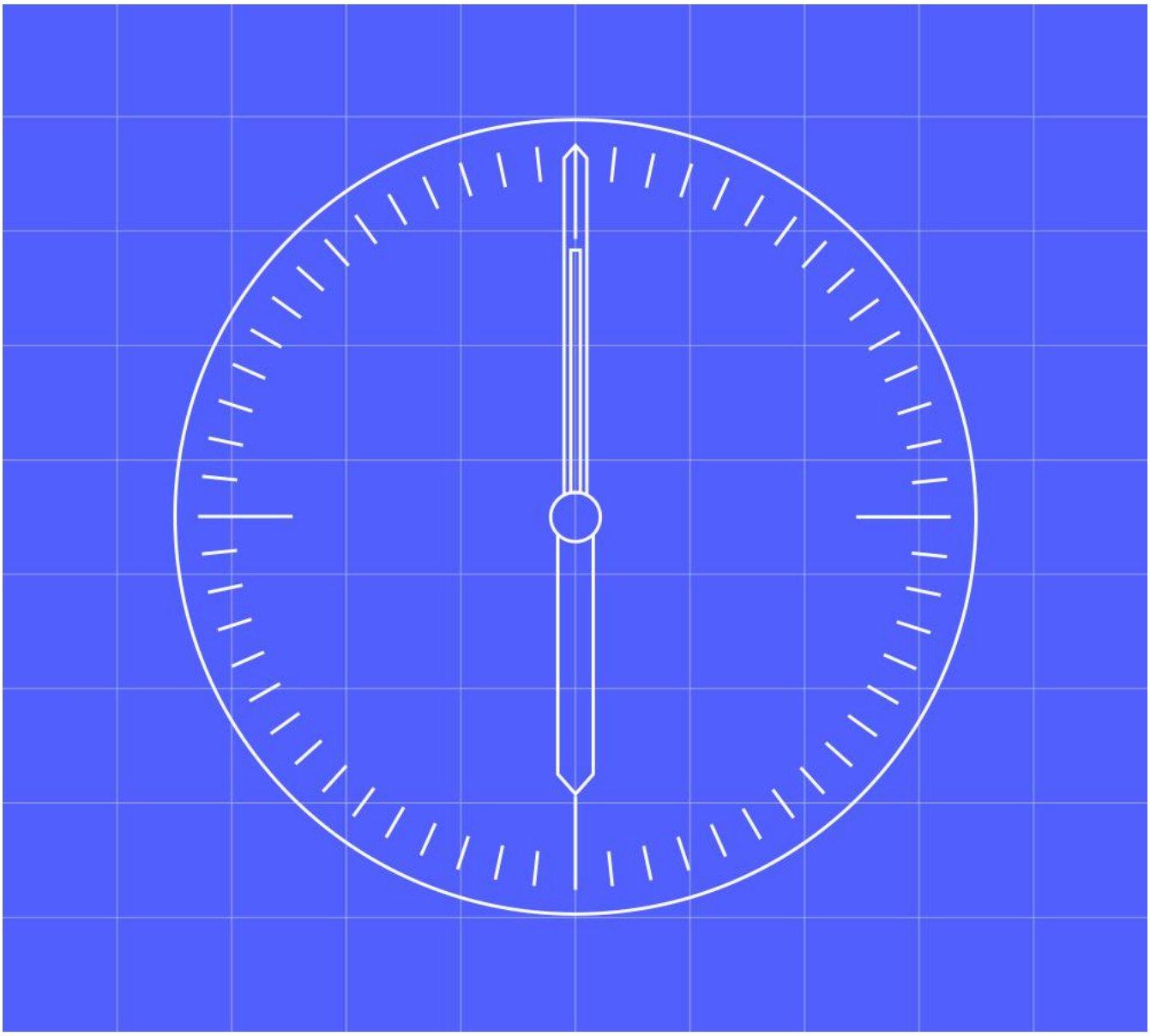
MHHS PROGRAMME
Industry-led, Elexon facilitated

Qualification Approach & Plan



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2 House Keeping

2.1 Change Record

Date	Author	Version	Change Detail
27/03/2023	Balancing and Settlement Code Company (BSCCo)and REC Code Manager	0.1 (Draft)	First draft version – this document has not been through the BSC and REC PAB governance process yet. The information provided may change, subject to review.
02/05/2023	BSCCo and REC Code Manager	0.2 (Draft)	Second draft version – this document has been updated to reflect consultation comments for QWG review ahead of submission to TMAG, BSC and REC PABs2 for approval.
31/05/2023	BSCCo and REC Code Manager	1.0	Version 1.0 approved by TMAG and the BSC and REC PABs
31/01/2024	BSCCo and REC Code Manager	1.1 (Draft)	First draft of the second iteration – this document has been updated following the publication of the MHHS-DEL1259 - SIT Functional Test Approach and Plan v1.0 on 16/08/2023 and MHHS-DEL1781 – SIT Migration Test Approach and Plan v1.0 on 20/12/2023. This version has not been through the BSC and REC PAB governance process yet. The information provided may change, subject to review.
05/03/2024	BSCCo and REC Code Manager	1.2 (Draft)	Second draft of the second iteration – this document has been updated to reflect consultation comments for QWG review ahead of submission to QAG, BSC and REC PABs for approval.

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2.2 Linked Documents

Name	Link
MHHS Outline Plan	MHHS-DEL1139 - MHHS Outline Plan v5.7
E2E Testing and Integration Strategy	MHHS-DEL315 E2E Testing & Integration Strategy v1.0
Pre-Integration Testing Guidance	MHHS-DEL852 Pre-Integration Testing Guidance v2.1
Environment Approach and Plan	MHHS-DEL618 Environment Approach and Plan v2.5
MHHS Placing Reliance Policy	MHHS-DEL1064 MHHS Placing Reliance Policy V1.0
End-to-End Solution Architecture	MHHS-E2E001 MHHS TOM – End-to-End Solution Architecture v3.0
SIT Functional Test Approach and Plan	MHHS-DEL1259 – SIT Functional Test Approach & Plan v1.0
SIT Scope for Voluntary Participants' Planning	MHHS-DEL872 - SIT Scope for Voluntary Participants' Planning v0.6
Overarching Test Data Approach and Plan	MHHS-DEL813 - Overarching Test Data Approach and Plan v1.0
SIT Test Data Approach & Plan	MHHS-DEL1367 - SIT Functional Test Data Approach & Plan v1.0.docx
Test Management Tool User Guide	MHHS-DEL1332 - Test Management Tool User Guide v1.0
SIT Migration Test Approach and Plan	MHHS-DEL1781 SIT Migration Test Approach & Plan v1.0
QA&P Annex 1: Non-SIT LDSO MHHS Qualification Testing Approach and Plan	MHHS-DEL2183 QA&P Annex 1 Non SIT LDSO MHHS QT Approach and Plan V0.4
QA&P Annex 2: Non-SIT Supplier and Agent MHHS Qualification Testing Approach and Plan	To be provided in later iteration of QA&P (and will follow model set out in Annex 1).
QA&P Annex 3: New Entrant Non-SIT LDSO MHHS Qualification Testing Approach and Plan	To be provided in later iteration of QA&P (and will follow model set out in Annex 1).
QA&P Annex 4 - Process for Participants that do not complete MHHS Qualification within the required timescales	MHHS-DEL2215 QA&P Annex 4 Non-Completion of MHHS Qualification v0.1
Placing Reliance Proposal Form for Non-SIT LDSOs	Non-SIT LDSO Placing Reliance Proposal Form v2.0
Pre-Qualification Submission Form for Non-SIT Suppliers, Agents and new entrant LDSOs	~~To be published on 05/02/2024.~~MHHS-DEL2231 - Pre Qualification Submission v1.0
MHHS Business Requirements	These include the following: • MHHSP-BRS001 Data Services Requirements v5.4 • MHHSP-BRS002 Metering Services Requirements v5.5 • MHHSP-BRS003 Registration Services Requirements v5.4 • MHHSP-BRS004 Supplier Overview Requirements v5.2 • MHHSP-BRS005 LDSO Overview Requirements v5.2
Consolidated Qualification Plans	Qualification PoaPs
DIP Subsidiary Document (DSD) 0002	Forms part of the BSC Issue 101 Consultation
Defect Management Plan	MHHS-DEL486 Defect Management Plan v2.0

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BSC Assessment Criteria	BSC Assessment Criteria for MHHS Qualification
REC Assessment Criteria	REC Assessment Criteria for MHHS Qualification

3 Executive Summary

The purpose of MHHS Qualification is to provide assurance that Programme Participants are ready to operate in the MHHS market, and to protect both electricity settlement and retail markets from participants who are not able to deliver the required industry processes and standards. The Qualification Approach and Plan (QA&P) is the high-level approach and plan for the delivery of MHHS Qualification in relation to the Balancing and Settlement Code (BSC) and Retail Energy Code (REC). The QA&P sets out roles and responsibilities for Programme Participants and defines the overall MHHS Qualification timeframes. It also describes the roles and responsibilities for Code Bodies and MHHS Programme for testing and assessment. For the avoidance of doubt, this document does not describe the enduring Qualification arrangements that will be in place after M14 to ensure that new entrants meet the required standards to operate the MHHS arrangements.

4 Introduction - Applicable to all participants

Code Bodies will prepare and manage the MHHS Qualification process, working collaboratively with the MHHS Programme and with support from the MHHSP Qualification Test Manager (for non-SIT LDSOs), to assess Programme Participant evidence to demonstrate they have the appropriate systems, processes and controls in place to meet the MHHS requirements in a timely manner.

It is the responsibility of Programme Participants to demonstrate the required evidence in the timescales set out in the overall MHHS Programme plan and in this QA&P, including its annexes.

It is the MHHS Programme's responsibility to monitor Programme Participants' progress and performance against the required MHHS Programme milestones and take any necessary escalation steps or other action if a Programme Participant is at risk of not meeting the MHHS Programme timescales. Code Bodies will provide the necessary reporting (as detailed in *Section 11 Qualification Governance*) to the MHHS Programme to enable it to undertake any escalation action required to ensure that MHHS Programme milestones are met.

The BSC Performance Assurance Board (PAB) and REC Code Manager are responsible for approving MHHS Qualification for a Programme Participant. Electricity Suppliers and LDSOs must be MHHS Qualified by both the BSC PAB and REC Code Manager before they can operate the new MHHS arrangements. Data Services must be MHHS Qualified by the BSC PAB only. MEMs must be MHHS Qualified by the REC Code Manager only.

4.1 Evidencing Qualification Requirements

As described in *Section 10* below, MHHS Qualification evidence will be provided by Programme Participants in the Qualification Assessment Document (QAD). A template for this document, describing the evidence required is being developed jointly by Code Bodies.

To become MHHS Qualified in an MHHS Role, a Programme Participant must complete all elements of the QAD relevant to that role; the QAD must be approved by all Code Bodies that have governance over that role. MHHS Qualification will require testing of the key requirements set out in the MHHS baselined design for each Programme Participant role, including the business processes and systems, as well as the Programme Participant's security and organisational controls that they will be operating with. Business and system processes from within Programme Participants' organisation will be considered as evidence that these changes have been incorporated robustly.

Testing will be carried out by Programme Participants either during System Integration Testing (SIT), for those who have volunteered as SIT Parties, or during Qualification Testing (QT). SIT involves End-to-End testing to validate the MHHS Design, while QT is role-based.

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The Code Bodies and MHHS Programme are collaboratively developing the MHHS Qualification artefacts and relevant SIT artefacts to ensure consistency and coverage of appropriate requirements. In particular, the aim is to ensure that SIT Parties undertake all relevant external testing via SIT so that additional testing in QT is not required.

Programme Participants are expected to have completed Pre-Integration Testing (PIT) to a satisfactory level prior to entering QT or SIT. In some circumstances, and with the prior agreement of Code Bodies, a Programme Participant may be permitted to complete certain parts of its PIT after it has started QT/SIT. See *Section 10.4 PIT Overview* for further information.

A Programme Participant can opt to Place Reliance on testing undertaken by a Third-Party Service Provider or another Programme Participant for SIT or QT. It can do this where it meets the requirements set out in MHHS-DEL1064 - Placing Reliance Policy, which received approval from TMAG and the BSC and REC PABs in April 2023. Additional information on the application of the Placing Reliance Policy is available in *Section 10.3* of this document.

In addition to PIT and SIT/QT testing, MHHS Qualification will also require documented evidence on governance, resourcing, organisational and system controls on areas considered as higher risk by Code Bodies for each role. These areas of higher risk are set out in the BSC and REC Assessment Criteria (further detail in *Section 5.3 Other Qualification Documentation*).

4.2 Qualification Routes

For each Market Role, a Programme Participant can follow one of the routes outlined below to become MHHS Qualified:

Route	PIT	SIT/QT	Other Evidence
SIT Participants	PIT completion (reviewed by MHHSP SI)	SIT (managed and assured by MHHSP SI)	Security and Organisational Controls Evidence (assured by Code Bodies)
Non-SIT LDSO Participants (until M10)	PIT completion (reviewed by MHHSP Qualification Test Manager)	QT (managed and assured by MHHSP Qualification Test Manager)	Security and Organisational Controls Evidence (assured by Code Bodies)
Other Non-SIT Participants (Suppliers, Agents and new entrant LDSOs post M10)	PIT completion (reviewed by Elexon Qualification Test Manager)	QT (managed and assured by Elexon Qualification Test Manager)	Security and Organisational Controls Evidence (assured by Code Bodies)

Table 1 Routes for Qualification

The process and schedule for each route outlined above is further described in *Section 9 MHHS Qualification Approach*. In summary:

- SIT Parties that are part of the Minimum Viable Cohort (MVC) are required to complete MHHS Qualification by the M10 MHHS Programme milestone in order for migration to start as planned. To do this, they must provide an Initial QAD Submission by 10/10/2024 and a Final QAD Submission by 06/01/2025. SIT Parties that are not part of the MVC can complete MHHS Qualification after M10 with their SIT needing to complete by April 2025.
- Existing LDSOs, and new entrant LDSOs that will commence market operation prior to M10, that are not part of SIT (Non-SIT LDSOs) are also required to complete MHHS Qualification by M10. This will require Non-SIT LDSOs to provide an Initial QAD Submission by 10/10/~~1~~2024, complete QT by 20/12/2024 and provide a Final QAD Submission by 06/01/2025~~4~~.
- Existing Non-SIT Suppliers and Agents are expected to complete MHHS Qualification by M14. For these Programme Participants, MHHS Qualification will take place take place through four MHHS Qualification Waves, which allow testing to be completed efficiently. The same MHHS Qualification process will apply to new entrant Suppliers, Agents and LDSOs that are expected to commence market operation between M10 and M14. Further information on how these parties will be required to meet their wider market entry requirements is

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set out in Appendix B. Non-SIT Suppliers, Agents and new entrant LDSOs are required to provide a Pre-Qualification Submission by 26 April 2024. New entrants who enter after April 2024 will need to discuss submission dates with the Code Bodies. This information will be used to allocate the Programme Participant to an appropriate MHHS Qualification Wave. Participants will also be required to provide an Initial QAD Submission and Final QAD Submission (dates associated with each wave are set out in Appendix C).

4.3 Regulatory context

BSC Section C 12.12.6 requires BSC Parties and Party Agents to complete MHHS Qualification and comply with the MHHS Qualification Plan. This QA&P is the MHHS Qualification Plan and sets out the MHHS Qualification requirements under the BSC for all relevant roles to move to the MHHS arrangements. The MHHS Qualification processes are in addition to the BSC Qualification arrangements set out in BSC Section J and BSCP537 “Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs”.

Similarly, under the REC, MHHS Qualification is required for REC Parties to operate under the MHHS arrangements. Meter Equipment Managers must comply with Code changes in line with REC Schedule 15 Section 4.1 to maintain accreditation. The ‘Change or Incident Notification’ (previously known as the 'Systems or Process Change Disclosure') noted in REC Schedule 9 Qualification and Maintenance, Paragraph 11.6, will not apply for changes assured by MHHS Qualification. The REC Code Manager will gain this assurance through the requirements set out in the QA&P. The REC Code Manager will also obtain assurance that Suppliers and LDSOs (referred to as DNOs under the REC) meet the REC associated MHHS obligations through this route.

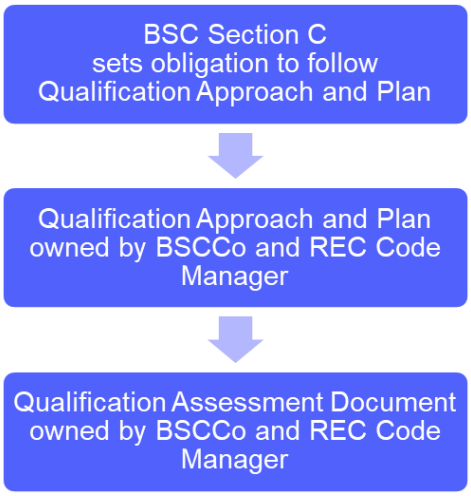

Figure 1MHHSP-Qualification Obligations

4.4 Importance of completing MHHS Qualification

Participants are required to complete MHHS Qualification to operate within the new MHHS arrangements.

- Suppliers can start to register MPANs within the MHHS arrangements from the start of the migration window, Milestone M11/M12, when they have completed MHHS Qualification, and the pre-requisites defined by the Migration Control Centre. Further information on the migration requirements is described within the MHHS Collaboration Base. All Suppliers must be ready to operate in the new arrangements by Milestone M14 which is the requirement for Suppliers to have systems and services in place to register MPANs under the MHHS Programme Plan. Where a Supplier has not completed MHHS Qualification by M14, provisions in the BSC allow for the removal of that Supplier’s right to register customers (e.g. through the switching or new connection process). The process to remove a Supplier’s right to register MPANs is described in Annex 4.

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- Agents can start to be appointed to MPANs within the MHHS arrangements from the start of the migration window, M11/M12, when MHHS Qualified, and the pre-requisites defined by the Migration Control Centre have been completed. As all MPANs are due to have moved to the new arrangements by the end of the migration period M15, agents will be unable to operate within the Supplier Volume Allocation (SVA) MHHS arrangements if they have not completed MHHS Qualification by this time.
- Existing LDSOs will have both MHHS-migrated and non-migrated MPANs on their networks between the start and the end of migration period. They therefore must be MHHS Qualified by M10 to be able to operate with the MHHS-migrated MPANs. Any new Metering Points created after M14 will only operate under the new MHHS arrangements (and cannot be reverse migrated to legacy arrangements).

4.5 Contacts for further information

If Programme Participants, having reviewed the QA&P and the documents referenced in *Section 2.2 and Section 5* have further questions, they should use the contact information in the table below:

Area	Contact
Non-SIT LDSO Qualification Testing including new entrant LDSO looking to enter the market prior to M10	Please contact the MHHSP LDSO Qualification test team at: LDSO_QT@mhhsprogramme.co.uk
Supplier and Agent Qualification Testing	Please contact the Code Bodies at: MHHSQualification@elexon.co.uk and performanceassurance@recmanager.co.uk
Qualification Assessment Document (all qualification pathways)	Please contact the Code Bodies at: MHHSQualification@elexon.co.uk and performanceassurance@recmanager.co.uk
SIT Testing	Please contact the MHHS Programme at: Testing@mhhsprogramme.co.uk
New Entrant LDSO Qualification Testing for a party looking to enter the market post M10.	Please contact the Code Bodies at: MHHSQualification@elexon.co.uk and performanceassurance@recmanager.co.uk

5 Qualification Artefacts - Applicable to all participants

This section sets out the purpose, scope and structure of the QA&P. It describes other key documents that Programme Participants should be aware of for MHHS Qualification (for further information see *Section 2.2*). It also describes how the documents related to MHHS Qualification will be iterated over time, including their review and approval process.

5.1 Purpose and scope of the Qualification Approach and Plan (this document)

This document (the QA&P) should be read by all Programme Participants that are required to become MHHS Qualified under the BSC and/or REC. The list of Market Roles is provided in *Section 7.1* and includes Electricity Suppliers, LDSOs (known as DNOs under the REC), Data Services, and Metering Services (known as MEMs under the REC). This document applies to Programme Participants that are undertaking external testing via the SIT route (MHHS Programme led) or through Qualification Testing (QT – MHHS Programme Qualification Test Manager led for non-SIT LDSOs and Elexon Qualification Test Manager led for Suppliers and Agents).

The purpose of this document is to set out the approach that will be taken for MHHS Qualification and the high-level plan of activities and requirements in relation to the BSC and REC only. As the Code Bodies are responsible for MHHS Qualification, BSCCo and the REC Code Manager have worked together on this joint approach and plan, with support from the MHHS Programme, and will continue to work closely for the duration of the MHHS Programme. Whilst the QA&P sets out the high-level scope and MHHS Qualification requirements, the detailed evidence required is defined in the QAD and will need to be completed by Programme Participants.

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This version of the QA&P reflects updates associated with the SIT Functional Approach and Plan and the SIT Migration Approach and Plan. Further updates to the QA&P will be made once the SIT Non-Functional Approach and Plan and SIT Operational Approach and Plan have been published, as described below in *Section 5.4 Documentation Development Plan*.

5.2 Structure of this document

The majority of this document applies to all Programme Participants that are required to complete MHHS Qualification, whether they plan to undertake external testing through the SIT or QT route. The titles for each section provide guidance on whether the content is relevant to all participants or a specified group. The following labels have been used in this document:

- **All Participants:** section is relevant to all Programme Participants required to complete MHHS Qualification under the BSC and / or REC.
- **SIT Parties:** section relevant to Programme Participants that are undertaking external testing via SIT.
- **Non-SIT Parties:** section relevant to Programme Participants that are undertaking external testing via QT.
- **Non-SIT LDSOs:** a subset of Non-SIT Parties, where QT is being managed by the MHHS Programme Qualification Test Manager.
- **Non-SIT Suppliers, Agents and new entrant LDSOs:** a subset of Non-SIT Parties where QT is being managed by the Elexon Qualification Test Manager. Note that this group includes Suppliers, Agents (including MEMs and Data Services) and new entrant LDSOs who will complete MHHS Qualification after M10 and enter the market after M11/12 but before M14.

The QA&P incorporates this document together with four annexes:

- **Annex 1 - Non-SIT LDSO MHHS Qualification Testing Approach and Plan**: sets out the specific MHHS Qualification testing requirements, scope, testing framework, objectives, and approach for Non-SIT LDSOs.
- **Annex 2 - Non-SIT Supplier and Agent MHHS Qualification Testing Approach and Plan**: sets out the specific MHHS Qualification testing requirements, scope, testing framework, objectives, and approach for Non-SIT Suppliers and Agents. This document will be provided as part of a later iteration of the QA&P.
- **Annex 3 – New Entrant Non-SIT LDSO MHHS Qualification Testing Approach and Plan**: sets out the specific MHHS Qualification testing requirements, scope, testing framework, objectives, and approach for new entrant Non-SIT LDSOs that will be MHHS Qualified after M10. This document will be provided as part of a later iteration of the QA&P.
- **Annex 4 – Non-Completion of Qualification**: sets out the market sanction process under the BSC should a current Programme Participant fail to complete MHHS Qualification in line with the MHHS Programme Plan.

5.3 Other Qualification Documentation

The QA&P must be read in conjunction with other overarching documents published by the MHHS Programme as set out in *Figure 2*. Some of these will require updates to reflect the MHHS Qualification arrangements described in this QA&P:

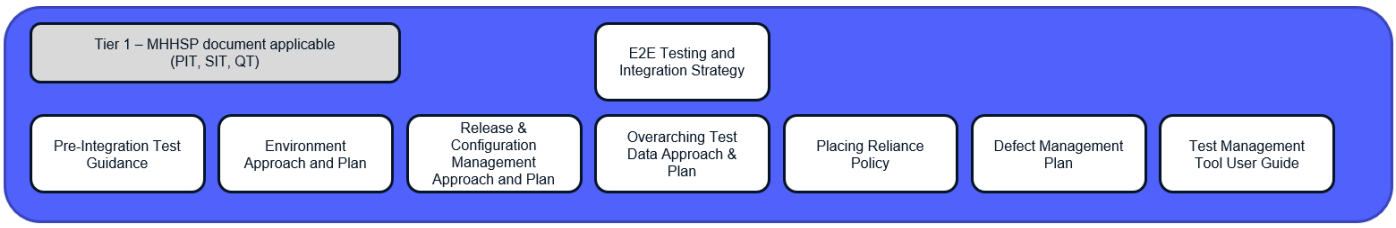

Figure 2 MHHS Qualification related MHHS Programme documents

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In addition to the above overarching MHHS Programme documentation, Programme Participants must also refer to the following lower-level documents detailing the MHHS Qualification arrangements:

- **Non-SIT Placing Reliance Form:** This document must be completed by all Non-SIT LDSOs who are intending to adopt the *MHHS-DEL1064 MHHS Placing Reliance Policy* (in part or in full). These submissions will be reviewed by Code Bodies to understand how the Programme Participant intends to meet its MHHS Qualification testing requirements through Placing Reliance.
- **Pre-Qualification Submission Template:** This document must be completed by Non-SIT Suppliers, Agents and new entrant LDSOs. Amongst other things, it sets out the information required by Code Bodies for Qualification Wave allocation and agreement on any Placing Reliance proposals. Participants will be able to submit this document from 05 February 2024 but no later than 26 April 2024. Where a Code-defined organisation enters the market after 26 April 2024, it would also need to complete this form to join one of the Qualification Waves.
- **Qualification Assessment Document (QAD)**: All Programme Participants, irrespective of which Qualification route they take, are required to complete the QAD to evidence that they have met the MHHS Qualification requirements. Each Programme Participant must provide an Initial QAD Submission and a Final QAD Submission This document can be completed on an iterative basis and once finalised, it requires sign-off from a Company Director (or delegate, as acceptable under the REC only) of the Programme Participant organisation.
- **Non-SIT LDSO QT Test Data Plan:** This document will set out the approach for Test Data for QT for Non-SIT LDSOs, covering the details and mechanics of how test data will be collated, allocated and used during testing. This document will be provided as part of a later iteration of the QA&P.
- **Non-SIT Supplier and Agents Test Data Plan:** This document will set out the approach for Test Data for QT for Non-SIT Suppliers and Agents, covering the details and mechanics of how test data will be collated, allocated and used during testing. This document will be provided as part of a later iteration of the QA&P.
- **Non-SIT LDSO MHHS Qualification Test Scenarios and Cases**: Test Scenarios and Test Cases for LDSOs opting for the Non-SIT route. This will form a full set of Test Scenarios and Test Cases expected to be executed in QT unless the party is Placing Reliance. For those that are Placing Reliance, the applicable set of Test Scenarios and Test Cases would be reduced and set by Code Bodies. This document will be provided as part of a later iteration of the QA&P.
- **Non-SIT Supplier MHHS Qualification Test Scenarios and Cases**: Test Scenarios and Test Cases for Suppliers opting for the Non-SIT route. This will form a full set of Test Scenarios and Test Cases expected to be executed in QT unless the party is Placing Reliance. For those that are Placing Reliance, the applicable set of Test Scenarios and Test Cases would be reduced and set by Code Bodies. This document will be provided as part of a later iteration of the QA&P.
- **Non-SIT Metering Equipment Manager (MEM) MHHS Qualification Test Scenarios and Cases**: Test Scenarios and Test Cases for MEMs opting for the Non-SIT route. This will form a full set of Test Scenarios and Test Cases expected to be executed in QT unless the party is Placing Reliance. For those that are Placing Reliance, the applicable set of Test Scenarios and Test Cases would be reduced and set by Code Bodies. This document will be provided as part of a later iteration of the QA&P.
- **Non-SIT Data Service MHHS Qualification Test Scenarios and Cases**: Test Scenarios and Test Cases for Data Services opting for the Non-SIT route. This will form a full set of Test Scenarios and Test Cases expected to be executed in QT unless the party is Placing Reliance. For those that are Placing Reliance, the applicable set of Test Scenarios and Test Cases would be reduced and set by Code Bodies. This document will be provided as part of a later iteration of the QA&P.

Programme Participants should also keep up to date on other useful documents cited on the Qualification page of the MHHS Collaboration Base. At the time of publication of this version of the QA&P, the following useful documents are available to Programme Participants:

- BSC Assessment Criteria for MHHS Qualification: The high-level approach document was presented to BSC PAB on how the MHHS functional design requirements relevant to the BSC should be evidenced by Programme Participants. This has been used to inform the development of the QAD (and may be subject to further updates in the MHHS functional design changes). A further iteration of this document is expected to cover the migration, non-functional and operational design requirements.

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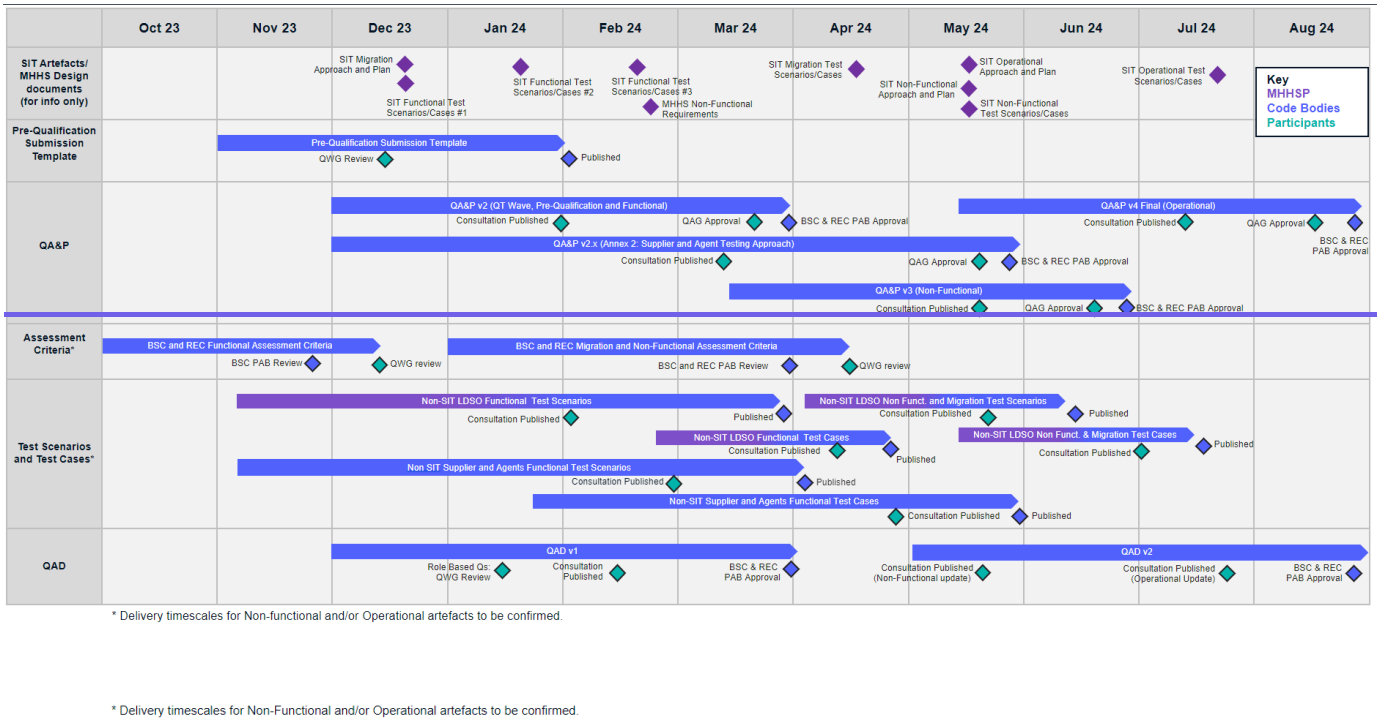
- REC Assessment Criteria for MHHS Qualification: The high-level approach agreed by REC PAB on how the MHHS functional design requirements relevant to the REC should be evidenced by Programme Participants. This has been used to inform the development of the QAD (and may be subject to further updates in the MHHS functional design changes). A further iteration of this document is expected to cover the migration, non-functional and operational design requirements.
- MHHS-DEL1964 MHHS Qualification FAQ: Summary of responses to FAQs from parties, updated as necessary.
- Non-SIT LDSO Placing Reliance FAQ: Summary of responses to FAQs from parties, updated as necessary.
- Qualification Plans: Slide deck setting out the latest summary of the MHHS Qualification plans for SIT Parties, Non-SIT LDSOs and other Non-SIT Parties. Note that these plans may be updated and made available to parties ahead of any formal updates to the POAPs set out in QA&P *Section 9*.

Further documents may be produced, as MHHS Qualification is further developed, to provide Programme Participants with clarity on various aspects of MHHS Qualification. As required, these will be listed and described in future iterations of the QA&P.

5.4 Documentation Development Plan

The QA&P, QAD and QT artefacts will be iterated to reflect the development of the SIT artefacts (in particular, SIT Approach and Plans and SIT Test Scenarios and Test Cases). The Code Bodies are working with the MHHS Programme and expect to deliver MHHS Qualification artefacts per the plan below:



* Delivery timescales for Non-Functional and/or Operational artefacts to be confirmed.

Figure 3 MHHS Qualification Document Development Plan

5.4.1 Qualification Approach and Plan

The first iteration of the QA&P (v1.0) was approved by TMAG, BSC PAB and REC PAB in May 2023. Further iterations will be published in-line with Programme updates to the SIT Approach and Plans and other MHHS Programme documents set out in *Figure 3*.

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This version (which will be v2.0 once approved) and its annexes cover details corresponding to the following SIT artefacts:

- MHHS-DEL1259 SIT Functional Approach and Plan v1.0, and
- MHHS-DEL1781 SIT Migration Approach and Plan v1.0.

In addition to the next planned update, that will provide QA&P Annex 2, future iterations of QA&P will correspond to the release of the following SIT artefacts, ensuring time planned for development, consultation and governance body approvals as set out in *Figure 3*:

- SIT Non-Functional Approach and Plan, and
- SIT Operational Approach and Plan.

Programme Participants are encouraged to feed into the relevant MHHS Programme Working Groups where discussions are taking place regarding the development and coverage of Non-Functional and Operational requirements.

Future iterations of the QA&P will also cover the following areas:

- The mechanism for submitting QAD responses and supporting evidence;
- Process for voluntary market exit for Programme Participants wanting to streamline the number of MPIDs that they MHHS Qualify; and
- Enduring Qualification arrangements and arrangements for new entrants that wish to enter the market ahead of M14.

5.4.2 Qualification Assessment Document

All Programme Participants, irrespective of their MHHS Qualification route, will be required to complete the QAD to demonstrate they have met all their MHHS Qualification requirements, including (but not be limited to) the evidence of successful completion of various testing phases and whilst ensuring sufficient coverage of Code requirements related to governance, operational controls, change management and security.

The QAD will be split into organisation-specific sections and role-specific sections; a participant's QAD will need to be approved by all Code Bodies relevant to their role(s). The QAD will be jointly administered by the Code Bodies during MHHS Qualification. Code Bodies are currently planning for a single location for participants to submit evidence and receive updates on their QAD, with the details of this to be released in future iterations of this document. The QAD will note which requirements are relevant to which Code Bodies.

The template for the QAD will be jointly developed by Code Bodies. The template will be updated and consulted upon by the Code Bodies in two stages, as per the plan above.

- The first version will ensure coverage of the MHHS Business Requirements (i.e. the MHHS Design document capturing the functional requirements).
- The final version is expected after incorporating any necessary updates for Migration, Non-Functional and Operational aspects, and the goal is to seek approval from the BSC and REC PABs in August 2024.

Please refer to *Section 9* and *Appendix C* for details of how and when Programme Participants are required to complete and submit their QAD for Code Body review.

5.4.3 QT Test Scenarios and Test Cases

Code Bodies will review the Test Scenarios and Test Cases for each phase of SIT to support the development of the Test Scenarios and Test Cases for QT. In doing this, Code Bodies will:

- Remove areas of duplication in SIT, that may be required to ensure full coverage of the E2E solution, but are not required for QT; and

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- Remove areas that do not relate to the BSC or REC requirements for Programme Participants.

Adapt Test Scenarios and Test Cases to reflect the role-based approach to MHHS Qualification Testing,

As set out in Figure 3, the first set of Test Scenarios and Test Cases delivered for QT will cover functional requirements. These will be updated to cover the migration, non-functional and operational testing requirements following the release of the related SIT Test Scenarios and Test Cases.

5.5 Reviewers and Approvals

The QA&P (and its annexes) will undergo initial review by the relevant Code Body and MHHS Programme teams supporting MHHS Qualification. A draft will then by published for industry consultation. An updated document, taking account of consultation comments, will be presented to the Qualification Advisory Group (QAG) with a request for approval.

Following QAG approval, approval will be sought from both the BSC PAB and the REC PAB. The approved version of this document will be published on the MHHS Programme Portal.

QA&P version history and a summary of the changes made are recorded in *Section 2.1 Change Record*.

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6 Principles - Applicable to all participants

This section sets out the key principles that describe how MHHS Qualification will operate:

1. MHHS Qualification will adapt the current arrangements for BSC and REC Qualification in BAU, which had been appropriate for a mature set of trading arrangements, to reflect the increased risk from new industry wide MHHS interfaces and business processes.
2. MHHS Qualification will, where possible, efficiently and appropriately, avoid requiring evidence for areas that are entirely unchanged based on the legacy role being undertaken.
3. MHHS Qualification will avoid the need for repetition of steps that have already been completed to the required standards through MHHS Programme testing through application of the *MHHS-DEL1064 MHHS Placing Reliance Policy*.
4. BSCCo and RECCo are accountable for the implementation and management of a robust, timely and well-governed MHHS Qualification process through the MHHS Qualification stage to the enduring MHHS arrangements.
5. Programme Participants must ensure that the systems and processes exercised during various testing phases to meet Qualification requirements are expected to be operated in live. Where incremental changes are made during or following the QT/SIT as part of the MHHS Design Interim Release (IR) process, regression testing may be required as set out in the Annexes. Programme Participants are encouraged to have ~~should have~~ developed internal service designs/Local Working Instructions (LWIs) ahead of SIT/QT testing and to record this in their Initial QAD Submissions. Where a party is not able to provide this information until their Final QAD Submission then this may delay the finalisation of the QAD while any assurance activity is completed. ~~.~~
6. Where changes to systems and processes, outside of MHHS, are planned, the party should engage with Code Bodies as described in *Section 7.3.6 Interaction with Current BSC and REC Audits and Considerations.*
7. New market entrants must complete all relevant market entry requirements, in addition to the MHHS Qualification requirements, before being permitted to commence operation of the new MHHS arrangements.
8. All Programme Participants are required to ensure that PIT is conducted when all components have been internally integrated. Programme Participants are expected to carry out a final internal test where all components are tested for business scenarios set out in the MHHS Design in an end-to-end manner, rather than earlier testing carried out to support development activity. Further information on PIT is set out in the Pre-Integration Testing Guidance document referenced in *Section 2.2* above and *Section 10.4 PIT Overview.*
9. The scope of MHHS Qualification under the BSC and REC is defined by the relevant Code Body's vires that are limited to the requirements set out within the respective Code. Code Bodies have not yet identified any Code requirements that are outside the scope of the MHHS Design that Programme Participants will be required to cover as part of their PIT evidence for MHHS Qualification.
10. MHHS readiness is predominantly expected to be demonstrated through SIT for SIT Parties or through QT for Non-SIT Parties. Evidence requirements that are not within the scope of SIT and QT, will be covered through other information submitted as part of the QAD, such as PIT evidence and Operation Controls and Governance documentation.
11. BSCCo and the REC Code Manager will develop the MHHS Qualification scope and materials from the MHHS Programme SIT scope and materials produced by the MHHS Programme (other than Non-SIT LDSO Test Scenarios and Test Cases, which are being developed in parallel given the timing constraints). This is to ensure there is an aligned approach to MHHS Qualification for all routes, providing that the scope and coverage for SIT meets the requirements for MHHS Qualification.
12. The MHHS Programme will execute SIT on an End-to-End (E2E) basis to prove the MHHS Design. MHHS Qualification, however, will be defined on a role-by-role basis and executed on an individual organisation and Market Role level (or group of roles in the case of Non-SIT LDSOs) to assure the robust operation of Programme Participants before they are allowed to start operating in the live MHHS arrangements and migrating MPANs. Programme Participants will ensure that the operational systems, processes and practices used in testing will reflect those intended to be used for live operation and are aligned to the MHHS Design Interim Release (IR) specified for that test phase.

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13. QT and SIT should execute similar coverage of the design baseline as the level of confidence required is similar. The number of tests for QT are expected to be fewer as SIT is likely to need to repeat some functional testing, to prove the functionality of central systems, where the same functions are used in different E2E test scripts.
14. Code Bodies are responsible for undertaking MHHS Qualification for REC Parties, BSC Parties and BSC Supplier Agents. Code Bodies are not responsible for undertaking MHHS Qualification or set up activities for any third-party organisations. Code-defined organisations remain accountable for actions required from their delegated third-party organisation. For avoidance of doubt, where a third-party organisation participates in Qualification Testing activities as a delegate of a Code-defined organisation, the third-party will not be qualified under Code.
15. Only Programme Participants that complete the entire MHHS Qualification process, including their QAD and are approved by the relevant Code Bodies will become MHHS Qualified and can complete the Service Activation process to be able to operate under the new MHHS arrangements; SIT and QT are just one part of the MHHS Qualification process. Please refer to *Section 9 MHHS Qualification Approach* for details on the MHHS Qualification process.
16. Changes to the baseline MHHS Design will only be made via an MHHS Change Request or the Design Issue Notification (DIN) process. MHHS Programme will ensure the MHHS Change Request and DIN processes consider impacts on MHHS Qualification, but it is the responsibility of the MHHS Programme, Programme Participants and Code Bodies to identify impacts through the Impact Assessment process. Any impact on the MHHS Qualification requirements, processes and procedures will then be fully assessed and the industry notified of any change of approach or further testing required.

7 Scope of MHHS Qualification – Applicable to all participants

This section sets out the Market Roles that are required to complete MHHS Qualification, the requirements within scope of the BSC and REC that will be assured through MHHS Qualification and the areas that are out of scope for MHHS Qualification assurance.

7.1 Market Roles included in MHHS Qualification

The following Market Roles are required to complete MHHS Qualification:

MHHS Roles	Nearest Equivalent Legacy Roles	Code Body	Programme Milestones to be supported by MHHS Qualification activity
Supplier	Supplier	BSC REC	16/03/2026 - M14 All Suppliers able to accept MPANs under MHHS arrangements
Smart Data Service (SDS)	New role but nearest comparator: Non-Half Hourly Data Collector (NHHDC) for traditional and smart metering systems and Half Hourly Data Collector (HHDC) for elective smart metering systems.	BSC	16/03/2026 - M14
Advanced Data Service (ADS)	Half Hourly Data Collector (HHDC)	BSC	16/03/2026 - M14
Unmetered Supply Data Service (UMSDS)	Meter Administrator (MA)	BSC	16/03/2026 - M14

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MHHS Roles	Nearest Equivalent Legacy Roles	Code Body	Programme Milestones to be supported by MHHS Qualification activity
Unmetered Supplies Operator (UMSO)	Unmetered Supplies Operator	BSC	07/03/2025 - M10 Central Systems ready for migration
Licensed Distribution System Operator (LDSO)	Licensed Distribution System Operator (i.e. Distribution Network Operator; DNO or Independent Distribution Network Operator; iDNO)	BSC REC	07/03/2025 - M10 Central Systems ready for migration
Supplier Meter Registration Agent (SMRA) / Electricity Retail Data Agent (ERDA)	SMRA / ERDA	BSC REC	07/03/2025 - M10 Central Systems ready for migration
Metering Equipment Manager (Advanced)	Metering Equipment Manager (MEM)	REC	16/03/2026 - M14
Metering Equipment Manager (Smart)	Metering Equipment Manager (MEM)	REC	16/03/2026 - M14
Meter Data Retriever (MDR)[1]	None	SEC	16/03/2026 - M14

Table 2 Market Roles in scope for MHHS Qualification

Code Bodies expect to close MHHS Qualification activity at M14 and that Agents are expected to be MHHS Qualified by this Programme Milestone to support MHHS migration. Where an Agent is not MHHS Qualified by M14, its request to become Qualified to operate the MHHS arrangements will transition to the enduring Code Body Qualification arrangements. This is described further in *Appendix B Non-Standard MHHS Qualification Pathways*.

7.2 Requirements included in Scope of MHHS Qualification

The scope of MHHS Qualification set out in this QA&P is aligned with the BSC and REC requirements for the entirety of the MHHS Design. As noted below, other Code requirements such as the Smart Energy Code (SEC) or Distribution Connection and Use of System Agreement (DCUSA) are out of the scope of this document.

To complete MHHS Qualification successfully, a Programme Participant must demonstrate that it can sufficiently complete all the responsibilities and functions required for the relevant Market Role, as described within the MHHS Design artefacts and the Code documentation that will align to that role.

BSC and REC have each developed an Assessment Criteria for MHHS Qualification to help Programme Participants understand which MHHS functional requirements are relevant to the respective Code, and how participants are expected to demonstrate these i.e. through evidence of testing such as PIT, SIT, QT or other tests done as part of DIP onboarding, or where testing is not appropriate, through operational controls and governance questions within the QAD. These documents will be updated to cover migration, non-functional and operational requirements.

The MHHS Programme is developing SIT requirements to ensure that the MHHS baselined design can operate successfully on an E2E basis. The scope and artefacts for this testing will link to requirements in the MHHS Design artefacts which will then link to Code requirements. As set out in *Section 6 Principles*, Code Bodies will accept SIT completion as evidence towards a Programme Participant's MHHS Qualification requirements, with the full set of SIT Party requirements being described in the QAD. Code Bodies will review SIT artefacts to ensure that the approved versions of SIT artefacts support this.

[1] Please see Section 7.3.4 Meter Data Retriever (MDR) role.

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7.3 Activities not in-scope for MHHS Qualification.

7.3.1 Other Codes

Qualification for other energy codes, such as the SEC, is not within the scope of this document and parties will need to discuss any such requirements with the relevant code body.

7.3.2 Legacy ~~Agents~~Arrangements

As part of the MHHS Programme Design and Code requirements, all Market Participants, including Programme Participants that intend to MHHS Qualify but have not yet done so, and other Market Participants ~~and Legacy Agents~~ that do not intend to MHHS Qualify, will need to demonstrate that they can operate migration and reverse migration processes, as defined in MHHS Migration Design forming part of the Code changes that will come into force at M8. Whilst this does not form part of the MHHS Qualification, there will be a reliance on existing Code Body Performance Assurance activities to gain assurance that the legacy changes to Supplier and Agents processes are implemented on time.

To reduce the number of information requests simultaneously going to market participants, the Code Bodies have included questions to cover MHHS readiness for the other relevant Code areas that they will be required to comply with, within the Pre-Qualification Submission. These include changes to the Supply Number format under the REC and the readiness of Suppliers and Agents, operating in the legacy settlement arrangements, to receive, process and respond to market messages that have been amended to support MHHS migration under both the BSC and REC. Responses to these questions will feed into BAU assurance arrangements and will not form part of the participant's MHHS Qualification assessment. For SIT Participants, who are not required to complete the Pre-Qualification Submission, the Code Bodies will obtain this information by applying Performance Assurance Techniques via the BSC and REC Performance Assurance Framework, for example, an Information Request. ~~Therefore, p~~Market Participants who are not expecting to be active in the market ahead of MHHS migration and will not be Qualifying against legacy provisions, are not required to answer these questions within their Pre-Qualification Submission.

7.3.3 Service Activation

Once a Programme Participant has been MHHS Qualified, it will need to go through a process of Service Activation before it is able to participate in the new MHHS arrangements.

A Programme Participant's MPIDs and DIP ID will be recorded in the Industry Standing Data (ISD), however, it must be clear which organisations and which of its roles are MHHS Qualified. This is necessary to ensure, for example, that Supplier Agents that are not MHHS Qualified are not appointed to MHHS migrated metering points.

Service Activation is outside the scope of MHHS Qualification. The required Service Activation activities will need to conclude after a Programme Participant has been MHHS Qualified. Code Bodies will provide reporting information to the Migration Control Centre on the progress of a Programme Participant through MHHS Qualification and on completion the MHHS Qualification approval. This will allow the Migration Control Centre to commence preparation for the start of migration. Further information on the requirements for migration are under the governance of the Migration Working Group (MWG) and will be published on the MHHS Collaboration Base. Code Bodies will also notify Elexon as the DIP Manager and the ISD Manager once a Programme Participant is MHHS Qualified so that, in consultation with the Migration Control Centre, the DIP onboarding and ISD publication process can be completed. The BAU processes for ISD publication will apply here.

7.3.4 Meter Data Retriever (MDR) role and Supplier submission of Smart data

The industry has raised concerns about the lack of clarity in the MHHS Programme's approach to testing MDR services and the Code Bodies' approach to Qualification when a Smart Data Services (SDS) provider intends to use:

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- MDR services as new functionality in the new MHHS arrangements; and/or
- Existing Supplier functionality to collect HH data from smart meters using existing Import Supplier and Export Supplier Service Requests with DCC (DSP)

Smart Data Services (SDS) is the MHHS role and it is the SDS that will be Qualified in its entirety through Programme SIT and Code Body Qualification. The MDR role or the existing Supplier smart meter functionality will not be qualified individually, the MDR is part of the SDS role.

If third-party SDS providers wish to use MDR functionality, then the organisation concerned will have to accede to the Smart Energy Code as an "Other SEC Party" and will need to complete DCC UEPT testing in the new DCC User Role of "MDR" as a prerequisite to entering Programme SIT or BSC Qualification.

New Test Scenarios have been defined by DCC for MDR Users undertaking the User Entry Process. Suppliers will have to send consumption data to the SDS (PSS element of the SDS) and this interface is not prescribed - there is flexibility for Suppliers and their agents to agree this exchange of data.

The Programme has been advising SDS service providers who wish to operate MDR to contact DCC at mhhs@smartdcc.co.uk to discuss SEC testing required.

More details relating to the MDR role can be found here.

7.3.5 Metering Accreditation

MHHS is not impacting physical metering activities, and therefore there is no change to the metering accreditation mechanism that forms a part of the Consolidated Metering Code of Practice (CoMCoP) under the REC.

MEMs will be required under the REC to qualify separately for smart and advanced segments based on the differing MHHS requirements. The differences in requirements relate to the market messages exchanged by the relevant role.

Through the metering accreditation and audit provisions under the REC, which remain separate from and outside the scope of MHHS Qualification, there are requirements to ensure that the Meter Installers working on meters have the relevant certifications.

7.3.6 Interaction with Current BSC and REC Audits and Considerations

During the MHHS Qualification process, some participants may undergo periodic audits under the BSC or REC to maintain their existing Qualification and accreditation status. For the avoidance of doubt, during MHHS Qualification, these periodic audits will remain entirely separate from the MHHS Qualification process. MHHS Qualification will be focused on the changes that Programme Participants are making to deliver the revised MHHS business processes.

However, there is an opportunity for Code Bodies to use the scheduled periodic audits to build the evidence base to confirm a participant's readiness for MHHS Qualification or to complement evidence required within the QAD.

The decision as to whether to take advantage of periodic audits in this manner will be made by the respective Code Bodies for the Market Roles within their remit.

Some considerations include:

- Ensuring that any enquiry on MHHS readiness during the periodic audit is a meaningful exercise that complements the MHHS Programme Readiness Assessments and the development of the QAD evidence base;
- Ensuring that it does not disproportionately increase the time or cost of the periodic audits; and
- Ensuring that participants are neither advantaged nor disadvantaged by the timing of their periodic audits with respect to both:
    - Maintenance of their current Qualification and accreditation status; and
    - MHHS Qualification.

7.3.7 Changes outside MHHS scope

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The scope of assurance provided by MHHS Qualification is limited to the changes required by Programme Participants to meet their MHHS requirements under the BSC and REC. However, Code Bodies recognise that a Programme Participant may progress other changes simultaneously, which are not related to MHHS but may impact the Programme Participant's BSC and/or REC wider obligations. Such changes will not be covered by MHHS Qualification and should be disclosed via the existing process under the relevant Code as set out below:

Reporting Material Changes under the REC

REC Schedule 9 – Qualification and Maintenance outlines the requirements for REC Parties to report changes, which may impact the retail arrangements and/or the REC Party's ability to meet their REC obligations. Such changes can either be reported while completing the Annual Statement or by completing the Change or Incident Notification form available on the REC Portal under the Annual Maintenance section for the organisation.

REC Parties are encouraged to engage in early discussion for planned changes with the REC Code Manager to gain clarity on the assurance requirements. These will be assessed on a case-by-case basis and the assurance requirements will be determined depending on the level of change and associated risk.

Reporting Material Changes under the BSC

If a Programme Participant is planning to make material changes while going through the MHHS Qualification process, they should reach out to the BSC as soon as they can. This is important because their ongoing Qualification might be affected by any adjustments they make, especially if they have already tested them in PIT or SIT/QT.

As a guide, the BSC website has a list of examples that are intended to assist BSC Parties in their own assessment of their material change.

7.3.8 MHHS impacting changes after completing MHHS Qualification

Code Bodies expect that Programme Participants will use systems, processes, and operational arrangements intended for live MHHS operation for their MHHS Qualification. Programme Participants will provide a declaration within their QAD submission confirming this.

Following the approval of its MHHS Qualification, should a Programme Participant make changes that impact its MHHS requirements, these will be considered BAU changes and should be reported to, and assured by, Code Bodies in line with *Section 7.3.7 Changes outside MHHS Scope*.

7.3.9 Interaction with MHHS Programme Readiness Assessments

The MHHS Programme Readiness Assessment is a standalone process which has no direct interaction with the MHHS Qualification process.

Programme Participants can re-use any evidence already provided to the MHHS Programme in Readiness Assessments to support the operational controls and governance evidence requirements in the QAD. However, there will be no automatic expectation that specific MHHS Qualification requirements have been met from the Readiness Assessments. This is because the purpose of the MHHS Programme Readiness Assessments is to judge overall industry readiness at specific points in time against the overall MHHS Programme Plan rather than specific participants. MHHS Programme will set the scope of each Readiness Assessment ahead of each assessment phase.

7.3.10 MHHS Design Assurance

In May 2023, ~~T~~the MHHS Programme ~~is requesting~~required that Programme Participants undertaking SIT complete a Design Assurance questionnaire. MHHS Programme also provides ~~and will be offering~~ voluntary Design Assurance support to Non-SIT Parties. The MHHS Programme Design Assurance team continue to support all Programme Participants with design queries and can be contacted at Design@MHHSProgramme.co.uk.

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Design Assurance ~~will be~~is a useful resource to support Programme Participant's DBT activities, but for the avoidance of doubt there is no interaction between the MHHS Design Assurance process or evidence gathering and the MHHS Qualification process. Programme Participants with questions on the evidence required to satisfy MHHS Qualification requirements should direct these to Code Bodies and not through the Design Assurance activity. It is a Programme Participant's responsibility to ensure it meets the MHHS Qualification requirements.

7.3.11 MHHS Sandbox Testing

The MHHS Programme is planning to provide a facility for Sandbox Testing, as described in the MHHS Programme E2E Testing and Integration Strategy. This is a facility provided by the MHHS Programme separately from MHHS Qualification and therefore should be considered outside the scope of this document. The MHHS Programme will define the Sandbox further in MHHS Programme artefacts (e.g. Sandbox Guidance, Sandbox Test Data Approach and Plan).

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8 Roles and Responsibilities - Applicable to all participants

The following RASCI matrix shows respectively which party is Responsible, Accountable, Supporting, Consulted or Informed for various elements of the MHHS Qualification process, as well as where the governance sits. Where the BSC and REC are delivering jointly, the table has been merged. In the case of dual governance between QAG (TMAG prior to February 2024) and the BSC/REC PABs, the body with final approval is noted with ✓F.

8.1 High-level RASCI applicable to routes for Qualification

The following table, at a high-level, lists activities that form a part of the end-to-end Qualification process, whilst defining where the responsibility lies for each activity.

Activity	Participant	BSC	REC	MHHS Programme	DIP Manager[2]	QWG	QAG (formerly TMAG)	BSC & REC PAB
QA&P	C	R, A		C	I	C	✓	✓F
Annex 1: LDSO QT Approach & Plan	C	C		R, A	I	C	✓	✓F
Annex 2: Supplier & Agent QT Approach & Plan	C	R, A		C	I	C	✓	✓F
Annex 3: New entrant LDSO QT Approach & Plan	C	R, A		C	I	C	✓	✓F
Annex 4: Non-completion of Qualification	C	R, A	C	C	I	C	✓	✓F
MHHS Qualification Assessment Criteria	I	R, A	R, A	I	I	I	-	✓
QAD Template	C	R, A		C	I	C	-	✓
Definition of the Process for QAD Review, including timelines	I	R, A		-	C	I	I	I
Completing and submitting the QAD and supporting evidence	R, A	C		-	-	-	-	-
Code Body review of the QAD submitted by Programme Participants	C	R, A		I	-	-	-	-
QAD Management Assertion (Company Director sign off)	R, A	I		I	-	-	✓	✓F
Environment Approach and Plan[3]	C	C		R, A	C	C	✓	-
PIT Guidance	C	C		R, A	-	C	✓	-
PIT preparation, execution and issue resolution[4]	R, A	I		I	-	-	-	-

[2] The role of the DIP Manager will transition from the DIP Delivery Manager to the Enduring DIP Manager. The details of when this will occur are subject to agreement.
[3] See Environment Approach & Plan for further details on roles and responsibilities for test environment provisioning.
[4] This includes activities such as preparation of PIT Scenarios and Scripts, data, environments, execution and issue resolution.

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Activity	Participant	BSC	REC	MHHS Programme	DIP Manager[2]	QWG	QAG (formerly TMAG)	BSC & REC PAB
PIT Work-off Plan	R, A	C, I		C, I	-	-	-	-
DIP Simulator for PIT	I	I		R, A	-	-	-	-
PIT Assurance for SIT Participants and Non-SIT LDSOs	C	I		R, A	-	-	-	-
PIT Assurance for Non-SIT Suppliers, Agents and new entrant LDSOs	C	R, A		I	-	-	-	-
Placing Reliance Policy	C	R, A		R	I	C	✓	✓[F]
Placing Reliance Proposal Submission[5]	R, A	I		I	I	-	-	-
Placing Reliance Proposal Review[6]	C	R, A		R, A	-	-	-	-
Pre-Qualification Submission template and process for Non-SIT Suppliers, Agents, and new entrant LDSOs	C	R, A		S	-	C	-	-
Pre-Qualification Submission from Non-SIT Suppliers and Agents, and new entrant LDSOs	R, A	C, I		I	-	-	-	-
Principles for Qualification Wave allocation for Non-SIT Suppliers and Agents, and new entrant LDSOs	C	R, A		I	-	C	-	-
Allocation of Non-SIT Suppliers and Agents, and new entrant LDSOs to Qualification Waves	I	R, A		I	I	-	I	I
DIP Onboarding	A	I		I	R	-	-	-
Qualification Approval	I	R, A	R, A	I	I	-	-	✓[7]

Table 3 High-level RASCI for Qualification applicable to all Programme Participants

[5] Only required from Programme Participants intending to Place Reliance. SIT Participants and Non-SIT LDSO submit their proposals to the MHHS Programme. For Non-SIT Suppliers and Agents, this is covered by the Pre-Qualification Submission.
[6] MHHS Programme will oversee reviews of Placing Reliance Submissions for SIT Participants and Non-SIT LDSOs. Code Bodies will oversee review of Placing Reliance Submissions (that form a part of the Pre-Qualification Submission) for Non-SIT Suppliers and Agents.
[7] The decision to approve REC Parties will be made by the REC Code Manager not the REC PAB.

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8.2 Lower-level RASCI for Non-SIT route

Lower level RASCI for preparation, execution and assurance of QT will be detailed within Annexes 1, 2 or 3 depending on the Programme Participant type.

8.3 Lower-level RASCI for SIT route

The following table lists activities that form a part of SIT, whilst defining where the responsibility lies for each activity.

Activity	Participant	BSC	REC	MHHS Programme	DIP Manager	QWG	QAG (formerly TMAG)	BSC & REC PAB
Test Scenarios and Test Cases	C	C		R, A	I	-	✓[8]	-
Participant Scripts	R, A	I		S	I	-	-	-
Data Availability and Allocation	C	I		R, A	I	-	-	-
Environment Coordination	I	I		R, A	S	-	-	-
Environment Connection	R, A	-		C	S	-	-	-
SIT Execution	R	I		A	S	-	-	-
Test Management	C	C		R, A	S	-	-	-
Issue Resolution	R	C		A	S	-	-	-
Agreement of work-off plan where required	R, A	R		R	S	-	-	I
Assurance	C	C		R, A	S	-	-	-

Table 4 Lower-level RASCI for MHHS Qualification applicable to SIT Participants

9 MHHS Qualification Approach - Applicable to all participants

This section separately describes the high-level MHHS Qualification Approach for three distinct groups of Programme Participants. These are:

- SIT Parties,
- Non-SIT LDSOs, and
- Non-SIT Suppliers, Agents, and new entrant LDSOs (qualifying post M10).

For each group we have set out the required MHHS Qualification Steps and a Plan on a Page (POAP). Further detail on the timescales for the required activities is set out in *Appendix C*. The overall MHHS Programme Plan will be updated so that it is consistent with the dates set out in this QA&P.

This section also describes the high-level approach for DIP o~~O~~nboarding to support testing and live operation. The lower-level details are available within Annex 1, 2 and 3 depending on the Programme Participant type.

[8] Following the split of TMAG, the governance Body responsible for approving SIT artefacts is the SIT Advisory Group (SITAG) and not the QAG.

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9.1 Process for SIT Parties to MHHS Qualify

9.1.1 Background

To test the E2E operation of the MHHS Programme scoped systems and prepare for Migration start at M11/M12, the MHHS Programme requires a Minimum Viable Cohort (MVC) of Programme Participants (covering LDSOs, Suppliers and Agents) to participate in SIT and then to be MHHS Qualified for M11/M12.

In addition to the MVC, other Suppliers and Agents have volunteered to progress through the SIT route. These Non-MVC SIT Parties will undertake the same tests, but do not need to complete MHHS Qualification ahead of M11/M12.

The PIT and SIT activity for SIT Parties is Programme led and the detail of this activity is not covered within the scope of the QA&P. The QA&P focuses on the interactions between SIT Parties and the Code Bodies required to support MHHS Qualification.

It is assumed that all SIT Party external testing requirements for MHHS Qualification will be met as part of SIT and SIT Parties will not be required to undertake any further testing during QT. Code Bodies will confirm this once the full scope of the SIT Test Scenarios and Test Cases has been agreed. Code Bodies are working closely with the Programme with the aim of ensuring that SIT scope meets all MHHS Qualification requirements. If the SIT Party is a new entrant, it will also need to meet the non-MHHS market entry requirements for each relevant Code prior to starting operation.

9.1.2 SIT Party MHHS Qualification Steps

A summary of the MHHS Qualification steps for SIT Parties is set out in *Figure 4* below.

The MHHS Programme has agreed to provide the following information to Code Bodes for SIT Parties that are required to MHHS Qualify: MPID and Role Code, Company and Contact Details, Placing Reliance Submissions, PIT Completion Reports and SIT Completion Reports. On this basis, Code Bodies do not require a Pre-Qualification Submission from SIT Parties.

SIT Parties will work with the MHHS Programme to complete their PIT and SIT activities (using defined PIT and SIT Exit Criteria). Where any defects remain at the end of SIT, Code Bodies will work with the SIT Party and MHHS Programme to ensure that these are appropriately mitigated.

SIT Parties must provide an Initial QAD Submission to Code Bodies so that Code Bodies can commence their assessment of SIT Party evidence. Code Bodies will review this information and work with the SIT Party to clarify and assure that the information provided meets Code Body requirements for MHHS Qualification.

SIT Parties will work with the MHHS Programme to complete SIT. Where a test cannot be completed in SIT, work-off plans are expected to be developed by the SIT Party, reviewed with the MHHS Programme and agreed with Code Bodies. SIT Parties must then provide a Final QAD Submission once they have completed SIT. Code Bodies will review the Final QAD Submission and work with the SIT Party to finalise it, including closing any required work-off plans to manage defects that cannot be resolved through SIT.

Further details of the information that must be provided in the Initial QAD Submission and the Final QAD Submission is set out in *Section 10.2 QAD* below.

Once the content of the QAD has been agreed as being complete for the purposes of MHHS Qualification, it must be signed by a Company Director (or delegate for roles governed only under the REC).

Code Bodies will then approve MHHS Qualification for the SIT Party in accordance with *Section 11.3 MHHS Qualification Approval*. Once MHHS Qualified, a SIT Party must undertake Service Activation before it can operate the new MHHS arrangements. Service Activation, as described in *Section 7.3.3 Service Activation*, is out of scope of the QA&P and will be managed by the MHHS Programme.

SIT Parties are expected to complete their testing through the SIT route. MHHS Programme and Code Bodies will work with SIT Parties to help ensure that this happens. Those participants, who cannot complete SIT, will be accommodated into the most appropriate Qualification Wave. The way forward will be dependent on the party, what has prevented the completion of testing in SIT, how much testing has been completed, and where this is within the MHHS Programme timelines. As such, it will be case by case dependent. *Appendix B* sets out the process for parties that need to move from SIT to QT.

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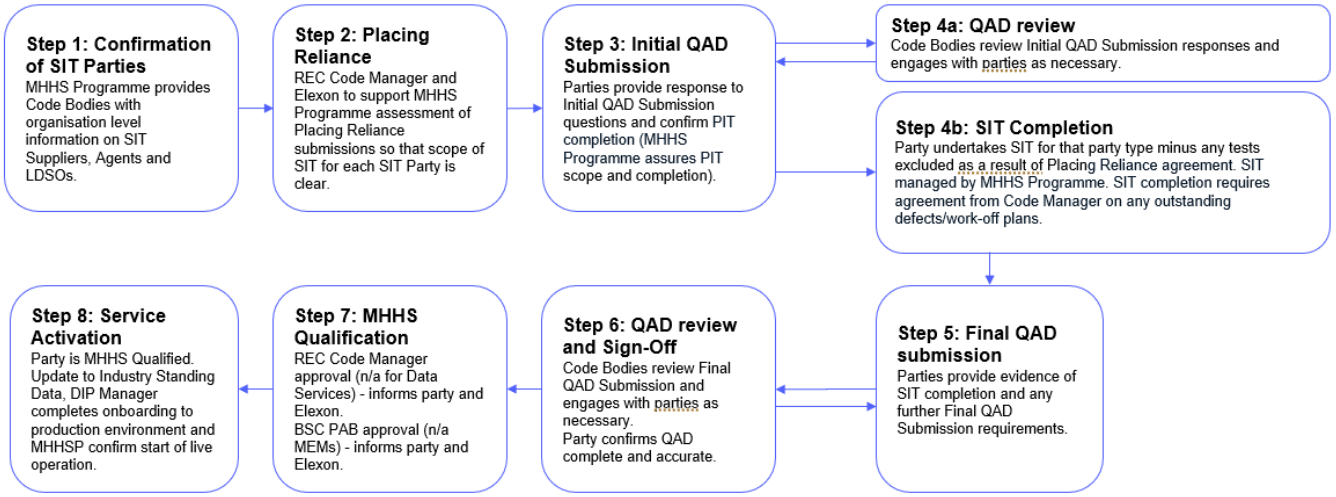

Figure 4 SIT Party MHHS Qualification Steps

9.1.3 SIT Party MHHS Qualification Plan on a Page

A high-level SIT Party POAP is set out in Figure 5 below with further information in Appendix C.

The MHHS Programme agreed the list of SIT participants in May 2023 and SIT Parties have been undertaking design, build and testing through their internal PIT activity ahead of SIT. SIT is scheduled to run from November 2023 to April 2025.

As noted above, it is expected that SIT Parties will complete the QAD in two stages. For the MVC and non-MVC SIT Parties, the Initial QAD Submission must be provided by 10/10/2024. MVC SIT Parties must provide their Final QAD Submission by 06/01/2025. Programme Participant will work with Code Bodies to address any remaining comments and submit their QAD Sign-off by 07/02/2025 so that an MVC SIT Party can be MHHS Qualified by 28/02/2025. Non-MVC SIT Parties will have longer to complete SIT and MHHS Qualification as set out in Appendix C.

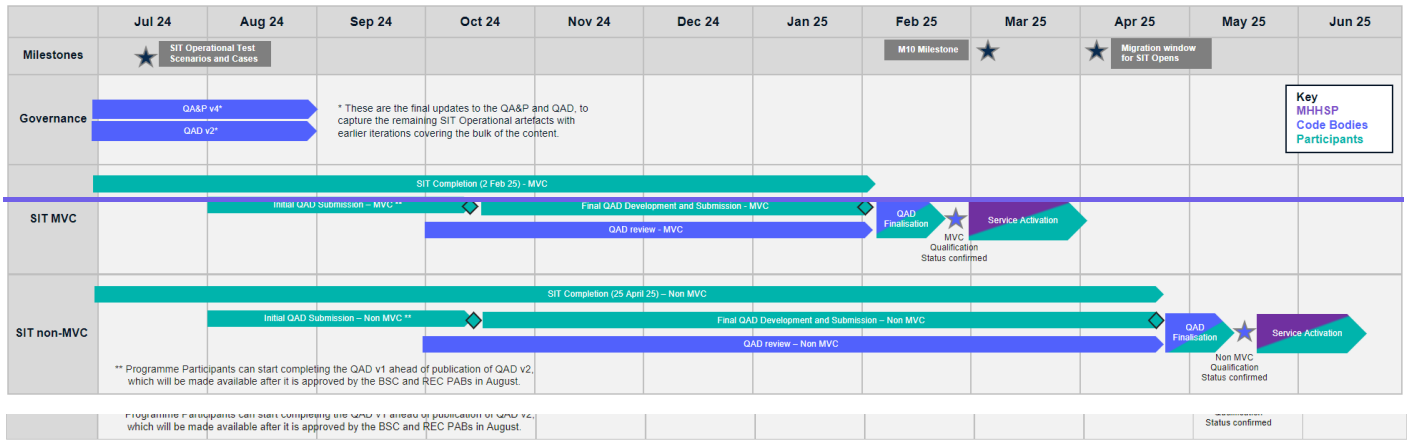

Figure 5 SIT Party POAP

9.2 Process for Non-SIT LDSOs required to MHHS Qualify by M10

9.2.1 Background

Existing LDSOs and those LDSOs that will enter the market ahead of M10 are required to complete MHHS Qualification by M10. LDSOs are not categorised by the MHHS Programme as Central Systems and are therefore not

required to undertake testing as part of SIT (other than a minimum of two SIT LDSO volunteers required to support testing of the E2E arrangements). Non-SIT LDSOs will therefore undertake QT.

Given the timing of Non-SIT LDSO testing, the interaction with SIT and the criticality for M10, management of QT is being undertaken by MHHS Programme. Code Bodies retain control of the overall MHHS Qualification Process for Non-SIT LDSOs.

9.2.2 Non-SIT LDSO MHHS Qualification Steps

A summary of the MHHS Qualification steps for Non-SIT LDSOs is set out in *Figure 6* below.

Non-SIT LDSOs that wish to Place Reliance on testing undertaken by others are required to provide the Non-SIT Placing Reliance Form to the MHHS Programme. Placing Reliance proposals will be reviewed by Code Bodies and confirmed to MHHS Programme and Non-SIT Parties so that the scope of QT is clear.

Each party will be required to complete PIT (assured by MHHS Programme against defined PIT Exit Criteria) and undertake its other MHHS Qualification preparation activities, such as DIP onboarding. The party will then be required to provide its Initial QAD Submission as per timelines set out in *Appendix C*. Code Bodies will review the Initial QAD Submission, seeking clarifications where required.

QT will be managed by an MHHS Programme Qualification Test Manager on behalf of the Code Bodies and a more detailed explanation of the QT process is set out in *Annex 1: Non-SIT LDSO MHHS Qualification Testing Approach and Plan.*

Non-SIT LDSOs should continue to develop the content of their Final QAD Submissions in parallel with QT.

Where a test cannot be completed in QT, work-off plans are expected to be developed by the Non-SIT LDSO, reviewed with the MHHS Programme Qualification Test Manager and agreed with Code Bodies.

Once a Non-SIT LDSO has completed QT (assured by MHHS Programme against defined QT Exit Criteria), it is required to provide a Final QAD Submission. Code Bodies will review the Final QAD Submission and work with the party to finalise it. Once the content has been agreed as being complete for the purposes of MHHS Qualification, it must be signed by a Company Director.

Code Bodies will then approve MHHS Qualification for the Non-SIT LDSO in accordance with *Section 11.3 MHHS Qualification Approval*. Once MHHS Qualified, the party must complete Service Activation before it can operate the new MHHS arrangements. Service Activation, as described in *Section 7.3.3 Service Activation*, is out of scope of the QA&P and will be managed by the MHHS Programme.

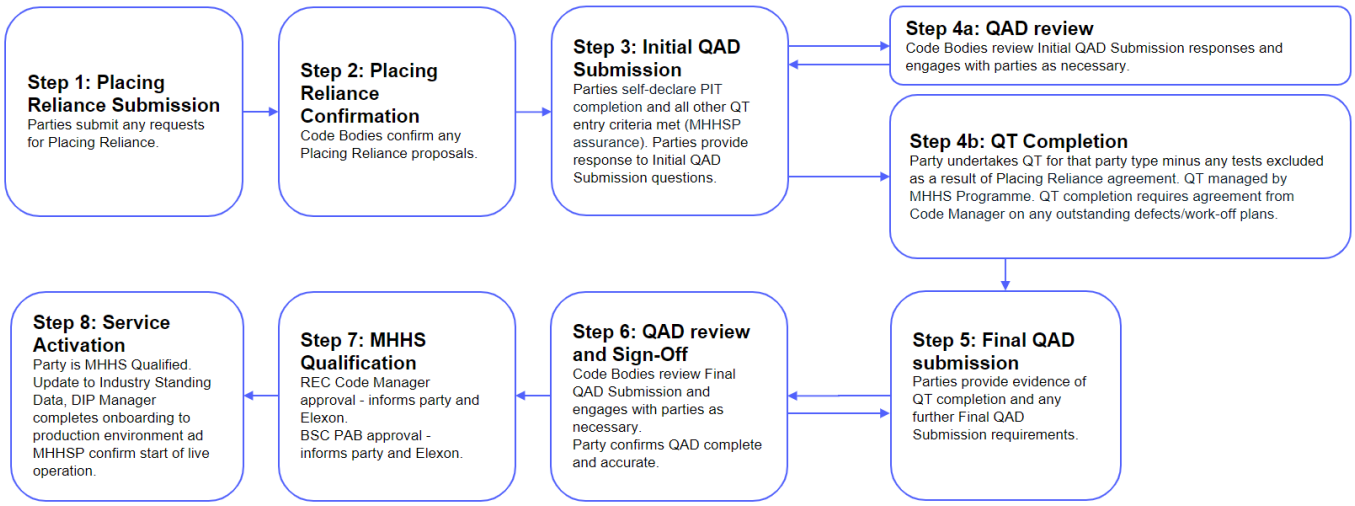

Figure 6 Non-SIT LDSO MHHS Qualification Steps

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9.2.3 Non-SIT LDSO POAP

A high-level Non-SIT LDSO POAP is set out in *Figure 7* below with further information in *Appendix C*.

The Non-SIT Placing Reliance Form has been published by Code Bodies with a request for Non-SIT LDSOs to send any proposals by 05/01/2024. Code Bodies and MHHS Programme Test Manager expect to agree any Placing Reliance proposals by the end February 2024.

A Non-SIT LDSO is expected to submit its PIT Completion Report by 26/07/2024, undertake DIP onboarding by mid-September 2024 and provide its Initial QAD Submission by 10/10/2024. These are the final dates by which submission is expected and earlier provision is encouraged.

QT for Non-SIT LDSOs is due to run from 1 October 2024 to 20 December 2024.

Non-SIT LDSOs are required to provide their Final QAD Submission by 06/01/2025. Programme Participant will work with Code Bodies to address any remaining comments and submit their QAD Sign-off by 07/02/2025 so that the party can be MHHS Qualified by 28/02/2025 to meet M10.

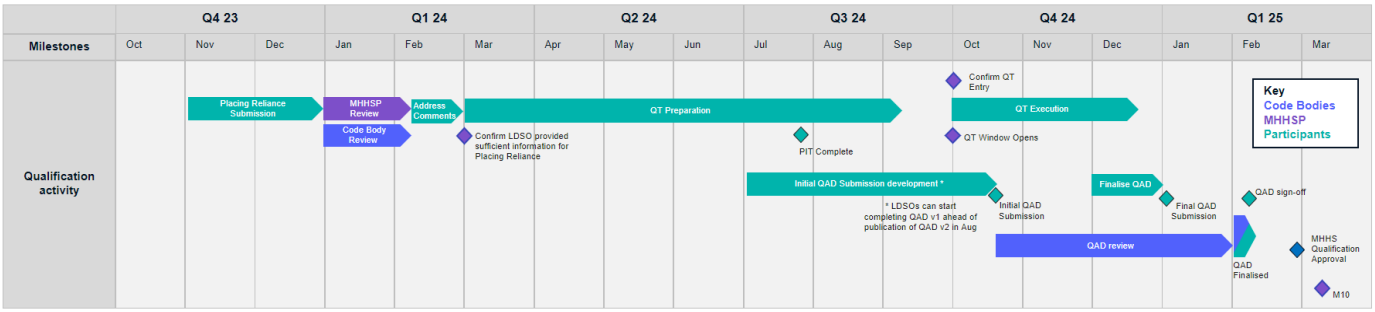

Figure 7 Non-SIT LSDO POAP

9.3 Process for Non-SIT Suppliers, Agents, and new entrant LDSOs (post M10) to MHHS Qualify

9.3.1 Background

This process applies to Suppliers and Agents that are not part of SIT. It also applies to new entrant LDSOs that will not be operational in the market ahead of M10 but wish to complete Qualification ahead of M14.

Because of the large number of Suppliers and Agents in this group, individual parties will be allocated to one of four overlapping Qualification Waves. Parties will be required to undertake QT, managed by an Elexon Qualification Test Manager on behalf of Code Bodies, and become MHHS Qualified. Once MHHS Qualified, and in accordance with the MHHS Programme Plan, Non-SIT Parties can commence operating in the new MHHS arrangements from 30 September 2025.

9.3.2 Non-SIT Supplier, Agent and new entrant LDSO MHHS Qualification Steps

A summary of the MHHS Qualification steps for Non-SIT Suppliers, Agents and new entrant LDSOs is set out in *Figure 8* below.

Parties are required to provide a Pre-Qualification Submission. This will collect information from each Programme Participant on its preferred Qualification Wave, PIT approach and completion timescales, target migration date, and any request from it to Place Reliance on testing completed by others, as well as other information. The Pre-Qualification Submission will provide Code Bodies with the information required to make an informed judgement on a party's plans and readiness for its preferred Qualification Wave, confirm the Placing Reliance approach and confirm what tests the party will be required to undertake in QT. For the avoidance of doubt, a Programme Participant cannot be allocated to a Qualification Wave prior to that of any party that it is Placing Reliance on.

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Code Bodies will seek to flex testing and assurance capacity to meet Programme Participant Qualification Wave requests as far as possible but may, as a last resort only, need to implement a reallocation process if all participants' requests cannot be met. The reallocation process will not be a first come, first served approach, and participants will be engaged prior to this process being enacted. Once allocated, Code Bodies would utilise a number of checkpoints to monitor progress against the QT Entry Criteria (see *Section 10.6* for further information on QT Entry Criteria), where a participant is not deemed to be on track for QT Entry they may be moved to a later wave. A wait list process will be in place where participants are looking to move into an earlier oversubscribed wave.

Each party will be required to complete PIT (assured by the Elexon Qualification Test Manager, using defined PIT Exit Criteria), provide its QT Test Plan and undertake its other MHHS Qualification preparation activities, such as DIP onboarding in accordance with the plans provided in its Pre-Qualification Submission. The party will then be required to provide its Initial QAD Submission. Code Bodies will review the Initial QAD Submission, seeking clarifications where required, and confirm that the party can commence QT in its allocated Qualification Wave.

QT will be managed by the Elexon Qualification Test Manager and a more detailed explanation of the QT process will, in the next iteration of the QA&P, be set out in *Annex 2: Non-SIT Supplier and Agent MHHS Qualification Testing Approach and Plan* and *Annex 3 – New Entrant Non-SIT LDSO MHHS Qualification Approach.*

A Programme Participant should continue to develop the content of its Final QAD Submission in parallel with QT.

Where a test cannot be completed in QT, work-off plans are expected to be developed by the Non-SIT Party, reviewed with the Elexon Qualification Test Manager and agreed with Code Bodies.

Once it has completed QT (assured by the Elexon Qualification Test Manager, using defined QT Exit Criteria), it is required to provide a Final QAD Submission. Code Bodies will review the Final QAD Submission and work with the party to finalise it. Once the content has been agreed as being complete for the purposes of MHHS Qualification, it must be signed by a Company Director (or delegate for roles governed only under REC).

Code Bodies will then approve MHHS Qualification for the Supplier, Agent or new entrant LDSO in accordance with *Section 11.3 MHHS Qualification Approval*. Once MHHS Qualified, the party must complete Service Activation before it can operate the new MHHS arrangements. Service Activation, as described in *Section 7.3.3 Service Activation*, is out of scope of the QA&P and will be managed by the MHHS Programme.

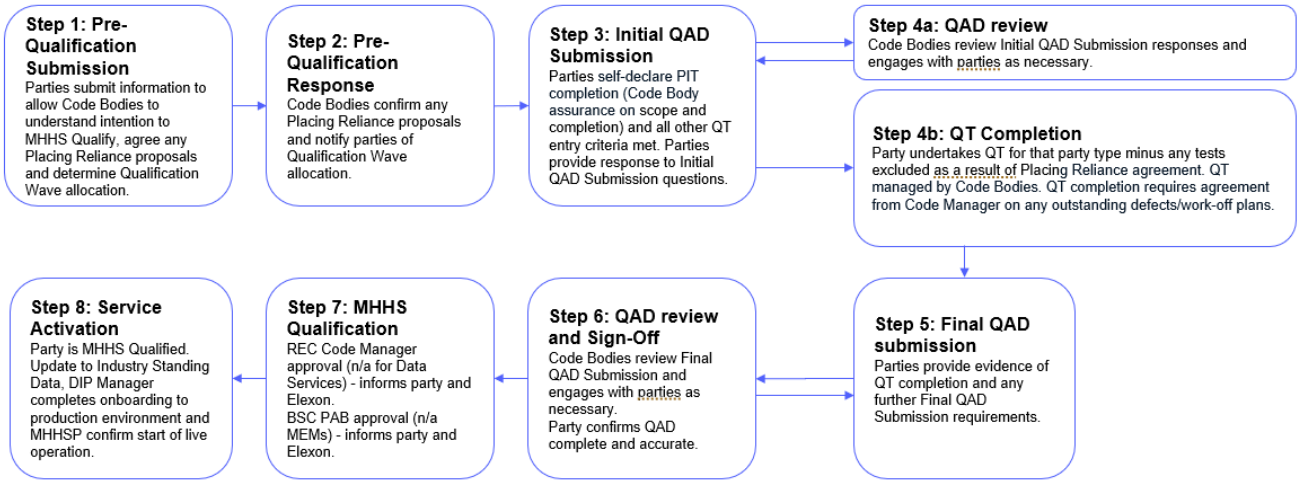

Figure 8 Non-SIT Supplier, Agent and new entrant LDSO MHHS Qualification Steps

9.3.3 Non-SIT Supplier, Agent and new entrant LDSO POAPs

Two POAPs have been provided for Non-SIT Suppliers, Agents and new entrant LDSOs which set out the sequencing and the dates for the MHHS Qualification steps describe above (with further information set out in *Appendix C)*.

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Firstly, *Figure 9* sets out the Pre-Qualification Process. The Pre-Qualification Submission template will be published by Code Bodies in early February 2024. Non-SIT Suppliers, Agents and new entrant LDSOs must return their completed Pre-Qualification Submissions by 26/04/2024. Code Bodies expect to be able to provide an early indication on the distribution of Qualification Wave requests in May 2024 so that parties understand the likelihood of any adjustment requirements. A final allocation of Non-SIT Suppliers, Agents and new entrant LDSOs to Qualification Waves is expected to be made by the end of June 2024. Annexes 2 and 3 will set out the process for parties that need to defer to a later Qualification Wave and how they can request a move to an earlier Qualification Wave. New entrants to the market, that are not in a position to provide a Pre-Qualification Submission by 26/04/2024, should discuss this as part of their market entry arrangements with Code Bodies (see *Appendix B* for further information*).*

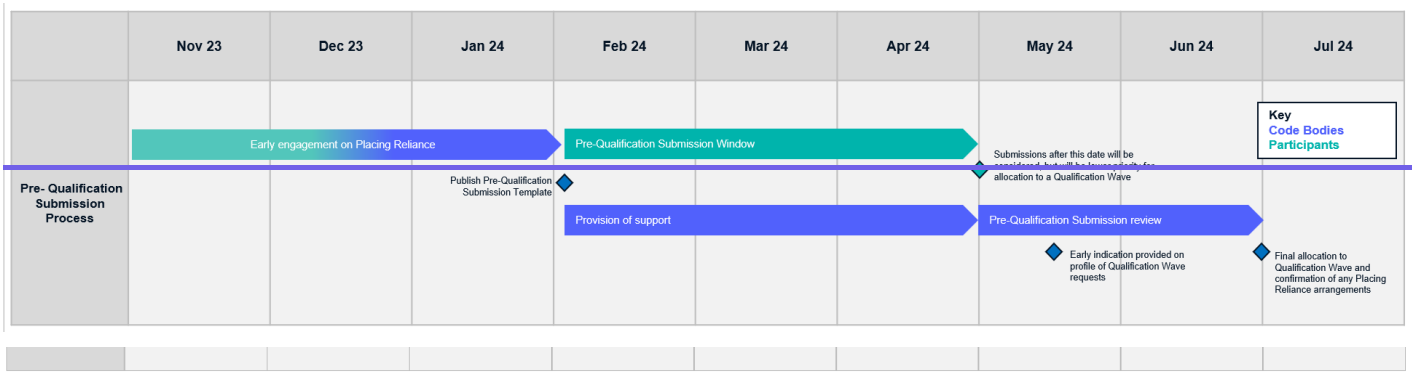

Figure 9 Non-SIT Supplier, Agent and new entrant LDSO Pre-Qualification Submission POAP

Secondly, *Figure 10* sets out the plan from Qualification Wave allocation to MHHS Qualification for Non-SIT Suppliers, Agents and new entrant LDSOs.

As noted above, a more detailed explanation of the QT process will be set out in *Annex 2: Non-SIT Supplier and Agent MHHS Qualification Testing Approach and Plan* and *Annex 3 – New Entrant Non-SIT LDSO MHHS Qualification Approach and Plan.*

Each party will be allocated to one of four Qualification Waves. Prior to starting QT, a party is expected to complete PIT, undertake DIP onboarding (including connectivity proving) and provide its Initial QAD Submission. The participant is encouraged ~~required~~ to submit its PIT Completion Report to the Elexon Qualification Test Manager for review at least two months ahead of its allocated QT wave execution start date with the final date for submission being approximately one month ahead of QT (see *Appendix C* for dates). Early submission of the PIT Completion Report reduces risk of delay to QT, for example where, following review, there is a requirement to undertake additional PIT or agree Work-Off plans with the Code Manager. ~~along with its QT Test Plan.~~ Confirmation that PIT has been completed to a sufficient standard to enter Qualification Testing will be provided to the participant within one month. Each party is also required to provide a QT Test Plan two months ahead of its QT wave execution start date.

QT for the first Qualification Wave is due to run from February 2025 to June 2025. QT for the fourth and final Qualification Wave is due to run from August 2025 to December 2025.

Qualification Wave assignment provides a QT start date and expected timeframe for QT completion. A participant's progress through QT will be tracked against its submitted QT Test Plan and the expected timeframe for completing QT (the QT execution window). The timescales for completion of QT within each Qualification Wave are illustrated in *Figure 10* below and described in more detail in *Appendix C*. Code Bodies will engage with a Participant, where there is a risk of slippage against their QT Test Plan, to review, and where necessary, re-baseline the plan.

Once a Final QAD Submission has been provided, reviewed by Code Bodies and determined to be complete and signed off by the Programme Participant, it is expected that Code Bodies will confirm that a party is MHHS Qualified within one month.

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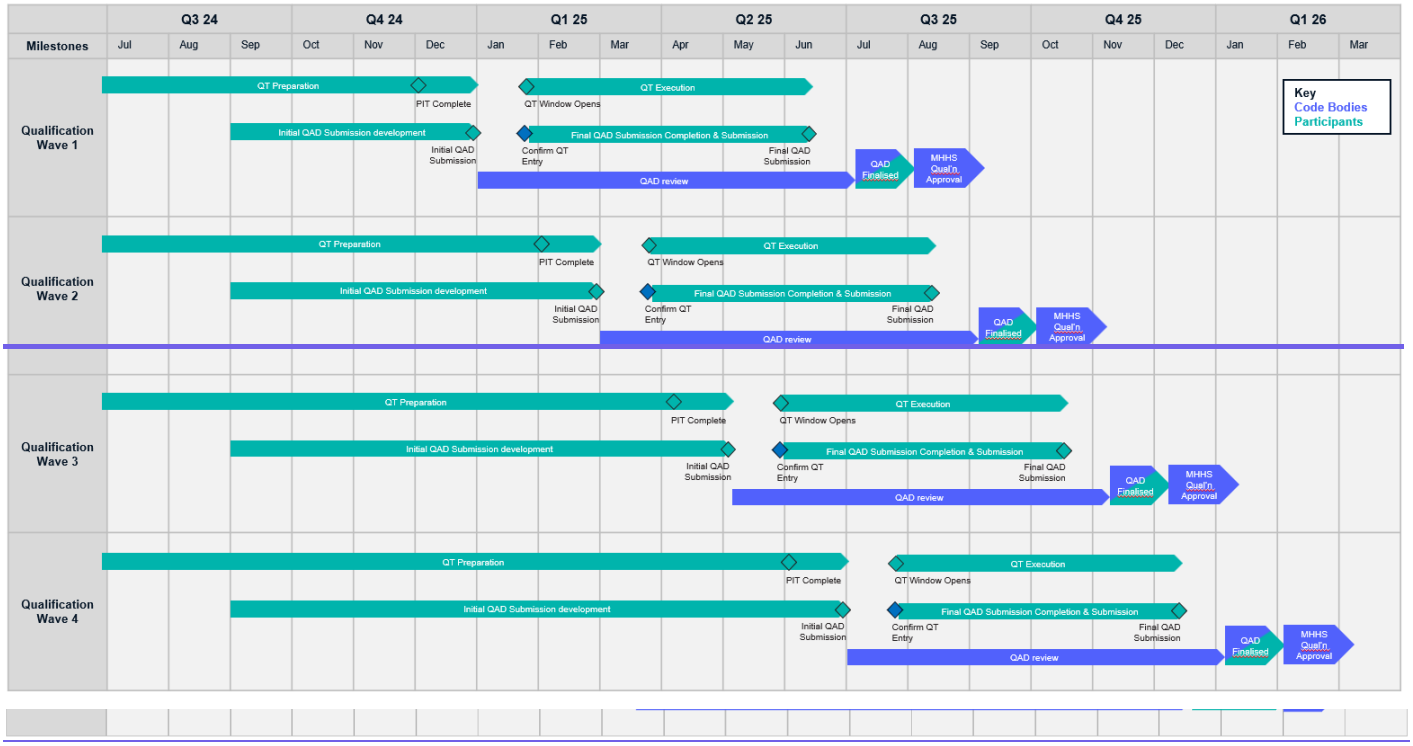

Figure 10 Non-SIT Supplier, Agent and new entrant LDSO Qualification Waves POAP

9.4 DIP Onboarding – Applicable to all participants

Programme Participants are responsible for ensuring that their systems are ready to communicate with the DIP ahead of DIP onboarding. For Non-SIT Parties, further information on DIP onboarding to support QT will be set out in Annexes 1, 2 and 3.

For the purposes of this document, DIP onboarding in preparation for SIT/QT includes the appointment of security officers, the issuance of Digital Certificates to support testing and initial connectivity proving (also referred to as smoke testing). Following MHHS Qualification, a participant will be issued with its Production Environment Digital Certificate as part of Service Activation

Programme Participants will only be able to receive their Production Environment Digital Certificates after the DIP Manager is satisfied that they are ready in all respects to move to the Production Environment – see DIP Subsidiary Document DSD002 (currently being consulted on as a part of BSC Issue 101 drafting) for further details – specifically that Code Body Qualification (including MHHS Qualification) has been completed.

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10 MHHS Qualification Evidence

This section sets out the PIT, QT, SIT and operational/governance controls evidence that Programme Participants must provide in their Initial QAD Submissions and Final QAD submissions. This section also describes how this evidence will be assured so that Code Bodies can approve a Programme Participant's MHHS Qualification to operate the new MHHS arrangements.

10.1 High-level MHHS Qualification Evidence Requirements - Applicable to all participants

Code Bodies expect Programme Participants to provide evidence that they have met the following requirements during the MHHS Qualification process:

- Have robust systems in place which meet the MHHS requirements;
- Be capable of receiving, processing, sending and publishing data as required by the MHHS requirements;
- Be capable of undertaking the business processes required by the MHHS requirements;
- Be capable of undertaking successful migration for MHHS; and
- Have the right resourcing, security and organisational controls in place to manage expected operation under MHHS.

All Programme Participants completing MHHS Qualification will be tested on their ability to meet the requirements in the MHHS Design; these specific requirements will be delineated in the QAD.

This section describes the overall process for the validation and approval of MHHS Qualification evidence through PIT, SIT and QT phases.

In summary, the high-level MHHS Qualification evidence requirements will include:

- PIT: Evidence of PIT completion must be provided in the Initial QAD Submission which will prove specific functional, non-functional, operational and migration-related characteristics of systems and processes.
- SIT/QT: Participants are expected to complete either SIT or QT, document evidence in ADO and provide a test completion report in their Final QAD Submission.
- Placing Reliance: Placing reliance submissions must be agreed in advance of QT/SIT start and will determine the scope of the tests that each Programme Participant must evidence in their Final QAD Submission.
- Procedural & Governance: All participants are required to demonstrate that the processes they are implementing adhere to the Code requirements and they have appropriate governance to ensure this; evidence for this will be documented in both the Initial QAD Submission and Final QAD submission as directed in the QAD template.

10.2 QAD – Applicable to all participants

The QAD is the mechanism through which all Programme Participants will provide the evidence required by Code Bodies for MHHS Qualification. Code Bodies expect Programme Participants to complete the QAD at an organisation-level, covering all Market Roles they intend to operate within the new MHHS arrangements.

To support the efficient review of evidence and to avoid unnecessary delay between the completion of QT/SIT and MHHS Qualification being approved, evidence should be provided via an Initial QAD Submission and a Final QAD Submission. Where test evidence has been uploaded into ADO, this should be referenced within the QAD, rather than uploading evidence in multiple places.

Programme Participants must provide the following in their **Initial QAD Submission**:

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- Confirmation of PIT completion (completion report including defects that cannot be resolved through PIT with supporting work-off plans and agreements with Code Bodies where elements of PIT have been deferred for later completion).
- ~~Confirmation that it has service design/Local Work Instructions (LWIs) covering each relevant process.~~
- Confirmation that processes have the appropriate documentation for them to be effectively operated e.g. service design or Local Work Instructions (LWIs).
- Details of operational controls e.g. exception management etc.
- Other organisation specific information requested in the Initial QAD Submission (not reliant on testing).

Code Bodies will then review this information and work with the Programme Participant to clarify and assure that the information provided meets Code Body requirements for MHHS Qualification.

Once the Programme Participant has completed QT/SIT, it must provide its **Final QAD Submission** covering the following:

- Confirmation of QT/SIT completion (completion report including defects that cannot be resolved through SIT/QT with supporting work-off plans that have been agreed by Code Bodies).
- Confirmation that it has completed DIP User requirements e.g. information security responses reviewed and agreed by DIP Manager and ~~any contractual agreements~~a DIP User Access Agreement, required between each ~~the~~ Programme Participant that is not a BSC Party and the DIP Manager to become a DIP User~~s~~, have been signed (this includes DIP Connection Providers operating on a Programme Participant's behalf).

The finalised QAD must be signed by a Company Director (or delegate for roles governed only under REC) to confirm that the information and evidence provided is complete and accurate.

Programme Participants are encouraged to complete their QAD in parallel with SIT/QT to ensure they meet timelines set out in Appendix C.

10.2.1 QAD Sections – Applicable to all participants

The Operational Controls and Governance section of the QAD is expected to be split into Organisation-Specific and Role-Specific sections as follows:

Organisation-specific sections:	Role-specific sections:
Company Information	Operational Solution
Programme Governance	Technical Solution
Change Management	Processes and Controls
Information Security Arrangements	Testing Requirements and Evidence

It is expected that Programme Participants will provide an explanation and supporting evidence of the operational controls and governance that they have in place over key risk areas identified by the Code Bodies. Code Bodies relevant to the Programme Participant's Market Roles may raise observations or findings and request further submission. All Code Bodies with governance responsibility for the Market Role must approve the operational controls and governance submission for the Organisation and Market Role. The list of areas below is not intended to be exhaustive compilation of what will be included on the QAD, but to provide an example of some current key considerations:

Business Solution

- People
  - Organisation structure, including reporting and lines of communication
  - Previous experience in the industry

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- Internal Resources
    - Expected change in resource requirements and technical capacity
    - Monitoring of the ongoing delivery of your revised service
- External Resources
    - Revised Supplier Agent contracts
    - Subcontractors, third parties, and service providers relationship management

Technical Solution

- Systems
    - In-scope system architecture
    - Elements bespoke or common to other participants
    - Fault, replay, and jeopardy management
- Code Obligations
    - Embedding Code obligations in processes and applications
    - Monitoring for compliance with Code obligations
- Change Risk
    - Risk assessment of changes
    - Change management procedures
    - Business continuity and disaster recovery arrangements
- Testing Policies (where not covered by SIT/PIT/QT)
    - Test Strategy
    - Defect identification and resolution
    - Reporting and oversight of testing
- Information Security and Data Protection
    - Risk assessment of information security and data protection
    - Information security accreditation (e.g. ISO27001 or equivalent)
    - Human resource security, screening and training
    - Incident management

For avoidance of doubt, Code Bodies will set out in the QAD what Operational Controls and Governance information should be provided and whether this should be part of the Initial QAD Submission or the Final QAD Submission.

10.3 Placing Reliance - Applicable to all participants

The MHHS-DEL1064 - Placing Reliance Policy was approved by TMAG and the BSC and REC PABs in April 2023 and further information on the application of this policy is available in this document.

The purpose of the policy is to ensure there is no unnecessary duplication of effort for participants whilst also ensuring that Code Bodies have sufficient assurance that Programme Participants can meet their Code requirements. It is optional for Programme Participants and can be adopted by either:

- Delegating some or all testing to a third-party software / IT provider (referred to as '*testing on behalf of*'), or;
- Placing reliance on some or all testing completed by another Programme Participant in PIT, SIT or QT to meet MHHS Qualification evidence requirements in part or full (referred to as '*placing reliance*').

In this document, the term Placing Reliance is used to collectively describe both instances covered in the bullets above and the lower-case terms refer to the specific arrangements for 'placing reliance' and 'testing on behalf of' as set out in the Placing Reliance Policy.

In either case, the Programme Participant that wishes to MHHS Qualify is accountable for how its MHHS testing requirements are met. Arrangements for delegation of day-to-day task management within test preparation and execution to third-party testing providers, and the arrangements for placing reliance on testing completed by other Code-defined organisations, may differ between Programme Participants. Programme Participant must ensure they have agreement in place with other Programme Participants, whose testing they may place reliance on, or with the third-party undertaking testing on their behalf.

The point at which Programme Participants should make requests to Place Reliance is described in *Section 9 MHHS Qualification Approach*. SIT Parties and Non-SIT LDSOs will complete a standalone Placing Reliance Form. Non-SIT Suppliers, Agents and new entrant LDSOs will provide this information as part of their Pre-Qualification Submission. Within their Placing Reliance proposals, Programme Participants should consider the applicability of the testing they are Placing Reliance on with their organisation's context, covering the level of commonality and bespoke elements of

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systems involved, including how the systems for live operation are hosted and interface with other systems within the organisation's systems landscape.

Code Bodies will need to agree each Placing Reliance proposal (and in the case of SIT Parties and Non-SIT LDSOs, the MHHS Programme will also need to agree). This information will be used to determine the tests that each Programme Participant will need to demonstrate through SIT or QT.

Criteria for Placing Reliance is set out in the Placing Reliance Policy and is focused on operational processes as well as the systems. As with other elements of the MHHS Qualification approach, where a Programme Participant's role is covered by BSC and REC then both Code Bodies will need to approve the extent to which a party can Place Reliance.

An organisation choosing to MHHS Qualify via the Non-SIT route may, where appropriate, place reliance on MHHS industry testing already successfully undertaken by another organisation/MPID acting in the same role (i.e. met via SIT, QT, or a combination of SIT and/or QT and testing on behalf of).

It is expected that when placing reliance, either partially or fully, the Programme Participant will not need to provide a copy of the testing report they are placing reliance on, provided Code Bodies already have access to the relevant information, but will need to reference in their QAD what testing they are placing reliance on.

If there are any changes in a Programme Participant's agreed Placing Reliance approach at any time during the MHHS Qualification process, then this must be agreed with Code Bodies. Based on the information provided, Code Bodies may require the Programme Participant to complete additional testing or other remediation actions.

Programme Participants taking the Non-SIT route should refer to the respective Annex for lower-level details for Placing Reliance.

10.4 PIT Overview - Applicable to all participants

PIT is required to demonstrate that a Programme Participant can meet all role specific requirements included in the MHHS Design, covering business requirements, non-functional requirements, operational requirements (including SLAs defined in the operational choreography) and that it is able to send and receive valid DIP messages in accordance with all defined validation rules. PIT testing should include all participant systems and processes required to support the MHHS requirements which fall within the scope of both the BSC and REC. It is the responsibility of each Programme Participant to ensure their PIT sufficiently covers the Assessment Criteria developed by the Code Bodies for the Market Roles they wish to Qualify for.

Code Bodies expect that PIT is conducted when all components to deliver BSC and/or REC obligations (as applicable for the relevant Market Role) have been internally integrated. PIT activity and evidence submitted to meet MHHS Qualification requirements is expected to be a final internal test where all components are tested for business scenarios set out in the MHHS Design in an end-to-end manner, rather than earlier testing carried out to support development activity. This should include interfaces covering the process triggers and process end points that may come from systems not defined within the MHHS Design.

If a participant is seeking to adopt the MHHS Placing Reliance Policy for some functional elements of PIT, that participant is not expected to repeat the PIT activity carried out by the ~~party~~ Programme Participant they are Placing Reliance on. However, if a Programme Participant is Placing Reliance on functional testing carried out by a third-party software / IT provider, there may be additional testing requirements to evidence that the software has been successfully deployed within the Programme Participant's environment and that any internal integration with the third-party software / IT solution has been successfully updated. Consequential changes to participant systems to support wider processes such as billing and DUoS charging, (sometimes referred to as DBT2) are not within the scope of BSC or REC and therefore not required for MHHS Qualification and testing evidence will not be required (for PIT or SIT/QT). ~~-~~Please note that as DUoS reports (REP900 and REP901) are part of the MHHS design, MHHS Programme requires assurance that LDSOs can generate these reports in line with MHHS requirements. It is expected that the LDSO PIT should include tests to show they can generate REP900 and REP901 reports and the format is in line with the MHHS design. MHHS Programme SIT team or the MHHS Programme Qualification Test Manager will not, as part of PIT assurance, check that the values within the REP900 and REP901 reports are being generated in line with the DCUSA requirements. Further detail on this is provided within Annex 1.

Whilst Programme Participants are expected to complete PIT ahead of SIT / QT, there may be some elements of PIT completed in parallel or following SIT / QT, for example where testing is reliant on the system functionality being proven through functional testing before it is deployed / integrated into the enduring environments. Participants should

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identify any PIT testing that is not expected to be completed ahead of SIT / QT within their PIT Approach and Plan to enable this to be agreed with Code Bodies.

The PIT phase is expected to comprise of different types of testing as detailed in MHHS-DEL852 Pre-Integration Testing Guidance (copied below in *Figure 11*):

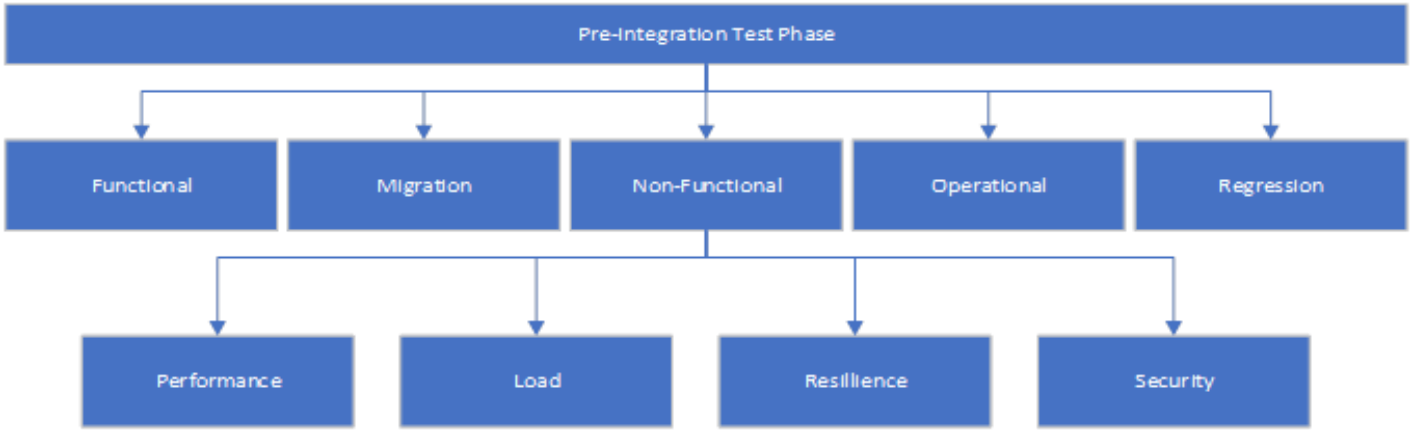

Figure 11 Extract from Pre-Integration Testing Guidance MHHS-DEL852 showing PIT scope

Please refer to MHHS-DEL852 Pre-Integration Testing Guidance document for further information on PIT, including expected timescales for PIT completion.

10.4.1 PIT Deliverables – Applicable to all participants

Programme Participants are responsible for managing their own testing process and will be required to demonstrate completion of their own PIT.

Each Programme Participant undertaking PIT will be expected to provide test artefacts (as referred to in MHHS-DEL852 Pre-Integration Testing Guidance) to be validated by the MHHS Programme (for SIT Participants and Non-SIT LDSOs) and Code Bodies (for Non-SIT Suppliers, Agents and LDSOs entering the market after M10). The PIT deliverables for SIT Parties are not discussed further in this section.

For Non-SIT Parties, the required artefacts are as follows:

- MHHS-DEL1049 PIT Approach and Plan
- MHHS-DEL1050 PIT Requirements to Test Traceability Matrix
- MHHS-DEL1051 PIT Scenarios
- MHHS-DEL1052 PIT Test Completion Report

For Non-SIT Parties, the above referenced PIT Approach and Plan, PIT Requirements to Test Traceability Matrix and PIT Scenarios should be provided as soon as possible and in line with the timelines published with MHHS-DEL852 Pre-Integration Testing Guidance so that they can be reviewed by Code Bodies to ensure that coverage is sufficient. For Non-SIT Suppliers and Agents, the PIT Approach and Plan ~~should~~ is expected to form part of a Programme Participant's Pre-Qualification Submission. Early submission and Code Body review will avoid the need for the Programme Participant to undertake any additional, unexpected PIT before their PIT Completion Report will be accepted. The PIT Test Completion Report should be provided once the Programme Participant has completed its planned PIT activity subject to any deferred PIT activity agreed with Code Bodies. ~~.~~

Non-SIT Parties may also find the following documents useful when completing PIT:

- MHHS-DEL1054 PIT Test Execution Progress Report
- MHHS-DEL1053 PIT Test Readiness Report

MHHS Programme and Code Bodies will issue templates that Non-SIT Participants must use to document their PIT evidence. These templates form a part of the PIT Guidance document that is planned to be issued for consultation imminently.

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10.4.2 PIT Exit Criteria - Applicable to all participants

All Programme Participants must successfully complete PIT testing as defined in MHHS-DEL852 Pre-Integration Testing Guidance and produce evidence of testing for review and approval to:

- Prove readiness to enter QT/SIT (subject to any PIT activity that will be deferred as agreed with Code Bodies). The relevant MHHSP SI, MHHSP Qualification Test Manager or the Elexon Qualification Test Manager for the QT/SIT will verify whether the Programme Participant is ready to commence QT/SIT as part of the QT/SIT preparation.
- Evidence coverage of requirements within the QAD to complete Qualification. This will be reviewed by the Code Bodies as part of the QAD review.

Programme Participants will be expected to submit their PIT evidence once and the MHHSP and Code Bodies' teams will ensure the evidence is shared internally as required.

QT/SIT Readiness

MHHS Programme will assure PIT exit for SIT Participants and Non-SIT LDSOs; and Code Bodies will assure PIT exit of Non-SIT Suppliers, Agents and new entrant LDSOs.

- All planned tests must be run to completion, or any exceptions documented and agreed with the MHHS Programme SI Test Team and/or Code Bodies;
- There are no outstanding severity 1 or 2 defects, or any exceptions are documented and agreed with the MHHS Programme SI Test Team and/or Code Bodies;
- Mitigation plans for any outstanding defects have been produced and agreed with the MHHS Programme SI Test Team and/or Code Bodies;
- A PIT Approach and Plan, PIT RTTM, PIT Scenarios and PIT Test Execution Completion Report has been submitted and assurance completed by MHHSP SI Test Team and/or Code Bodies.
- Programme Participants have proven interfaces as a minimum based on Market Role. This includes evidence generated by the DIP Simulator test tool to show that all relevant IFs and PUBs have been successfully exercised and evidence that changes to existing DTN messages have been tested.

Evidence Coverage of Requirements to Complete Qualification

In some circumstances a Programme Participant may not be able to fully complete PIT ahead of QT/SIT but they would still want to start QT/SIT and provide their Initial QAD Submission. For example, if a Programme Participant is placing reliance on functional testing being undertaken by a third-party software / IT provider before the software is deployed into the Programme Participant's environment for final internal integration testing. In such cases, the Programme Participant may submit the remaining PIT evidence after their Initial QAD submission, although such Programme Participants are encouraged to submit this as soon as available to avoid any delays in QAD sign-off and Qualification Approval. Any specific instances will need to be agreed on an individual basis with Code Bodies.

10.5 SIT Overview - SIT participants only

The tests to be covered in SIT to verify the correct functioning of each Service (according to its role) are described in the MHHS-DEL872 - SIT Scope for Voluntary Participants' Planning v0.6. A summary of the SIT requirements from this document is set out below for information only and participants should review the source document to understand the requirements.

SIT Parties will be required to complete all relevant SIT Test Cases specified for the Programme Participant type e.g. Supplier, unless agreed via its Placing Reliance proposal.

On completion of SIT, the MHHS Programme is expected to share the below artefacts with Code Bodies.

- SIT Completion Report
- SIT RTTM

While the MHHS Programme will have the primary assurance role for SIT, Code Bodies will review the above noted artefacts as part of a SIT Participant's Final QAD Submission.

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SIT Participant defects are expected to be resolved through SIT. Where a defect has been identified, that cannot be resolved through SIT, Code Bodies must agree with any work-off plan developed by the SIT Participant and MHHS Programme before it can accept that SIT has been completed. Any such work-off plans should be discussed and agreed with Code Bodies and then provided as part of the Final QAD Submission. Early engagement with Code Bodies on work-off plans is recommended to ensure they meet the MHHS Qualification requirements.

See *Section 9.1 Process for SIT Parties to MHHS Qualify* for further information.

There is a key MHHS Programme assumption that there will be no additional Qualification Testing for SIT Participants. Code Bodies are reviewing and providing input to SIT artefacts to ensure that SIT has sufficient coverage to meet MHHS Qualification requirements.

10.6 QT overview – Non-SIT participants only

The QT scope will be fully defined within the QT Test Scenarios and Test Cases as outlined in *Section 5.3 Other Qualification Documents.* QT scope will be derived from the SIT scope using on a 'risk-based testing' approach. The scope of QT is not expected to be additional to that of SIT, subject to review by the Code Bodies.

Further detail including an explanation of the QT approach and plan for Non-SIT Participants is set out in Annex 1 (Non-SIT LDSOs), Annex 2 (Non-SIT Suppliers and Agents), and Annex 3 (Non-SIT new entrant LDSOs).

QT will be managed by MHHS Programme Qualification Test Managers for Non-SIT LDSOs and by Elexon Qualification Test Managers, on behalf of Code Bodies, for Non-SIT Suppliers, Agents and new entrant LDSOs.

The scope of QT will cover the functional, migration, non-functional and operational MHHS Design requirements.

Participants will be provided with QT Test Scenarios and Test Cases relevant to their Market Role (see *Section 5.3 Other Qualification Documentation* and *Section 5.4 Document Development Plan* for further information.

The scope of the tests that a Programme Participant will need to evidence through QT may be reduced, with the agreement of Code Bodies, where the Programme Participant is Placing Reliance on QT/SIT completed by others.

Elexon and MHHSP Qualification Test Managers will undertake assurance during QT preparation. This will cover assurance of planning, coverage, readiness and execution.

Participants must demonstrate that they have met the high-level **QT entry criteria** set out below before they commence this stage of testing. This will include (with further detail set out in the Annexes):

- Complete PIT and submit artefacts described in *Section 10.4.1 PIT Deliverables* as ~~part of Initial QAD Submission~~set out within the updated MHHS-DEL852 PIT Guidance;
- Provide a QT Test Plan. ~~(~~For non-SIT Suppliers and Agents, this is expected to be provided at the same time as the PIT Completion Report. For Non-SIT LDSOs, the timelines for submission are set out in Annex 1 as part of the LDSO Preparation Schedule~~)~~;
- Be able to connect to the UIT Environment;
- Confirm all test data requirements have been completed and validated;
- Confirm all relevant users required to perform execution during QT phase are available and have access to all required systems and tools; and
- Participant Test Scripts are approved and loaded onto the ADO test management tool.

Programme Participants will be required to load test evidence, covering successful test completion as well as unresolved defects, onto ADO, the test management tool.

MHHSP and Elexon Qualification Test Managers will work with Programme Participants to assure QT completion based on the following **QT exit criteria**:

- No outstanding severity 1 or 2 defects (as defined in MHHS-DEL466 Defect Management Plan v2.0);
- Severity 3 and 4 defects that cannot be resolved during QT are documented with impact assessment and a work-off plan produced by the Programme Participant, reviewed by the MHHSP / Elexon Qualification Test Manager and agreed with Code Bodies as part of QT Exit;

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- ~~Severity 5 defects are documented. Documentation is required to validate that defects have been categorised correctly. Severity 5 defects are expected to be mostly cosmetic in nature and resolution/agreed work-off plans are not required for QT exit;~~
- 100% test execution, with approval from Code Bodies for any de-scoped/ failed test cases before QT completion; and
- Completion of any PIT work-off plans or deferred PIT activity (as agreed with Code Bodies).

The QT Completion Report will be provided to Code Bodies as part of a Programme Participant's Final QAD Submission. Code Bodies expect to rely on assurance undertaken by MHHS Programme and Elexon Qualification Test Managers on the completeness and accuracy of the QT Test Completion Reports. However, Code Bodies may undertake additional assurance, e.g. through sampling, using a risk-based approach as part of the Final QAD review.

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11 Qualification Governance – All participants

11.1 MHHS Qualification Progress Reporting

Code Bodies will report MHHS Qualification progress of Programme Participants to the MHHS Programme Migration Control Centre at the following stages. Please note that stages 1 and 2 below relate to Non-SIT Suppliers and Agents only. Code Bodies may provide additional reporting to MHHS Programme as requested.

	Report	Due by	Frequency	Coverage
1	Pre-Qualification Submission Status	May 2024	One-off	Report list of organisation, MPID and role of those who have submitted the PQS by response deadline.
2	Wave Allocation	July 2024	One-off	Report wave allocation by organisation, MPID and role.
3	Qualification Testing (QT) Readiness*	c. 2-4 weeks before execution	Once for each wave	Report list of organisation, MPID and role of those who have completed PIT requirements and are on track to start QT.
4	Qualification Execution Status*	Through QT execution	Weekly	Report list of organisation, MPID and role by wave along with number of tests scheduled, completed, open defects and issues, and the QAD status.

* Reports for Non-SIT LDSOs will be produced by the MHHSP.

11.2 Escalation Process

Programme Participants are expected to be open and transparent and share issues as soon as possible with Code Bodies, MHHS Programme/Elexon Qualification Test Managers or MHHS Programme as relevant, so that they can support, and mitigation can be agreed as needed.

Code Bodies will report progress against a Programme Participant's QT Test Plan to the MHHS Programme, and support MHHS Programme to ensure M14 is achieved. Where, following reporting from Code Bodies, the MHHS Programme considers that the ability to meet MHHS Programme Milestones is at risk, MHHS Programme will escalate to PSG.

11.3 MHHS Qualification Approval

To become MHHS Qualified, Programme Participants must complete all requirements in the QAD. All Code Bodies relevant to the participant's role(s) as per *Section 7.1 Market Roles included in MHHS Qualification* above will need to approve the participant's QAD. For the avoidance of doubt, where a Programme Participant's Market Role is governed by both BSC and REC, both will need to individually approve the MHHS Qualification.

Once a Programme Participant's QAD has been finalised with Code Bodies and been signed-off by the Programme Participant's Company Director (or delegate, as acceptable under the REC only), Code Bodies expect to confirm MHHS Qualification approval within a month. Code Bodies are discussing with Elexon and the MHHS Programme whether reporting on the progress of the QAD can be used to commence Service Activation and avoid any delay to commencing operation of the new MHHS arrangements.

Both BSC and REC MHHS Qualification is delineated on a Market Role basis, therefore where a participant has multiple roles, each role will be approved separately; there is no requirement for approval of these roles (other than LDSO, SMRA and UMSO) to be concurrent as long as the role is qualified by the timelines set out in *Section 7.1*.

It is acknowledged that there is a MHHS Programme risk that individual organisations failing to MHHS Qualify could impact the timing of M10 (central bodies being ready for migrating MPANs), especially in the case of MVC and LDSO

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participants as well as the overall completion of migration by M15. As noted above, Code Bodies will provide reporting to MHHS Programme to help mitigate this risk.

MHHS Qualification Approval will be solely within Code Body governance. For BSC, the MHHS Qualification Approval for individual participants will be a BSC PAB decision. It is expected that participants will be able to appeal the BSC decision on MHHS Qualification to the BSC Panel, with the appeal mechanism to be included in future iterations of the QA&P. For REC, the MHHS Qualification Approval for individual participants will be a REC Code ~~Body~~ Manager decision. Where a Participant is dissatisfied with the Code Manager's decision on its MHHS Qualification, it may appeal the decision to the REC PAB in line with the process outlined in REC Schedule 9 Qualification and Maintenance, Section 15 Appeals.

For the avoidance of doubt, participants will not be able to appeal Code Body decisions on MHHS Qualification to the MHHS Programme.

To be 'MHHS Qualified' (i.e., able to be registered or appointed to MHHS migrated metering points) for a role, the participant must meet the following criteria:

- Be an acceded and Qualified Party in that role for all relevant Codes as per *Section 7.1,*
- Have completed all the requirements in the QAD, with the QAD approved by all Code Bodies relevant to that role, and
- All outstanding findings and observations must either be cleared, or an action plan to resolve them agreed between the Code Body who raised it and the participant.
- In the case that the participant has elected to MHHS Qualify MPIDs at different times, a Management Assertion to confirm that the remaining MPIDs will complete MHHS Qualification prior to the required date as per *Section 7.1*.

11.4 Other Considerations for Qualification

11.4.1 Approach for participants with multiple MPIDs who intend to undertake testing at different times

Code Bodies expect Programme Participants to complete testing and qualification with all their MPIDs (associated with a particular role) in SIT or a single Qualification Wave as this is the most efficient approach, will avoid unnecessary confusion and is aligned with the REC approach of approving Qualification on a legal entity basis.

However, in some exceptional situations, having the flexibility to allow MPIDs for each organisation's specified role to undertake testing at different times would provide better outcomes and support participants in working through the MHHS Qualification requirements more quickly; in these cases, participants will still complete a single QAD but may set out MHHS Qualification evidence for each role and associated MPID separately.

Where organisations have completed the required MHHS Qualification steps for some MPIDs and not others, the MHHS Qualified MPIDs will be able to proceed into the migration phase. However, as REC Qualification is at an organisational level, it will require a Management Assertion to confirm that the remaining MPIDs will complete MHHS Qualification at a later stage.

MHHS Qualification is undertaken on a role basis and therefore organisations can undertake MHHS Qualification for a given role separately from its others if required, such as via a different Qualification Wave or SIT/non-SIT route. However, Qualification for LDSO, SMRA and UMSO role must be undertaken at the same time.

Further information on some similar non-standard pathways that may apply to Programme Participants is provided in *Appendix B*.

11.4.2 Approach for participants where they do not operate / intend to operate sub-roles within a Code-defined role

There are no sub-roles within the BSC, you need to be Qualified in all requirements for each Market Role to operate in the MHHS arrangements.

There has been an approved exemption by the BSC PAB for Suppliers that do not have the capabilities to operate in the Unmetered Supplies subject to a change to the BSC to support this as part of the MHHSP Consequential Code

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Drafting. As part of the approval any Suppliers that wish to have the exemption will need to fill in an extra section of the QAD to demonstrate the controls they will have in place to mitigate the risk of registering any UMS Sites.

There will also be reporting in place to identify any Suppliers that have UMS Sites appointed but are not Qualified, if any Suppliers take on a UMS Site that they aren't Qualified to take on they will be invited to BSC PAB to provide an explanation. The outcome of the PAB meeting could be that the Supplier ~~may~~ needs ~~be~~ to re-qualify to be able to provide assurances that they are able to operate in the UMS arrangements.

11.4.3 Market Exit process for parties who intend to exit ahead of MHHS Qualification

This section is under development and will be added in a future iteration of the QA&P.

12 Risks, Assumptions and Dependencies - Applicable to all participants

This section sets out the key risks, assumptions and dependencies for MHHS Qualification. Specific risks, issues and dependencies for QT will be set out in Annex 1, 2 and 3. Code Bodies will work with the MHHS Programme to review and update the MHHS Programme RAID as necessary.

12.1 Risks for Code Body Delivery of MHHS Qualification

- Changes to the MHHS Design or SIT approach or delays to the provision of SIT deliverables that Codes will be adapting for Qualification, could lead to Code Bodies not being able to deliver MHHS Qualification within the currently planned dates.
- MHHS Programme not being able to coordinate the provisioning of central system test environments could lead to Code Bodies not being able to deliver MHHS Qualification within the currently planned dates.
- MHHS Programme risk that Programme Participants do not ~~engage with or~~ complete the required MHHS Qualification steps (including SIT) within the required timescales, including where this is outside of the Programme Participant's reasonable control. This is a potential impact on the M10, M14, M15, and M16 milestones, and may also impact Code Body delivery of the QA&P.
- There is a risk that Programme Participants that had intended to Place Reliance may not be able to do so, or may be delayed in doing so, because of delays in testing by the party that they are intending to Place Reliance on. This could lead to a change in the Programme Participant's MHHS Qualification timescales.
- There is a risk that the timeliness of the DIP onboarding process for Non-SIT Parties will delay when they can become MHHS Qualified.

12.2 Assumptions for Code Body Delivery of MHHS Qualification

- MHHS Programme will undertake the onboarding required for DIP Users (see *MHHS-E2E001 End to End Solution Architecture 3.3.2)* and ensure these are set up with the DIP as required. This is only relevant until DIP is passed to the DIP Manager at M10.
- QT is expected to be the equivalent of SIT but on an individual role/participant basis, testing up to and including the interactions with the DIP and does not require E2E testing with other market participants. Test Harnesses will be used as required for test execution and will be aligned to MHHS Programme policy, as described in Annexes 1, 2 and 3.
- MHHSP and Code Bodies will work closely together on the development of SIT and QT artefacts.

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- Any changes to the Code baseline post M6 will be subject to a CR and impact assessment. Code Bodies will highlight any impacts on MHHS Qualification and the MHHS Qualification timeline as part of this CR process, which may lead to additional regression testing or other assurance for MHHS Qualification.
- The scope of PIT for MHHS Qualification is limited to the end-to-end processes to deliver the scope of the MHHS Design baseline. Any additional testing that Programme Participants do as part for their PIT is out of scope for MHHS Qualification.
- Code Bodies will review any issues found in SIT execution and update the QT artefacts or the approach to MHHS Qualification as necessary.
- MHHSP will provide individual SIT Programme Participants reports from each stage of SIT which will be used as MHHS Qualification evidence.
- Code Bodies can check the MDRs used by an SDS against a valid list of SEC Qualified MDRs, which Code Bodies expect to be maintained in ISD.
- The User Interface Testing (UIT) environment available for QT will include integration with DIP to cover level 1 and level 2 validation of DIP interface flows during testing. It will also include integration with the Registration Service, or a Registration Service test harness, to cover level 3 and level 4 validation and business rule validation completed by the Registration Service, as agreed between the MHHS Programme and Code Bodies.
- No Qualification Testing will be required for participant interfaces with CSS as they are entirely reflective of existing functionality, or with EES, as use of this service is not a mandatory part of Programme Participants' business processes.
- The DIP Manager / MHHS Programme will support Programme participants' onboarding to the DIP, including appointment of security officers and provision of testing security certificates.
- The work done by MHHSP with Environments, Test Tooling and Test Data for non-SIT LDSOs will act as a basis to be built on for non-SIT Suppliers and Agents, ensuring that efficiencies are recognised, and participant experience is aligned.
- The start date for QAD Reviews and the Qualification Testing window will be defined for each Qualification Wave. However, once a participant has entered testing, they can move through their designated wave as quickly or slowly as they wish, with the expectation that they will complete MHHS Qualification by M14.
- There will be two formal QAD submission stages within each Qualification Wave:
    - Initial QAD Submission: Post-PIT. This will cover the QT entry criteria.
    - Final QAD Submission: Post Qualification Testing. This will cover the remaining Qualification criteria.
- Reporting from SIT and QT is accurate and the relevant Test Manager captures any instances of use of non-production processes and/or systems. This will also be recorded as a risk so it can be understood and tracked as needed to resolution.
- Earliest Qualification Approval for non-SIT Suppliers and Agents is expected to be BSC PAB Approval and REC Code Manager Approval at the end of July 2025. Following this, QADs will be taken to the next available BSC PAB for approval and do not need to wait until the BSC PAB aligned with the end of the wave.
- The earliest Service Activation, with the participant included in ISD and able to Migrate Metering Points / be appointed to Migrated Metering Points, for a non-SIT Party will be September 2025 and requirements for entry to Migration will be set out by the Migration Workstream at a later date.

12.3 Dependencies for Code Body Delivery of MHHS Qualification

- The development of Supplier and Agent QT plans and artefacts are dependent on the development of SIT artefacts. There will therefore be several iterations of this QA&P document and the QAD to take account of each of the SIT deliverables as outlined in *Section 5.4 Documentation Development Plan*.
- Code Bodies have a dependency on the MHHSP to produce a clear mapping from SIT scope and testing artefacts to the design artefacts and Code obligations to enable Code Bodies to assess the coverage of the testing.

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- There is a dependency on M8 (Code Changes delivered) to be achieved for the BSC and REC PABs to qualify SIT and LDSO Programme Participants against the live Codes which is required for M10, M11, and M12 (start of migration) to take place.
- The QAD has a linked dependency to the start of the February 2024 Code drafting Mop Up consultation as it is as that point that the Code and subsidiary documentation will be considered sufficiently completed for Qualification evidence to be reliably assessed against.
- Before Qualification can be approved by Code Bodies, Programme Participants will need to ensure they have any required DIP User Access Agreements (non-BSC Parties only) ~~contractual agreements~~ for live operation in place with the DIP Manager (this includes DIP Connection Providers operating on a Programme Participant's behalf).

13 Appendix A: Glossary – Applicable to all participants

Acronyms and defined terms used across the MHHS Programme are hosted in a MHHS Programme artefact - Programme Glossary - MHHS Programme

A glossary of additional acronyms and defined terms used within this QA&P, including its Annexes, is set out below:

Term	Definition
ADO	Microsoft Azure DevOps; test and defect management tool
ADS	Advanced Data Service; a new MHHS Role governed by BSC and similar to the legacy HHDC role, but as set out in the MHHS Design
BAU	Business as usual; refers to before and after MHHSP Transition
BSC	Balancing and Settlement Code
BSCCo	Balancing and Settlement Code Company
BCDR	Business Continuity and Disaster Recovery
Code Bodies	BSC and REC Code Bodies collectively
Code Requirements	Where not specified, both BSC and REC Code Requirements collectively
CSS	Central Switching Service
CVA	Central Volume Allocation
DBT	Design Build Test, as described within MHSS-DEL852 PIT Guidance
DCUSA	Distribution Connection and Use of System Agreement
DIP	Data Integration Platform
DIP Manager	Manages the DIP Service. Role will transition from MHHS Programme to Elexon.
DNO	Distribution Network Operator as defined under the REC
DUoS	Distribution Use of System
DTN	Data Transfer Network
E2E	End-to-End; in reference to entire scope of MHHS Design
ERDA	Electricity Retail Data Agent as defined under the REC
Gaining Supplier	As described under the BSC and REC
IDNO	Independent Distribution Network Operator
ISD	Industry Standing Data; will include some data in MDD with new standing data
IR	Interim Release of MHHS Design
LDSO	Licensed Distribution System Operators; known as DNO in REC. Unless otherwise mentioned, this covers the Registration Service, UMSO and LDSO requirements.
Losing Supplier	As described under the BSC and REC
M8	MHHS Programme Milestone: Code changes delivered (M8)
M10	MHHS Programme Milestone: Central systems ready for migrating MPANs (M10)
M11	MHHS Programme Milestone: Start of 18-month migration for UMS / Advanced (M11)
M12	MHHS Programme Milestone: Start of 18-month migration for Smart / Non-smart (M12)
M14	MHHS Programme Milestone: All suppliers must be able to access MPANs under the new TOM (M14)
M15	MHHS Programme Milestone: Full transition complete (M15)

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MDR	Metered Data Retriever; new MHHS Role governed by SEC
MHHS	Market-wide Half Hourly Settlement
MHHSP	Market-wide Half Hourly Settlement Programme
MHHS Qualification	Qualification completed during the MHHS Programme and governed by Code Bodies
MHHS Qualified	A Programme Participant that has been approved by the Code Bodies to operate the new MHHS arrangements
MPAN	Meter Point Administration Number
MPID	Market Participant Identifier e.g. ABCD
MPID/Role	Market Participant Identified with Role e.g. ABCD-X
MSA	Metering Services Advanced; known as Metering Equipment Manager (Advanced) under REC
MSS	Metering Services Smart; known as Metering Equipment Manager (Smart) under REC
MVC	Minimum Viable Cohort; needed by MHHSP to sufficiently test SIT
Non-SIT participants	Programme Participants not qualifying via the SIT route; i.e. qualifying via the QT route
PABs	BSC and REC Performance Assurance Boards collectively
PIT	Pre-Integration Testing as described within the MHSS-DEL852 PIT Guidance
PP	Programme Participant
Programme	Market-wide Half Hourly Settlement Programme
QA&P	Qualification Approach and Plan; this document
QAD	Qualification Assessment Document
QAG	Qualification Advisory Group
QT	Qualification Testing
QT Test Plan	Plan produced by a Programme Participant and agreed with Code Bodies for completion of Qualification Testing. Code Bodies will track Programme Participant's progress against this plan and report to MHHS Programme.
QWG	Qualification Working Group
REC	Retail Energy Code
RECCo	Retail Energy Code Company
RTTM	Requirements to Test Traceability Matrix
SDS	Smart Data Service; new MHHS Role governed by BSC
SEC	Smart Energy Code
SIT	Systems Integration Testing
SMRA	Supplier Meter Registration Agent; governed by BSC
Supplier	As described under the BSC and REC
SVA	Supplier Volume Allocation
TMAG	Testing and Migration Advisory Group – this has now been restructured into the SIT Advisory Group, the Qualification Advisory Group and the Migration Advisory Group.
TOM	Target Operating Model, as augmented by MHHS-DEL622
UMSDS	Unmetered Supply Data Service; a new MHHS Role governed by BSC and similar to the legacy Meter Administrator role, but as set out in the MHHS Design
UMSO	Unmetered Supplies Operator; governed by BSC

14 Appendix B: Non-Standard MHHS Qualification Pathways- Applicable to all Participants

This Appendix outlines the potential MHHS Qualification pathways for Market Participants. The list below is in addition to the standard MHHS Qualification routes described in *Section 9 MHHS Qualification Approach* above for SIT Parties, Non-SIT LDSOs and Non-SIT Suppliers and Agents as well as new entrant LDSOs. The list is not exhaustive but aims to provide guidance to Programme Participants on how each non-standard pathway will be managed. Any Programme Participant who believes that they cannot follow the standard route should contact Code Bodies to discuss.

Pathway 1 - SIT Party moves to QT

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- It is expected that Programme Participants who start in SIT should complete external testing through SIT. SIT for Non MVC participants (applicable to Suppliers and Supplier Agents only) runs until April 2025 so there is 3 months contingency in the MHHS Programme Plan to allow Non MVC Suppliers and Supplier Agents to complete testing. This contingency period is not applicable to SIT LDSOs who are must complete SIT as part of the MVC to be ready to meet M10.
- The MHHS Programme will monitor progress and identify if there are concerns about progress of Programme Participants in SIT. The MHHS Programme expects all participants to be open and transparent and communicate with the MHHS Programme/Code Bodies if they think they are facing an issue which will block their testing, or they have concerns they may not complete SIT or meet the expected timeframes for MHHS Qualification.
- The MHHS Programme would then work with that participant and Code Bodies to agree any mitigating actions to support their continuation in SIT. The aim is to keep all participants in SIT, and this could include re-partnering where necessary.
- If staying in SIT is not possible, then the MHHS Programme and Code Bodies would explore how the participant can be accommodated in the Qualification Waves (see *Section 9.3 Process for Non-SIT Suppliers, Agents, and new entrant LDSOs (post M10) to MHHS Qualify*).
- The MHHS Programme would also work with any other SIT Parties potentially impacted by the SIT Party who has not being able to continue participating in SIT.
- The way forward will be dependent on the level of testing that has been completed, the issue that is blocking testing, and where this is within the MHHS Programme timelines. As such, it will be case by case dependent.
- Programme Participants would be able to use testing that has been successfully passed in SIT as part of their evidence for MHHS Qualification. The QT scope recommended by Code Bodies would consider this. The MHHS Programme will support the Code Bodies in this assessment and provide information on completed tests as needed. Code Bodies would also be able to access test evidence uploaded into ADO to support the assessment of tests completed, tests outstanding and the status of any defects and use this information to review against QT scope. As SIT and QT will be happening in different environments the exiting SIT Party will be required to request new Digital Certificates, complete connectivity proving and data load for continued testing within the UIT environment. This would need to be factored into determining when an appropriate window is to enter QT. The MHHS Programme and Code Bodies would aim to get the participant resuming testing as soon as practical.

<u>Pathway 2 – Programme Participant undertakes SIT for one Market Role and requests QT for the remaining Market Roles</u>

- MHHS Qualification will be completed on a role-by-role basis. Therefore, completion of SIT for one Market Role e.g. Supplier, will not impact the requirement for the Programme Participant to also participate in QT for its other Market Roles e.g. Supplier Agents.
- For Market Roles that have not completed SIT, these will need to follow the process as set out in Section 9.3.
- As Programme Participants are expected to complete the QAD at an organisation level, it will be acceptable for Programme Participants taking part in both SIT and QT to complete a single QAD submission, particularly where generic sections are the same for each Market Role. However, the Programme Participant will only be MHHS Qualified for each Market Role once testing has been completed. Therefore, the separate Market Roles may not be MHHS Qualified at the same time.

<u>Pathway 3 – Programme Participant has multiple MPIDs for the same Market Role and wishes to undertake SIT for one MPID and QT for the remaining MPIDs</u>

- Code Bodies expect participants to complete testing and MHHS Qualification with all their MPIDs (associated with a particular Market Role) in SIT or a single QT Wave as this is the most efficient approach, will avoid unnecessary confusion and is aligned with the REC approach of approving Qualification on a legal entity basis.
- However, in some exceptional situations, having the flexibility to allow MPIDs for each organisation's specified role to undertake testing at different times would provide better outcomes and support Programme Participants in working through the MHHS Qualification requirements more quickly; in these cases, Programme Participants will still complete a single QAD but may set out MHHS Qualification evidence for each role and associated MPID separately.
- Where MPIDs following the Non-SIT route are set up and operated identically to the MPIDs participating in SIT, the Programme Participant should complete the SIT Placing Reliance Submission confirming that the systems and operational set up for the additional MPIDs is identical to the MPID that completed SIT. Subject to review of this

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Placing Reliance Submission by Code Bodies, the additional MPIDs may be able to complete MHHS Qualification without undergoing QT.

- Where MPIDs following the Non-SIT route have a different set of systems and processes (for example, a Non Domestic Supplier MPID versus a Domestic Supplier MPID using different systems and/or managed by different areas of the business) then Programme Participant will be required to undergo QT for the Non-SIT MPIDs, and they will need to provide a Pre-Qualification Submission and join a QT Wave. Code Bodies will consider Placing Reliance Submissions on a case-by-case basis in line with the Placing Reliance Policy as part of the Pre-Qualification Submission.

Pathway 4 - Enduring Qualification solution

- The process for Market Participants wishing to enter the market after the completion of the MHHS Qualification process at M14 will be managed by the Code Bodies and defined in the future. It is expected that applications for Qualification after M14 will be accepted from Spring 2025 subject to confirmation from Code Bodies. There may be a delay to testing activity for enduring Qualification whilst QT is being operated to prioritise QT to achieve M14.
- The enduring Qualification process can be completed by new entrants, or by Programme Participants that did not complete MHHS Qualification within the expected timeframes. However, Suppliers that fall into the latter category, should note market sanctions that will apply to them as described in Annex 4.
- There is no guarantee on the time it may take for a Programme Participant, that has not completed MHHS Qualification, to complete the enduring Qualification arrangements. It is strongly advised that Programme Participants wishing to operate the MHHS arrangements should complete MHHS Qualification by M14.

Pathway 5: New participant who intends to Qualify under MHHS Qualification

- Applications by new entrants will be managed on a case-by-case basis by Code Bodies.
- If a new entrant wishes to enter the market before M14, it would be required to:
    - Align and follow all Entry and Exit Requirements defined by the Code Bodies including filling out the Pre-Qualification Submission form and confirm readiness to join one of the MHHS Qualification waves as per availability.
    - If it wishes to operate within the legacy arrangements, a new entrant must demonstrate its ability to operate in accordance with any required legacy processes and Code requirements relating to Non-MHHS Migrated Metering Points, in addition to MHHS Qualification requirements. These will be executed by going through the BAU Qualification processes under the BSC and/or REC depending on the Market Role.
    - If any new entrants wish to only operate within MHHS arrangements and not Qualify under the legacy arrangements then they will not be able to register / be appointed to, Non-MHHS Migrated Metering Points. In addition to MHHS Qualification requirements, they may also be required to undergo additional tests and provide additional information to demonstrate they can meet existing Code requirements that have not changed under the MHHS Programme. For example, all new Suppliers will need to demonstrate they can send and receive messages to and from CSS either as part of the legacy Qualification, or in addition to their MHHS Qualification where they are not completing the legacy Qualification.
- It is expected that any new entrant, as either a Supplier or Supplier Agent, will be able to enter the market after M11/M12 (the start of migration) without having to enact legacy processes relating to Non-MHHS Migrated Metering Points. They will however need to be able to demonstrate that they can follow both forward migration processes (as a Gaining Supplier) as well as the reverse migration processes (as a Losing Supplier);
- Any new LDSOs intending to enter the market before M14 will need to complete both MHHS Qualification processes and legacy processes to fulfil legacy obligations. The legacy processes should be completed by following the BAU Qualification processes under the BSC and REC. The MHHS Qualification arrangements for new participants are subject to further development and therefore this section will be reviewed and updated in future iterations of this document.

Pathway 6 – Programme Participant has multiple MPIDs for the same Market Role and wishes to undertake QT for one MPID and Place Reliance for meeting QT requirements for the remaining MPIDs

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- Where a Programme Participant wishes to qualify multiple MPIDs in one Market Role following the Non-SIT route, and these are set up and operated identically, the Programme Participant may be able to evidence meeting testing requirements with one MPID, and Place Reliance on this testing for remaining MPIDs.
- In such cases, the Programme Participant should complete the Non-SIT LDSO Placing Reliance Submission or Placing Reliance section within the Non-SIT Supplier and Agent Pre-Qualification Submission (as applicable) confirming that the systems and operational set up for the additional MPIDs is identical to the MPID that will be completing QT.

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15 Appendix C: Indicative Timelines for MHHSP Qualification

The following timelines are provided to support Programme Participants with their MHHS Qualification planning. Guidance to support detailed QT planning will be provided within Annex 1, 2 and 3. The dates within the following table may not match the dates within MHHS Programme Plan. These are under discussion and will be subsequently updated within the MHHS Programme Plan once agreed with the MHHS Programme.

Qualification activity	SIT (MVC)	SIT (Non-MVC)	Non-SIT LDSO Wave for M10	QT Wave 1	QT Wave 2	QT Wave 3	QT Wave 4
Placing Reliance Proposal Submission deadline	Summer 2023		05/01/2024	N/A - This forms a part of the Pre-Qualification Submission (PQS)			
MHHSP Review of Placing Reliance Proposals	Summer 2023		January 2024				
Code Bodies Review of Placing Reliance Proposals	September 2023		February 2024				
Programme Participants can start submitting their PQS from	N/A		N/A	05/02/2024			
PQS deadline	N/A		N/A	26/04/2024 (caveat for new entrants)			
PIT Approach and Plan Submission Deadline – Programme Participants are advised to submit this with their PQS so Code Bodies can flag any gaps in advance of PIT completion.	Submitted as per timelines for SIT entry		26/04/2024	26/04/2024 with the PQS			
Indicative QT Wave allocation following PQS review by Code Bodies	N/A		N/A	17/05/2024			
QT Wave allocation finalised by Code Bodies	N/A		N/A	28/06/2024			
Code Bodies to engage with Programme Participants for clarification on their PIT Approach and Plan submitted with the PQS	N/A		N/A	26/04/2024 to 05/07/2024			
QT Preparation start	N/A		04/03/2024	01/07/2024	02/09/2024	04/11/2024	06/01/2025

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Qualification activity	SIT (MVC)	SIT (Non-MVC)	Non-SIT LDSO Wave for M10	QT Wave 1	QT Wave 2	QT Wave 3	QT Wave 4
Initial QAD submission window	01/09/2024 to 10/10/2024	01/09/2024 to 10/10/2024	01/09/2024 to 10/10/2024	14/10/2024 to 20/12/2024	18/11/2024 to 21/02/2025	20/01/2025 to 18/04/2025	17/03/2025 to 20/06/2025
QT Entry Checkpoint 1: Programme Participant to provide status of PIT Completion and submit their QT Test Plan	N/A		26/07/2024	29/11/2024	31/01/2025	31/03/2025	30/05/2025
QT Entry Checkpoint 2: Final date for Programme Participant to confirm and evidence PIT Completion Report for QT Entry	N/A		30/08/2024	20/12/2024	21/02/2025	18/04/2025	20/06/2025
Completion of Code Bodies' review of the Initial QAD (including PIT evidence[9])	Within 6 weeks of Initial QAD submission or 29/11/2024 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 29/11/2024 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 29/11/2024 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 31/01/2025 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 31/03/2025 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 30/05/2025 (whichever is earlier)	Within 6 weeks of Initial QAD submission or 31/07/2025 (whichever is earlier)
~~QT Preparation start~~	~~N/A~~		~~04/03/2024~~	~~01/07/2024~~	~~02/09/2024~~	~~04/11/2024~~	~~06/01/2025~~
~~Final date for Programme Participant to confirm and evidence PIT Completion for QT Entry~~	~~N/A~~		~~26/07/2024~~	~~29/11/2024~~	~~31/01/2025~~	~~31/03/2025~~	~~30/05/2025~~
DIP onboarding window for QT (covering appointment of security officers, the issue of certificates and smoke testing as described in Section 9.4) (NB: this is different from DIP onboarding for Production which is covered by Service Activation outside the scope of Qualification)	N/A		~~From the beginning of August 2024 until the middle of September 2024~~ 05/08/2024	01/11/2024 to 20/12/2024	06/01/2025 to 28/02/2025	03/0~~3~~5/2025 to 25/04/2025	01/05/2025 to 27/06/2025

[9] The timelines for PIT evidence submission are detailed within the MHHS-DEL852 Pre-Integration Testing Guidance, which will be issued for consultation imminently.

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Qualification activity	SIT (MVC)	SIT (Non-MVC)	Non-SIT LDSO Wave for M10	QT Wave 1	QT Wave 2	QT Wave 3	QT Wave 4
			to 13/09/2024				
QT Entry confirmation	N/A		27/09/2024	31/01/2025	31/03/2025	30/05/2025	31/07/2025
QT Execution Window	N/A		01/10/2024 to 20/12/2024	03/02/2025 to 13/06/2025	01/04/2025 to 08/08/2025	02/06/2025 to 10/10/2025	01/08/2025 to 13/12/2025
Final QAD Submission window	02/12/2024 to 06/01/2025	02/12/2024 to 31/03/2025	02/12/2024 to 06/01/2025	03/02/2025 to 20/06/2025	01/04/2025 to 15/08/2025	02/06/2025 to 17/10/2025	01/08/2025 to 12/12/2025
Completion of Code Bodies' review of the Final QAD	31/01/2025	25/04/2025	31/01/2025	Within 4 weeks of Final QAD submission or 18/07/2025 (whichever is earlier)	Within 4 weeks of Final QAD submission or 23/09/2025 (whichever is earlier)	Within 4 weeks of Final QAD submission or 14/11/2025 (whichever is earlier)	Within 4 weeks of Final QAD submission or 23/01/2026 (whichever is earlier)
Programme Participants can start submitting their QAD Sign-off from	Any time after Code Bodies have confirmed all open comments on the QAD have been addressed sufficiently.						
QAD Sign-off deadline	07/02/2025	02/05/2025	07/02/2025	31/07/2025	30/09/2025	21/11/2025	30/01/2026
REC Code Manager / BSC PAB Decision for Qualification expected by (NB: This is based on the Programme Participant meeting all timelines their route/wave set above.)	28/02/2025	30/05/2025	28/02/2025	Within 1 month of QAD sign-off or 29/08/2025 (whichever is earlier)	Within 1 month of QAD sign-off or 31/10/2025 (whichever is earlier)	Within 1 month of QAD sign-off or 19/12/2025 (whichever is earlier)	Within 1 month of QAD sign-off or 27/02/2026 (whichever is earlier)
Non-technical assurance for DIP Onboarding	Done by DIP Manager and will set out within the Code of Connections (CoCo) / DIP Rules document (see Issue 101). This is expected to occur in parallel to SIT/QT and is required to be completed in order to complete Qualification.						

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