

Technical Assurance Checks Outcome Report

The Processing of Revenue Protection Reads by NHHDCs and Suppliers

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Background

The Technical Assurance of Performance Assurance Parties (TAPAP) is a Performance Assurance Framework technique designed to help ELEXON measure the level of risk to the market in particular areas. The scope of this technique is set on an annual basis, agreed by the PAB. The scope is based upon the net significance of risks outlined in the [Risk Evaluation Register](#).

During November 2009 through to February 2010, ELEXON visited 5 [NHH](#) Suppliers and 7 [NHHDCs](#) to perform Technical Assurance checks on the processing of revenue protection reads. In total this was 21 [MPIDs](#).

These checks were designed to look at what is happening in industry in terms of the processes supporting revenue protection investigations. We reviewed those processes against the BSC. The BSC has minimal obligations specific to revenue protection so we also wanted to use these checks to explore how the processes fit to the BSC and highlight any issues and make recommendations as appropriate (changes to the BSC and / or CSDs, we may also need to feed our findings into other code governors).

Whilst this check was designed to look at [NHHDCs](#) and Suppliers, because of some company set ups we did in some cases get to see the [RPS](#) too, this allowed us to view the process with a broader context.

[Non compliances](#) (NCs) were applied where there was clear evidence of non compliance with the BSC and Code Subsidiary Documents.

[Observations](#) were applied where evidence showed that processes / systems are not being operated as best practice.

All of the [MPIDs](#) selected for this check worked collaboratively with ELEXON and prepared themselves well, providing the required documentation and information prior to the check. The checks went smoothly because the right members of staff were made available to ELEXON throughout the visit. Many thanks to all involved.

[Risk Evaluation Register](#)

sets out the Settlement Risks identified and evaluated by the PAB

[DCs](#)

Data Collector Agents

[NHH](#)

Non Half Hourly

[MPIDs](#)

Market Participant Identifiers

[CSDs](#)

Code Subsidiary Documents

[BSC](#)

Balancing and Settlement Code

[RPS](#)

Revenue Protection Services

Primary Findings



The **primary findings** of the Technical Assurance checks on processing revenue protection reads are:

- The obligations and requirements in the BSC are not clear and conflict with the **DCUSA** working practice and also the **MRASCo / DTN** references.
- There is not one consistent approach to ensure that data from revenue protection investigations reach Settlement.
- There is very little (in fact most cases none) engagement between Suppliers, NHHDCs and RPS regarding the processing of revenue protection units.
- Suppliers do use the units provided to them by the RPS, though in most cases they amend the units to be applicable with the customer circumstances to make it easier to recoup any debt.
 - We could only find evidence that three NHHDCs were processing units received from the RPS / Supplier.
 - In all these instances the NHHDC, the RPS and the Supplier all belonged to the same company group.
 - In all cases it is impossible to track any 'lost' units through Settlement (because there is currently no revenue protection marker for units and because units are applied to the latest read and are not apportioned).
- Many of the parties who took part in the check are aware that the current provisions / guidance for this process are confusing and could be improved. They are aware of and in some cases feeding into other areas of work going on in this area (e.g. A DCUSA working group (DCP054).)
- Units were only processed where a Meter exchange had taken place.

DCUSA

Distribution
Connection and Use
of System Agreement.

MRASCo

Master Registration
Agreement Service
Company

DTN

Data Transfer
Network

Recommendations



ELEXON recommends;

- That we feed these findings into Ofgem, for information, and
 - Into the DCUSA working group, and
 - The [ENA](#) (Commercial Operations Group).
- That the BSC is amended. We recommend that this happens once the outcomes from other areas of industry are known (e.g. the DCUSA working group; who are currently looking at different types of incentives for suppliers and are redrafting and defining guidance on the process).
 - We should do this by asking the [SVG](#) to look at how to make the BSC and CSDs more effective and to apply any changes required as a result of the other areas of work.

[ENA](#)

Electricity Networks
Association

[SVG](#)

Supplier Volume
Allocation Group

Key Findings

How is (potential) theft identified for investigation?

At DC...

- The NHHDC (data retriever) field force identify potential irregularities with the Metering System. They log their findings on a hand held device.
- The NHHDC processes the data from the hand held device. They use Site Visit Check Codes (SVCC) to indicate the findings.
- NHHDCs use the D0010 (Meter Register Readings) and D0004 (failure to obtain Reading) with a SVCC of 06 (suspected tamper).
- Most DCs also use the D0136 (Report to Supplier of possible Irregularities).

At Supplier...

- Suppliers rarely use the SVCC received on the D0010, D0004, D0135 and D0136, some are more responsive to the flows than others.
- All Suppliers proactively work to identify potential theft e.g. identify pre payment meters that are consuming but no purchases are being made.
- If the Revenue Protection Services (RPS) identify theft, they either send a D0237 (Notification by Revenue Protection Service of Possible Irregularity), *OR*
- Perform an investigation and then send the Supplier a D0239 (Report on Revenue Protection Investigation).
- Some RPS work proactively with Police (et al) to find theft issues and report them back to Supplier using a D0239 (Revenue Protection Report on Action Taken).

Key Findings

How is the data from the investigation recorded?

At DC...

- NHHDCs do not have a defined way of marking units that result from a Revenue Protection investigation.
- Whilst the NHHDC systems are heavily automated, some DCs have the capability to add comments manually when data falls out of the NHHDC system into exception reports (e.g. data validation changes).
- A small number of DCs use a spreadsheet to track data from the RPS and input into the NHHDC system, the units themselves cannot be tracked.

At Supplier...

- Most Suppliers use their customer billing systems to track the units from the RPS. All comments and communication with a customer are also logged here.
- Some Suppliers use a 'Revenue Protection' database to store all data returned from the RPS (this is because the data is required to be stored by the Supplier and the Customer Billing System cannot always take all of the data received from the RPS (e.g. photos etc)).

Key Findings

How is the data from the investigation processed?

At DC...

- Most NHHDCs say they don't, or are not aware that they receive any units relating to Revenue Protection for processing.
- Most NHHDCs have working practices in place (just in case), and these meet the requirements set out in the BSC, though are vague (having not been used yet).
- Some NHHDCs collaborate with their associated Supplier or RPS and any associated units from theft are processed by creating a pseudo D0010 to process automatically. These units are added onto the last reading.
- All units that are processed pass through standard NHHDC validation and processes. The data is not identified or treated differently.

At Supplier...

- All Suppliers process the data received from RPS.
- All Suppliers make amendments to the data received from the RPS to allow them to apply the units to a customer in an attempt to recover any debt.

Key Findings

How is the data from the investigation passed into Settlement?

At DC...

- All data that is passed through the NHHDC System successfully is processed and sent out to NHHDA and Supplier using the DTN and the D0019 (Metering System EAC / AA Data).

At Supplier...

- Currently no Suppliers pass any data through to NHHDCs to process.

So, what is the Revenue Protection process?

The BSC does not make clear any obligation that is specific to the revenue protection process for a Supplier, except for the standard obligations applicable to a Supplier relationship with its Supplier Agents (e.g. the Supplier must ensure that the Supplier agent has all the information to be able to perform its duties).

[BCSP504](#) describes how the NHHDC must apply revenue protection units to the meter advance (which is received from the [RPS](#)). The NHHDC should then create an EAC / AA and send that detail to the NHHDA.

The Data Transfer Network is set up so that the results from an RPS investigation go to the Supplier and MOA, not the NHHDC ([D0239](#)).

The [DCUSA](#) working practice suggests that the Supplier provides the units to the NHHDC after the RPS has passed them via the D0239 to Supplier.

In practice both Suppliers and NHHDCs process the data resulting from a revenue protection investigation in many different ways.

Most NHHDCs are not aware of receiving any data (it's likely that they do not) and most Suppliers do not proactively work with NHHDCs and the RPS to make sure that the applicable detail is passed to the NHHDC.

Picture 1 (next page) describes the typical process and shows where the BSC fits in with the process.

What is clear, is that where a NHHDC, Supplier and RPS all belong to the same company group, the exchange of data is smoother and it is only in these cases where it was evident (only in three instances) that the NHHDC had received data to process.

[BSCP504](#)

Non Half Hourly Data
Collection for SVA
Metering Systems
Registered in SMRA.

[RPS](#)

Revenue Protection
Service

[D0239](#)

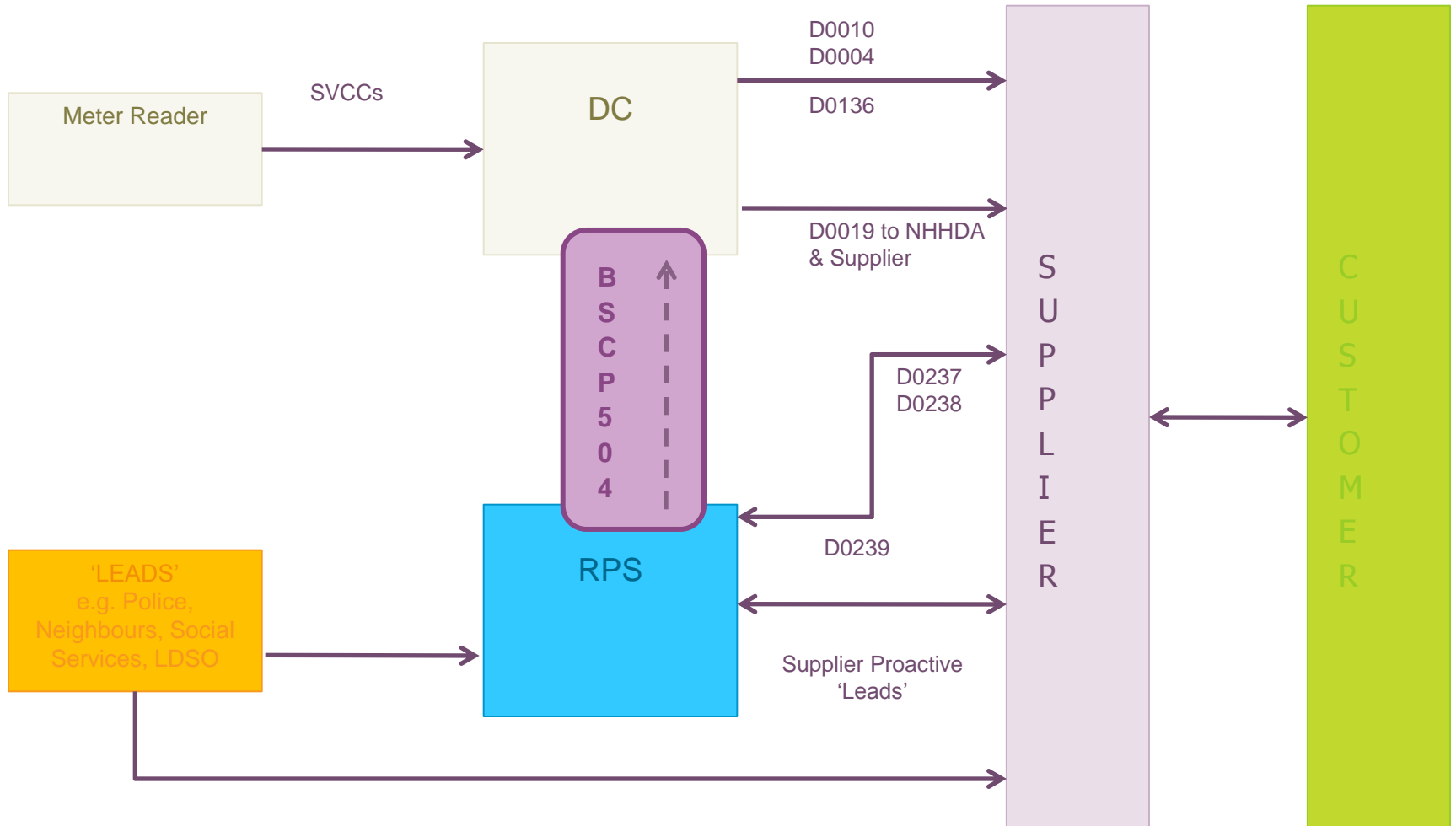
Revenue Protection
Report on Action
taken

[DCUSA](#)

Distribution
Connection and Use
of System Agreement.

The Revenue Protection process

Picture 1



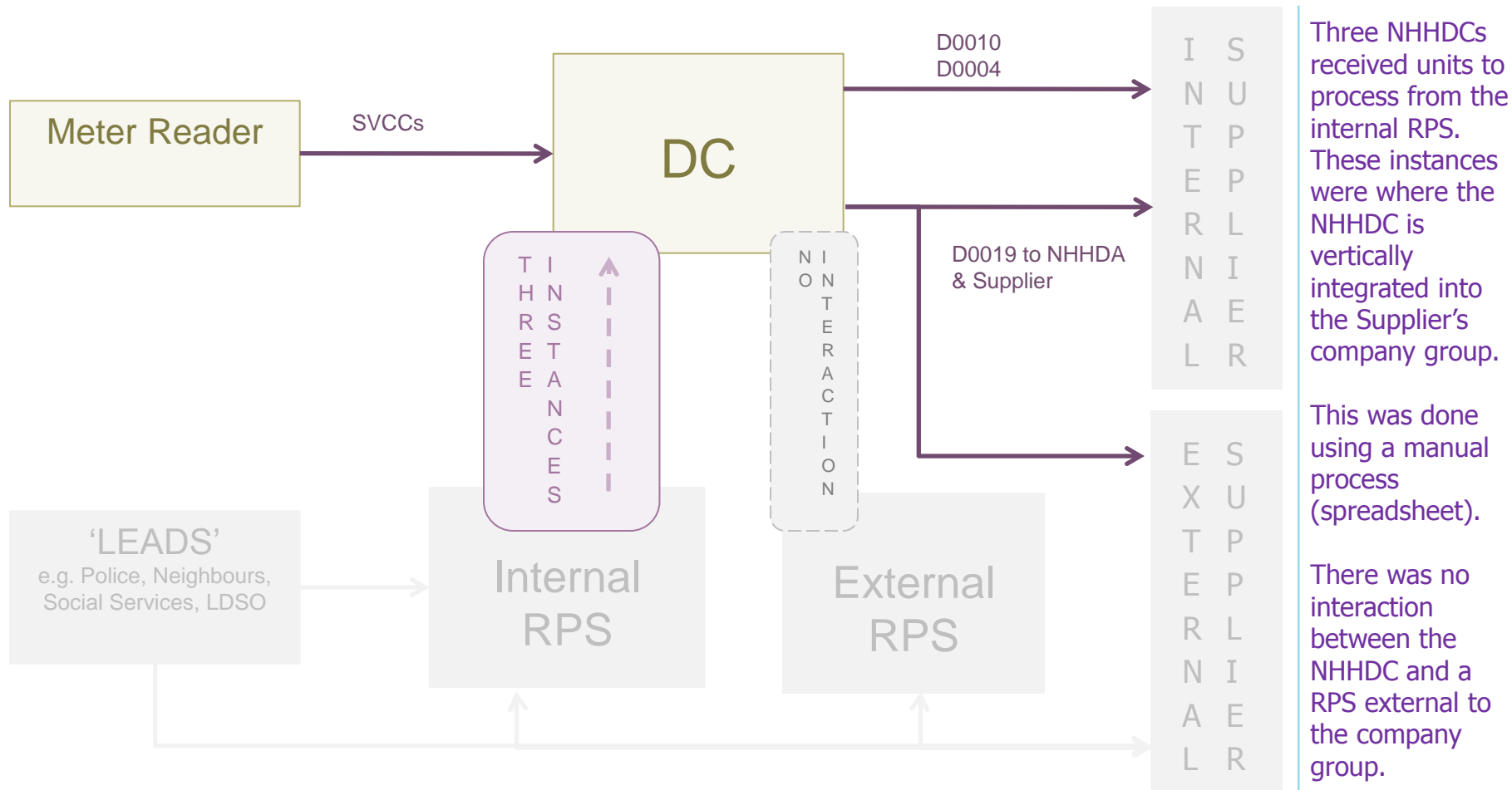
What happens if a meter does not record the full value of energy consumed?

- The customer has still consumed the energy (the supplier has no way of knowing that this is the case and often theft can go undetected for long periods of time).
- The energy costs still have to be paid, but the Supplier only pays on what the meter says, so the shortfall is spread across all other Suppliers in the area (the energy is generated and consumed, because the meter does not identify the actual volume of consumption, supply will not match demand). This creates an imbalance and the Group Correction Factor is applied across all suppliers.
- The Licensed Distribution System Operator (LDSO) is only paid on what the meter says so they lose Use of System income (the LDSO is incentivised by the regulator to be able to identify and minimise line losses, the higher the losses, the more impact this has on their incentive payments. Often there is little that the LDSO can do to minimise theft).
- The Supplier can only charge their customer on what the meter says. So, at best loses profit margin and at worst may not cover their fixed costs.

How do NHHDCs manage the process?

When the NHHDC is vertically integrated?

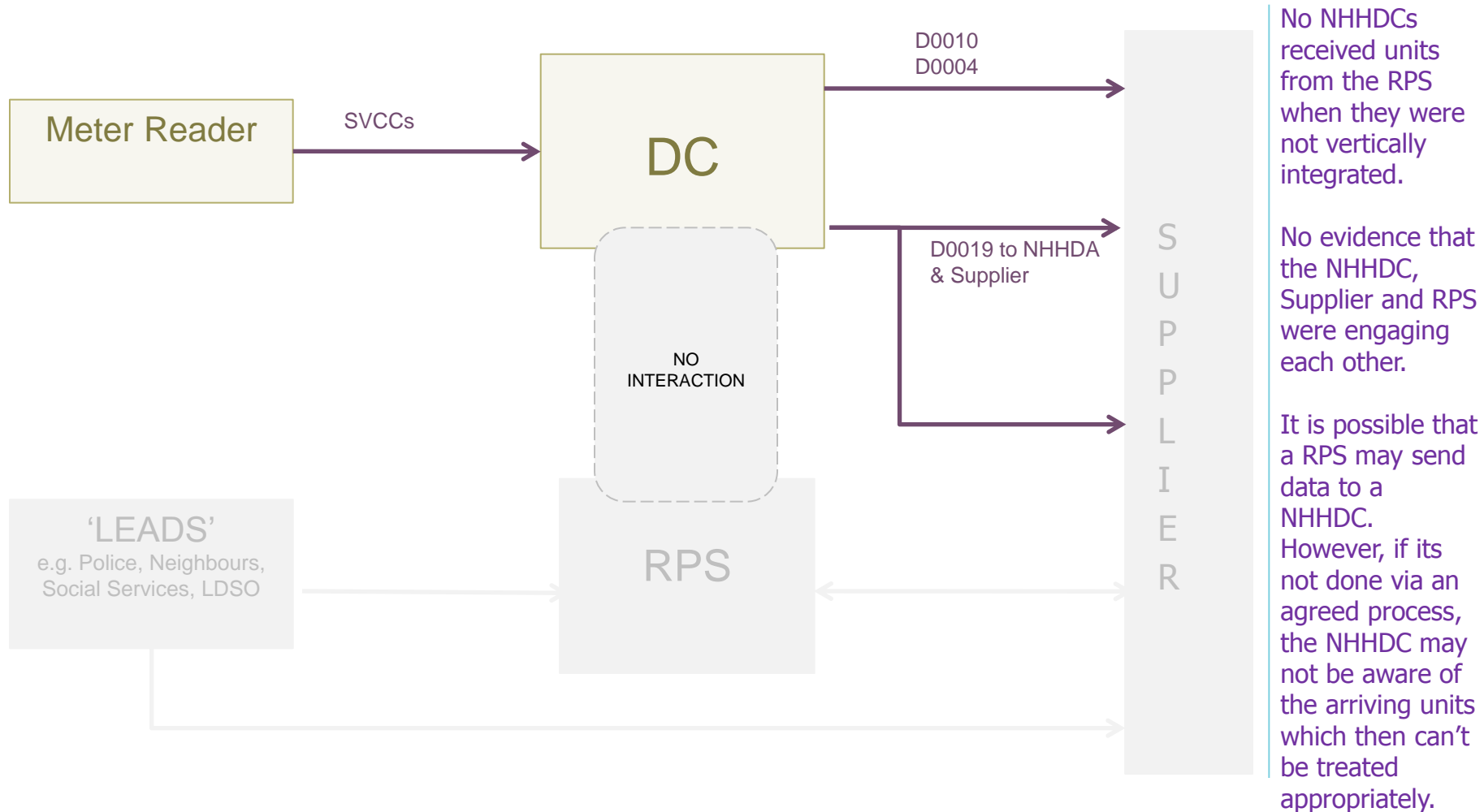
Picture 2



How do NHHDCs manage the process?

When the NHHDC is not vertically integrated?

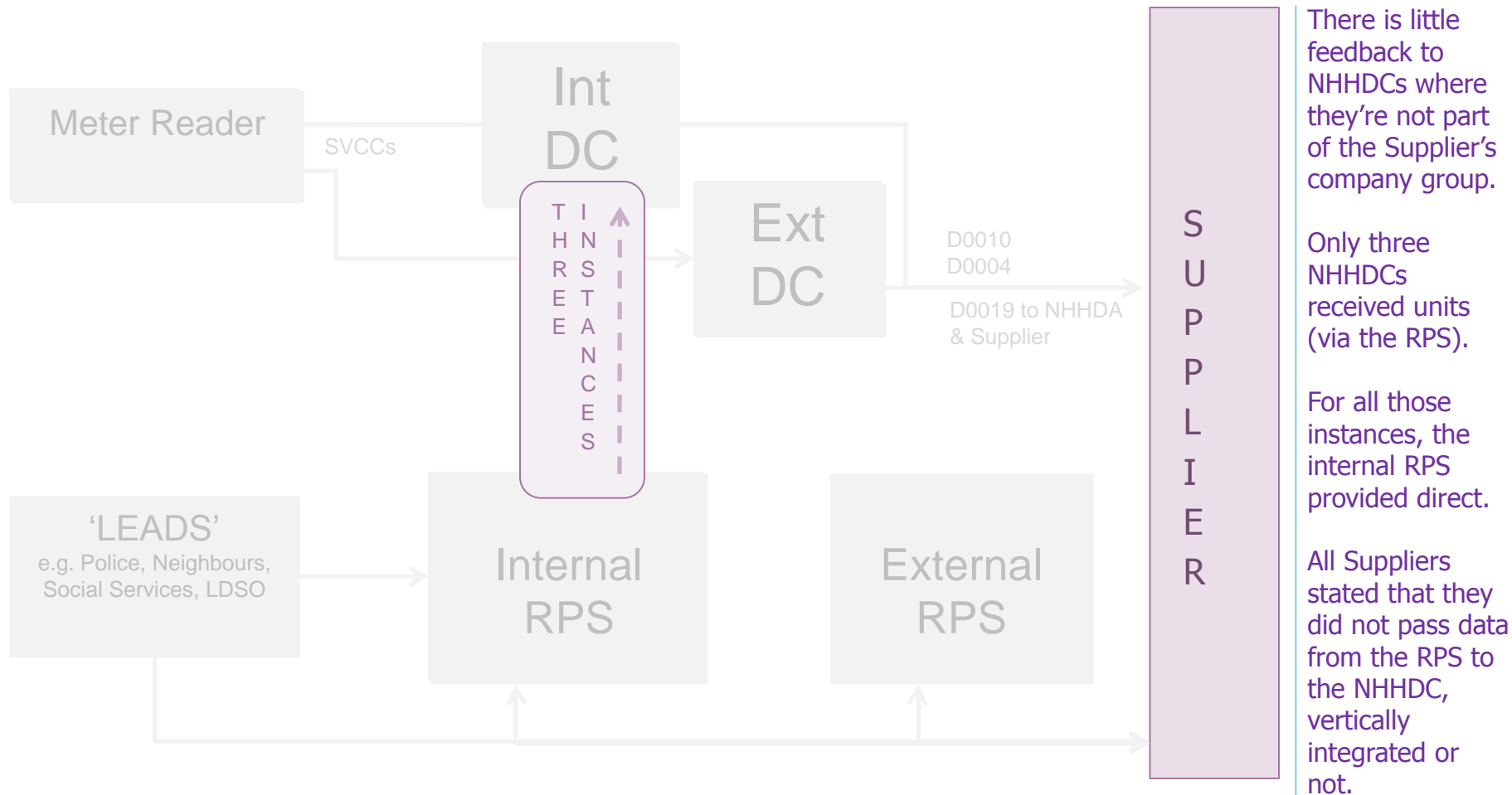
Picture 3



How do Suppliers manage the process?

When the NHHDC is vertically integrated?

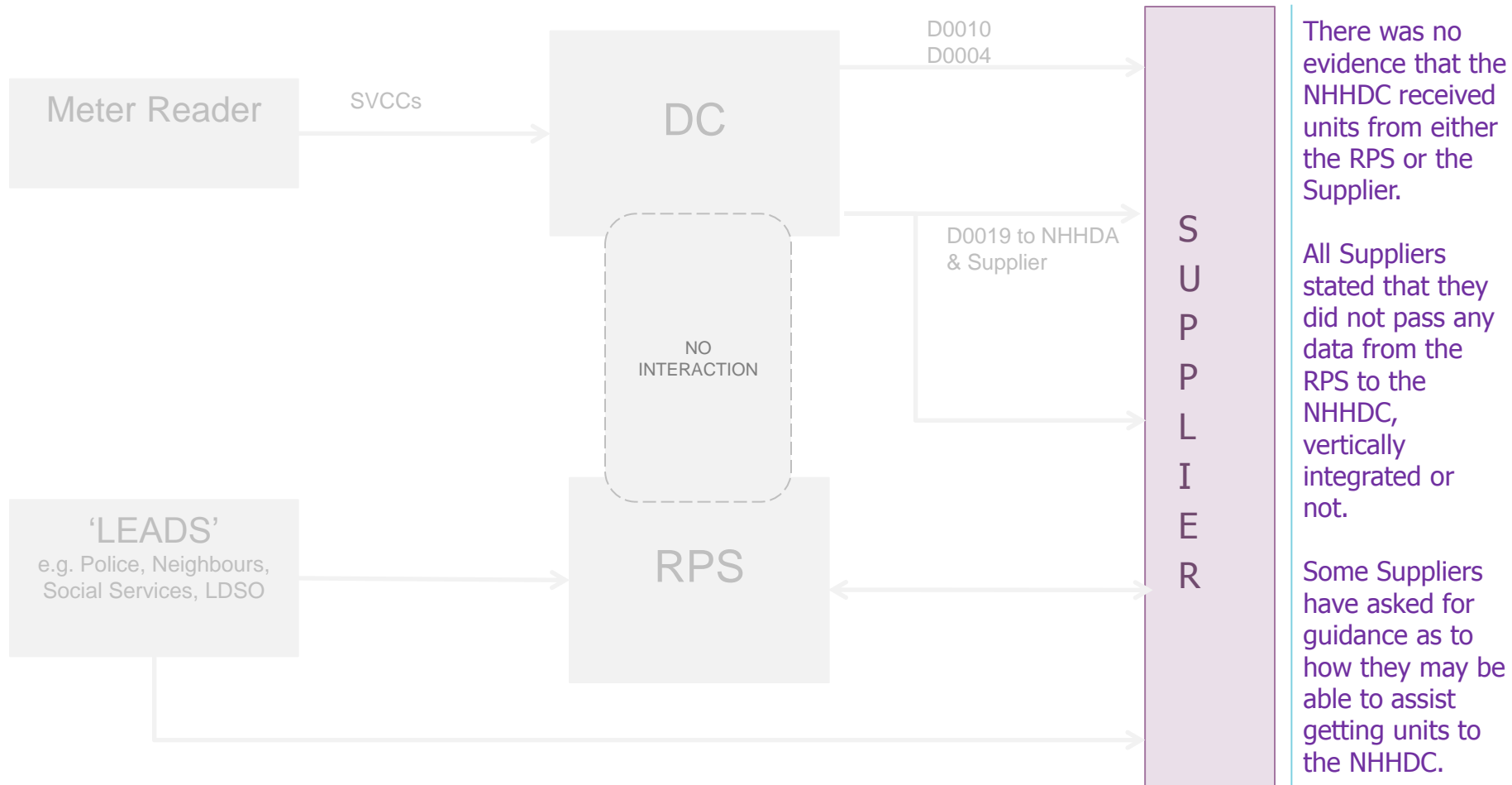
Picture 4



How do Suppliers manage the processes?

When the NHHDC is not vertically integrated?

Picture 5



Appendix A – Results by NHHDC

MPID	1	2	3	4	5	6	7	8
NHHDC Obligations								
PSL100 v2.0								
8.1 All controls devised to meet the BSC requirements should: effectively meet the relevant control objective(s); be operated effectively throughout the relevant period; be verifiable; have documented procedure; and have this operation recorded. If a control requires a check to take place, this check must also be recorded and verifiable.	✓	✓	✓	✓	✓	✓	✓	✓
9.1.1 The Market Participant shall ensure that all processes which affect Settlement shall be verifiable. This means that: Processes must be documented so that anyone wishing to verify the processing has a description of what it should be; all processing must be recorded and these records must contain such cross references as are necessary to allow verification by tracing through processing, forwards and backwards, conveniently; and audit trails must be maintained as described in the BSC and relevant CSDs.	✓	O* O	O	O	✓	✓	✓	✓
BSCP504 – NHH Data Collection for SVA MS in SMRS v22.0								
3.6.1 The NHHDC when informed by the RPS that there is evidence of tampering with a SVA MS, will record an adjustment to the meter advance based on the unrecorded units estimates by the RPS.	✓	O	✓	✓	✓	NC**	✓	✓
3.6.2 The NHHDC will calculate a new EAC and AA based on the adjusted meter advance and send the new EAC/AA to the NHHDA.	✓	✓	✓	✓	✓	NC~	✓	✓
4.1 The NHHDC will check the MS when visiting a NHH MS and record and report any evidence of tampering with the SVA MS or the LISO equipment, particularly seals (amongst others).	✓	✓	✓	✓	✓	✓	✓	✓
4.2 The validation must retain the original value, the initial validation flag, the reason for failure where the flag is invalid and the reason for changing the status to valid.	✓	✓	✓	✓	✓	✓	✓	✓
4.17 The system operated by the NHHDC must have controls in place to ensure input, processing and output are valid. In particular, controls should be developed to ensure that illegal and dangerous situations concerning SVA MS are identified, recorded and reported to the relevant parties for further action.	✓	✓	✓	✓	✓	✓	✓	✓
* Observations applied for: Inadequate control of working instructions; and For being unable to verify units as they passed through the NHHDC system.		O = Observation						
** NC applied because when units are received from the RPS by the NHHDCs, no adjustment is made in the NHHDC system.		NC = Non-compliance						
~ Although the data is received from the RPS by the NHHDC, it is not processed and therefore no EAC / AA is created.		✓ - Compliant						

Appendix B – Results by Supplier

MPID	a	b	c	d	e	f
NHH Supplier Obligations						
BSC Section U - Provisions Relating to Settlement						
1.2.1 Without prejudice to any specific provisions of the Code relating to the accuracy and completeness of data, each Party shall ensure that and undertakes that all information and data submitted or otherwise provided by or on behalf of such Party to the Panel, any Panel Committee, BSCCo, the BSC Clearer or any BSC Agent pursuant to any provision of the Code or any Code Subsidiary Document will as far as reasonably possible be accurate and complete in all material respects.	✓	✓	✓	✓	✓	✓
BSC Section S - Supplier Volume Allocation						
2.1.1 Each Supplier shall, in accordance with Section J, appoint and register Supplier Agents in respect of each SVA Metering System for which such Supplier is or is to be the Registrant.	✓	✓	✓	✓	✓	✓
2.1.2 Each Supplier shall be responsible, in accordance with Section J, for every act, breach, omission, neglect and failure (in relation to that Supplier) of each Supplier Agent appointed by it and shall comply, and procure compliance by each Supplier Agent, with Party Service Line 100 and the relevant BSC Procedures, Codes of Practice (in respect of meter operation) and with the applicable provisions of the Code.	O**	O~	O~	O~	O~	✓
2.1.4 Without prejudice to the requirement to perform the obligations and carry out the activities described in Section J1.2.2 through the use of Supplier Agents, each Supplier shall be responsible (for the purposes of the Code) for the discharge of such obligations and the carrying out of such activities in respect of each SVA Metering System for which such Supplier is the Registrant, and any failure by such Supplier to appoint a Supplier Agent in accordance with paragraph 2.1.1 shall not alter or affect such responsibility in any way.	✓	✓	✓	✓	✓	✓
PSL100 v2.0						
8.1 All controls devised to meet the BSC requirements should: effectively meet the relevant control objective(s); be operated effectively throughout the relevant period; be verifiable; have documented procedure; and have this operation recorded. If a control requires a check to take place, this check must also be recorded and verifiable.	✓	✓	✓	✓	✓	✓
9.1.1 The Market Participant shall ensure that all processes which affect Settlement shall be verifiable. This means that: Processes must be documented so that anyone wishing to verify the processing has a description of what it should be; all processing must be recorded and these records must contain such cross references as are necessary to allow verification by tracing through processing, forwards and backwards, conveniently; and audit trails must be maintained as described in the BSC and relevant CSDs.	O*	✓	O^	O^	O^	✓
* Observation applied because Supplier was unable to verify unit adjustments as processed by the NHHDC.						
** A delay in the process at Supplier meant that even adjustments were not passed to NHHDC in a timely manner.						
~ Supplier did not ensure that the NHHDC had the information from the RPS to enable processing.						
^ Observations applied for inadequate control of working instructions.						