governance Framework – please see section 10.1.

8 Test Schedule

8.1 SIT Migration Test

SIT Migration Test is the 3rd stage within the System Integration Test schedule.

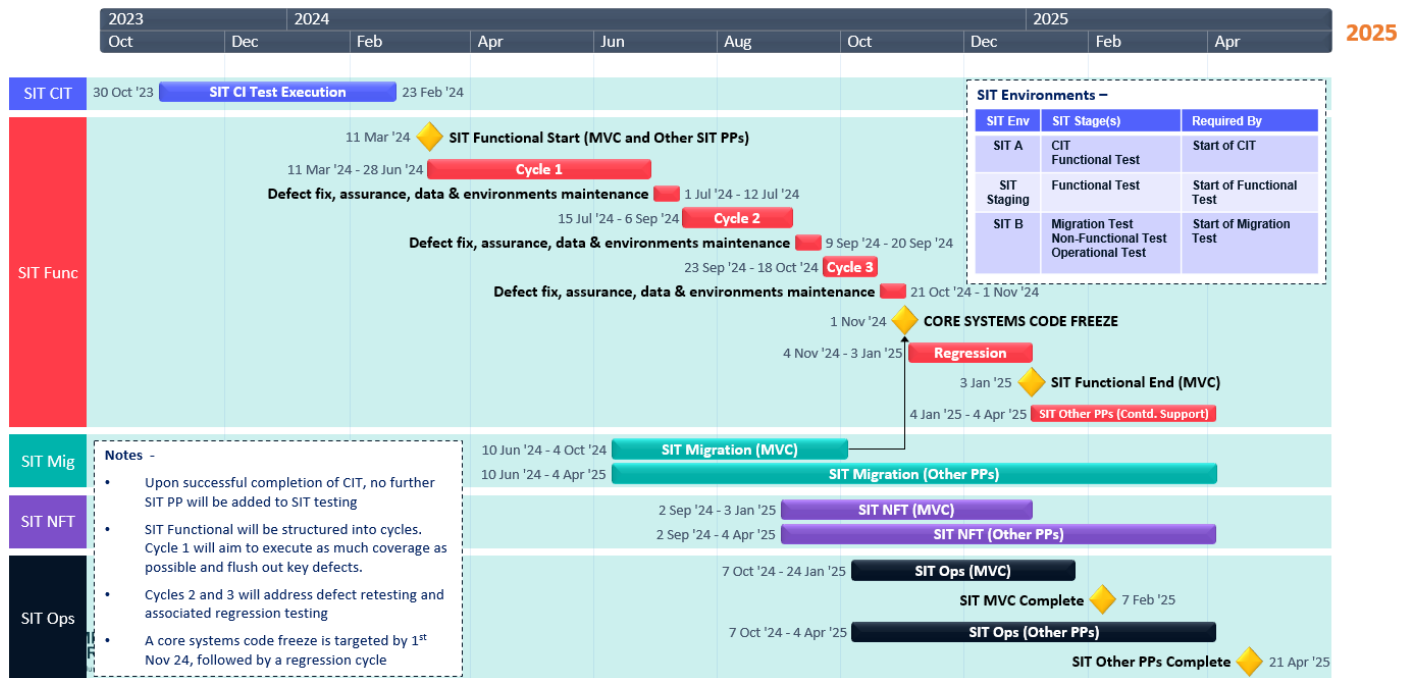


Figure 4 - SIT Stages Plan on a Page

8.2 SIT Migration Test Preparation Schedule

SIT Migration readiness dates that all PP’s will be required to meet ahead of test execution commencement can be found below. Please note that this also includes the schedule for test assurance and governance activities. It is recommended that participants refer to [REF-23] [MHHS-DEL1139 - MHHS Outline Plan](#) as the primary up to date source to confirm MHHS programme tasks and dates.

For details of activities, deliverables and assurance associated to PIT please refer to [REF-15] [MHHS-DEL852 - Pre-Integration Test Guidance](#).

9 Test Management & Organisation

The following resources will be required to prepare and execute the SIT Migration Test stage. The resources below is a guideline to the types of resource required by organisations participating in the day-to-day activities of Migration Testing. It is the responsibility of each Participant to provide sufficient and appropriate resources to support the Test Stage.

Organisation	Role/Resource Type
SIT Participants	<ul style="list-style-type: none"> • Test Manager • Test Analyst • Defect Manager / Analyst • Programme Management • Infrastructure, application, and network support • Release and configuration management support • Environment Management support
SI Team	<ul style="list-style-type: none"> • Test Manager • Test Lead / Analyst(s) • Test Data Lead / Analyst(s) • Defect Manager / Analyst(s) • Programme Management • Environment Manager • Release Manager • Test Architect / Assurance Manager • Test Assurance Lead / Analyst(s) • Test Management Tool Lead / Analyst(s)

Table 2 - Test Teams & Roles

9.1 Test Meetings

Daily Test Meetings

During Test Execution, the SI will hold regular stand-up meetings with each individual test Participant (and / or their delegated 3rd Party testing provider) to:

- Review the status of testing for the previous day.
- Review planned testing for the day.
- Review any changes required to scheduled testing e.g. for blocking Defects.

Where appropriate both the Participant and other party representatives who are engaged in testing together at the time may be invited into joint stand-ups where there is requirement to discuss and coordinate on cross party activities or blockers.

The SI may also invite SME's both from within the central programme or from SIT Participant organisations to discuss specific topics concerning defects, environmental or data issues or releases.

Weekly Test Execution Progress Meetings

The SI will conduct weekly Test Progress meetings with all test participants engaged in testing at that point in the schedule, to:

- Collaborate with all Test Participants on matters relating to Test Execution
- Review testing progress for the week to date.
- Review planned testing for the following week.
- Review any changes required to scheduled testing e.g. for blocking Defects.

This meeting will also involve representatives from the Environments, Data, Defect Resolution, Release Management and Code Bodies.

Note that the default period for reporting will be from Friday to Thursday to allow for collation and distribution of reports. The meeting will be conducted using Microsoft Teams.

Defect Management Meetings

Please refer to the [REF-24] [MHHS-DEL466 - Defect Management Plan](#).

Environments and Release Management Meetings

Please refer to:

- [REF-16] [MHHS-DEL618 - Environment Approach & Plan](#)
- [REF-22] [MHHS-DEL1089 - Release and Configuration Management Approach & Plan](#).

Fast Track Implementation Group

The SI will provide status updates within the FTIG forum and escalate any blocking issues which may need collaboration at this forum in order to resolve.

9.2 Test Roles & Responsibilities

9.2.1 SIT Migration Test RACI

Activity	Participant	SI	SI Test Assurance	Code Bodies	SITWG	TMAG
SIT Migration Test Scenarios	I	R,A	C	C	C	I
SIT Migration Test Scenarios Approval	I	C	C	C	C	R,A
SIT Migration Test Cases	I	R,A	C	C	C	I
SIT Migration Test Cases Approval	I	C	C	C	C	R,A
SIT Migration Test Approach and Plan	I	R,A	C	C	C	I
SIT Migration Test Approach and Plan Approval	I	C	C	C	C	R,A
Test Data Allocation	C	R,A	C	I	C	I
Loading and assigning of Test Cases in ADO	I	R,A	I	I	I	I

PIT Preparation, Execution and Completion	R,A	C	I	I	I	I
Coordination of SIT-B Environment Connectivity Proving	C	R,A	I	I	I	I
SIT-B Environment Connectivity Proving	R,A	C	I	I	I	I
Test Data Load and Verification	R,A	C	I	I	I	I
Participant mobilisation of appropriate Test and Support Resources	R,A	C	I	I	I	I
Participant SIT Migration Test Readiness Report	R,A	C	I	I	I	I
SI SIT Migration Test Case Prioritisation	I	R,A	C	C	C	I
SI SIT Migration Test Readiness Report	C	R,A	C	I	I	I
SI SIT Migration Test Readiness Report Approval	I	C	C	I	C	R,A
Decision to commence SIT Migration Test Execution	I	C	C	I	C	R,A
Completion of assigned SIT Migration Test Case Execution within ADO (inc. evidence capture)	R,A	C	I	I	I	I
SIT Migration Test Case Execution Coordination and Support	C	R,A	I	I	I	I
Defect Management Coordination	C	R,A	I	I	I	I
Fixing assigned Defects (inc. Environment Defects)	R,A	C	I	I	I	I
Coordinating Releases & Code Deployments	C	R,A	I	I	I	I
Deployment of Releases	R,A	C	I	I	I	I
Chairing Test Meetings	C	R,A	I	I	I	I
Participant Test Meeting Attendance	R,A	C	I	I	I	I
Reporting on Overall Test Execution and Completion	C	R,A	C	I	I	I

Progress and RAG status						
Participant SIT Migration Test Completion Report	R,A	C	I	I	I	I
SI Participant Test Completion Assurance	C,A	C	R	I	I	I
SI SIT Migration Test Completion Report	C	R,A	C	C	I	I
SI SIT Migration Test Completion Report Approval	I	C	C	C	C	R,A

Table 3 – SIT Migration Test RACI (R = Responsible, A = Accountable, C = Consulted, I = Informed)

10 Test Governance & Reporting

10.1 Governance

SIT Migration Testing will operate in accordance with [REF-25] MHHS-DEL030 - Programme Governance Framework adhering to the decision making and escalation principles set out within.

The table below is an extract from the [REF-26] MHHS-DEL1140 - Milestone Register identifying SIT Migration Test milestones and the decision-making authority (governance group). The SI will be responsible for reporting status and RAG for all Tier 2 and 3 TMAG milestones.

Milestone Tier	Level 1 Milestone	Milestone ID	Milestone Title
T3		T3-TE-0071	SIT Migration Testing Test scenarios approved
T3		T3-TE-0056	SIT Migration Testing Test Completion Report (Other Participants) Approved
T2		T2-TE-0800	SIT Migration Testing Test Completion Report (Minimum Viable Cohort) Approved
T3		T3-TE-0025	SIT Migration Testing Test Cases Approved
T3		T3-TE-0018	SIT Migration Testing Test Approach & Plan approved
T3		T3-TE-0038	SIT Migration Testing Start
T2		T2-TE-0650	SIT Migration Testing Preparation Complete
T3		T3-TE-0051	SIT Migration Testing End (Other Participants) (incl. confirmation that PPs have submitted their Test Completion Reports to Programme for assurance)
T3		T3-TE-0043	SIT Migration Testing End (Minimum Viable Cohort) (incl. confirmation that PPs have submitted their Test Completion Reports to Programme for assurance)

Table 4 – SIT Migration Test Milestones

10.2 Reporting

Once test execution for the test stage has started, the responsible party will ensure that test execution progress is kept up to date in ADO and tracked within configurable ADO dashboards (See below for an ADO dashboard example). The SI team will then produce regular aggregate progress reports based on this information. The reports will be collated by the SI team for use within Test progress, Defect Management and Release Meetings and for upward reporting to the SRO, FTIG, SITWG and TMAG. Reports are configurable but will generally show:

- Actual number of test cases executed vs. planned, cumulative trend.
- Actual number of test cases passed vs. planned, cumulative trend.
- Actual number of open and closed test defects vs. cumulative trend.
- Actual number of test defects outstanding, split by severity / priority.
- Test and requirement coverage by priority.
- Test and requirement coverage across MVC and all SIT Participants.
- Progress against test exit criteria.

- Progress against any work-off plan from previous test stage.
- Risk, dependency and assumption status.
- Overall RAG status.

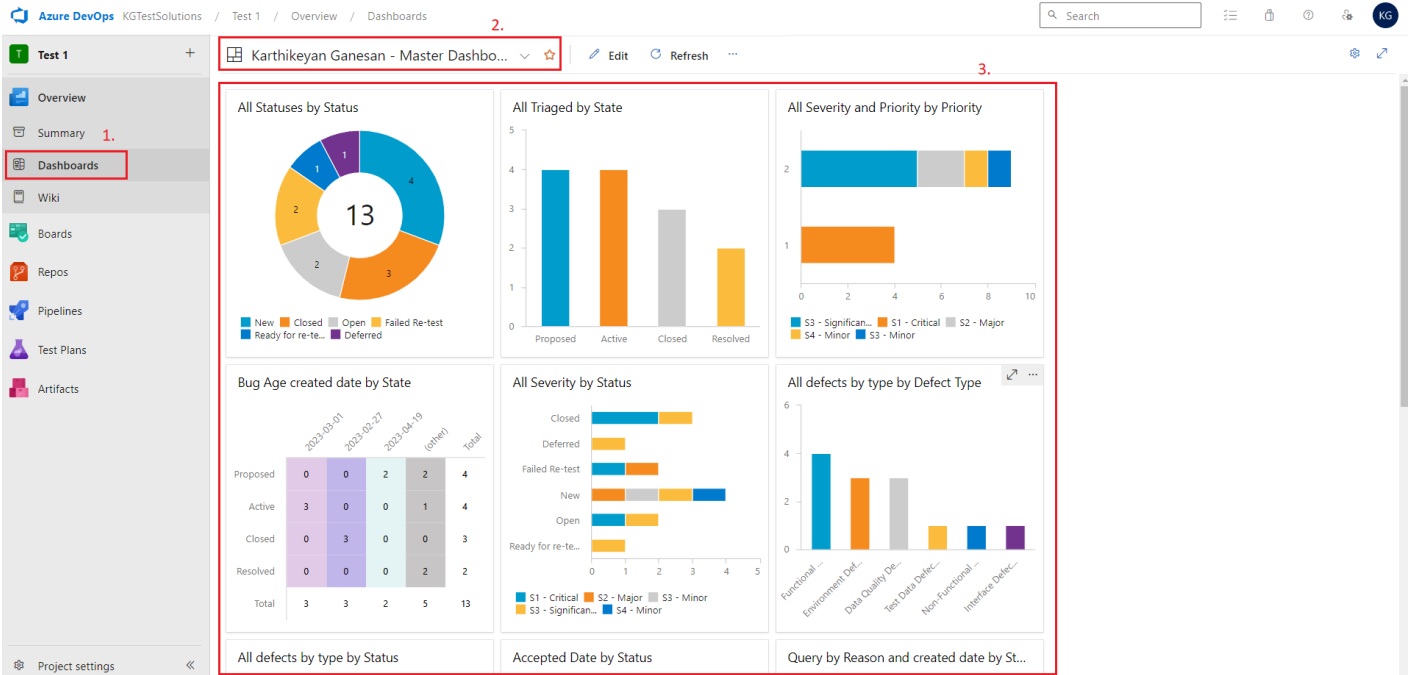


Figure 5 - ADO Dashboards

11 Test Assurance

11.1 Approach

SI Team will carry out monitoring and outcome assurance throughout PIT, details of this approach can be found within the [REF-15] [MHHS-DEL852 - Pre-Integration Test Guidance](#).

In addition to this SI will engage in assurance of Programme participant SIT readiness activities i.e.

- Environments.
- Test Data.
- Test and Support Resource mobilisation.
- Test Resource readiness for execution.

During and following SIT Migration Test execution the SI will undertake assurance of test execution results with a specific focus on:

- Validating evidence of actual vs. expected results of tests.
- The quality of supporting information and evidence within defects.
- Evidence of local defect retesting prior to fix release deployment to the SIT-A environment.
- Test Stage Exit Criteria and Completion Status.