Western Power Distribution

SLC51: Information Gathering Plan

Version 1.1 (16 Aug 2016)

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

Document Revision History Table:-

Document Version	Date	Comment	Author
1.0	21/04/2016	Introduction of Information Gathering Plan detailing the scope and form of the data that Western Power Distribution will collect in order to implement the Common Network Asset Indices Methodology in accordance with Standard Licence Condition 51	Phil Mann, Planning & Regulation Special Projects Engineer
1.1	16/08/2016	Additional details added including information on systems and processes following review of version 1.0 by Ofgem	Andrzej Michalowski, Planning & Regulation Special Projects Manager

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1 INTRODUCTION

1.1 For the RIIO-ED1 period, each licensee has agreed Network Asset Secondary Deliverables relating to asset health, criticality and risk. These are measured using Network Asset Indices that are comprised of:

- the "Health Index", which relates to the current condition of the licensee's Network Assets, and the predicted rate of deterioration in the condition of those assets, so as to enable their present and future condition and the probability of their failure to be assessed;
- the "Criticality Index", which reflects the safety impact, environmental impact, network (or system) reliability impact, financial implications, and other consequences that the licensee may reasonably deem to be relevant to its Network Assets; and
- the "Risk Index", which is a measure of the overall level of risk to the reliability of the licensee's Network Assets and the consequences of failure of these Network Assets, and is determined from the Health Index, the Criticality Index and the interdependence between the Network Assets.

1.2 Part C of Condition 51 in the Standard Conditions of the Electricity Distribution Licence introduced a requirement for DNOs to jointly develop a Common Network Asset Indices Methodology (CNAIM). The CNAIM outlines the methodology to be employed, by all DNOs, in the determination of Network Asset Indices.

1.3 A CNAIM was developed and submitted for approval by a joint DNO working group in December 2015. Version draft 0.4 was approved by Ofgem on 1st February 2016. Under this direction DNOs are required to modify and report revised information for the price control period by 30 December 2016. This direction also identified that a few minor issues needed to be resolved and these should be addressed, along with any other issues identified by the DNOs, by 1 August 2016. An updated version of CNAIM (version 1.0) was submitted to Ofgem on 27 July 2016. Ofgem have indicated that the updated version constitutes a change to the original methodology and requires DNOs to invoke Part I of Condition 51 in the Standard Conditions of the Electricity Distribution Licence which requires a public consultation of the proposed changes.

1.4 Part A of Condition 51 in the Standard Conditions of the Electricity Distribution Licence introduced a requirement for DNOs to have in place and keep under review a Network Asset Indices Methodology (NAIM) from 1 April 2015. Western Power Distribution's (WPD's) NAIM currently describes the methodology used to derive secondary deliverables prior to the development of a CNAIM. As part of the implementation of CNAIM, the WPD NAIM will be updated to describe how data structures in WPD systems map to the input data required for CNAIM. Together the WPD NAIM and CNAIM will describe the full process for calculation of secondary deliverables using CNAIM.

1.5 Part E of Condition 51 in the Standard Conditions of the Electricity Distribution Licence requires each licensee to submit a plan (the 'Information Gathering Plan') that sets out how the licensee will gather and record information required for its implementation of the CNAIM. The licensee is required to keep the Information Gathering Plan under review and where necessary modify it to ensure that it continues to enable the licensee to report accurately on the progress of its Network Asset Secondary Deliverables.

1.6 In accordance with the requirements of Condition 51, this document outlines the Information Gathering Plan for all four WPD licences areas, namely:

- Western Power Distribution (West Midlands) plc;
- Western Power Distribution (East Midlands) plc;
- Western Power Distribution (South Wales) plc; and
- Western Power Distribution (South West) plc.

1.7 This version of the Information Gathering Plan relates to the CNAIM version 1.0 submitted to Ofgem on 27 July 2016 which is in the process of public consultation as required under Part I of Condition 51 in the Standard Conditions of the Electricity Distribution Licence.

1.8 Going forward, it is proposed to keep the Information Gathering Plan consistent with the WPD NAIM and CNAIM. This means that when changes are implemented to CNAIM or data structures change in WPD systems affecting the WPD NAIM, the Information Gathering Plan will be reviewed and updated (where necessary). Also, it is proposed to review the Information Gathering Plan at the following points during RIIO-ED1:

- during Q1 of 2017, following the implementation of CNAIM, restatement of ED1 Secondary Deliverables and submission of RIGs Annex D as required under regulatory reporting covered by Condition 46 in the Standard Conditions of the Electricity Distribution Licence; and
- during Q4 of 2019, following submission of mid-period deliverables report in July 2019 as required by Part H of Condition 51 in the Standard Conditions of the Electricity Distribution Licence.

2 DATA COLLECTION PROCESSES

2.1 WPD has an in-house multi-functional asset management system called CROWN. One of its functions is to hold data about assets which includes data defining the assets, condition data and defect data. It also records inspection and maintenance activities on the assets as 'events'.

2.2 Staff across the business have access to CROWN and local teams record information directly into the system.

2.3 The frequency of inspection and maintenance is defined within company directives, with Policy documents specifying the frequency of activities and Standard Techniques specifying the detailed work required.

2.4 Inspection and maintenance cycles are integrated into the functionality of CROWN and maintenance and inspection 'tasks' are generated for assets in line with the frequency specified in policy. Local teams use the tasks to manage inspection and maintenance work and the completion of tasks is monitored by management key performance indicators. Future dates are triggered by the completion of events. WPD targets the completion of all inspection and maintenance tasks within the required period, so that no arrears exist.

2.5 On site, condition and defect information is captured on paper forms. These are preformatted to guide the field teams to provide the required data. Condition data is used where there is a scale of assessment (e.g. slightly rusty, heavy corrosion) and defects are used where there is a definitive status (e.g. bushing oil level low). WPD policy requires defects to be fixed with the clear instruction throughout policy documents of 'DON'T IGNORE DEFECTS – FIX THEM'. All defects are recorded on CROWN. If the defect is rectified during the maintenance it is recorded in CROWN as a repaired defect.

2.6 The paper forms completed on site are transcribed into CROWN by local teams. This means that if any of the information is unclear the local teams can quickly identify the correct values from the field teams.

2.7 Specialist users have access to produce reports from CROWN and they extract the data required for input into Asset Indices Models. This may require a number of reports to be combined into a single input file. The input files are checked for anomalies before being run through the Asset Indices Models and the output of the models is also checked and cross validated to ensure that the models have completed calculations on all assets.

2.8 For a limited number of assets (including fluid filled cables), separate registers are used. The users of these registers are familiar with the contents and have been instructed on how to provide updates. These registers are progressively being considered for migration to CROWN.

3 PROPOSED CHANGES TO DATA COLLECTION ACTIVITIES

3.1 As part of the implementation of the CNAIM, WPD is reviewing its asset management systems and data structures. There are likely to be some ongoing changes to systems and data structures in RIIO-ED1 to provide process improvements, in order to better facilitate extraction of the data required for the CNAIM.

3.2 WPD also proposes to develop new systems and processes to electronically record information from inspection and maintenance activities. It is proposed that these processes shall enable population of WPD's asset management systems directly from site. WPD is looking to develop these new systems over the next few years with the implementation of applications starting in 2016.

4 WPD PROCESSES FOR REVIEWING DATA COLLECTION

4.1 The responsibility for defining data collection requirements is held by the WPD Policy team. Each Policy document and associated Standard Techniques are reviewed periodically (normally every three years). This review considers changes to legislation, technology, regulatory requirements and policy effectiveness to re-state the requirements.

4.2 Changes may also be implemented outside the routine cycle, following specific incidents or as a result of a major change to requirements (such as the implementation of CNAIM).

4.3 The review requires the policy owner to consider the new requirements and incorporate them into the policy. Where the changes are simple extensions to existing activities these can be incorporated quite easily, but where changes to data collection require new tools or testing techniques, the costs of rolling these out to the whole business need to be considered. As part of the change, the policy owner will also drive changes to CROWN to enable any new data to be collected to be recorded in the asset management system. All policy changes are reviewed and approved by the Policy Manager.

4.4 In order for CROWN change requests to be prioritised within the IT teams, the requests are co-ordinated through one manager responsible for being the liaison point between 'the business' and IT. This same manager is responsible for co-ordinating the implementation of technological developments for improvements to data collection from site.

5 REVIEW OF DATA COLLECTION FOR IMPLEMENTATION OF CNAIM

5.1 WPD has carried out a review of each data input required for CNAIM to identify which existing data elements within WPD asset management systems can be used. This review has been coordinated by staff involved with the development of CNAIM to ensure that requirements are fully considered when identifying data sources.

5.2 CNAIM requires various types of data input for different stages of the methodology. These include:

- Location factors;
- Duty factors;
- Data to provide initial health score;
- Observed conditions;
- Measured conditions;
- Safety consequences;
- Environmental consequences;
- Network performance consequences;
- Financial consequences.

5.3 Condition data in WPD is either in the form of a condition assessment, test result or defect. Condition assessments are all recorded, but defects are only recorded by exception.

5.4 The review has identified that the majority of data inputs for CNAIM can be satisfied with existing data elements being collected in WPD systems. There are a few data inputs where additional data collection will be required. These are identified against specific data inputs in the appendices.

5.5 A small number of data inputs will not have data collected. These are non-critical items, discretionary items or situations where there are very limited circumstances where the data is relevant. For example, the bunding rating for primary HV switchgear will not be used because these assets are located in bunds in very exceptional circumstances. The inclusion of such data would have a minimal impact on the overall assessment.

5.6 WPD has ensured that there is adequate coverage of data for CNAIM to be applied to all assets with secondary deliverables defined for RIIO-ED1. For data used to determine Observed Condition and Measured Condition Modifiers, this has taken into account the maximum number of factors that can be combined using the MMI technique. The following table summarises the number of data inputs that will be used for each asset category. More details are provided in the appendices which contain comments against the data inputs that are not being collected and show that in some instances the data inputs being used are satisfied by more than one WPD data source. The appendices also indicate where data collection is proposed for the future, but since it is not yet implemented it is not shown as being collected.

Asset Category	Required/ Collected	Location Factor	Duty Factor	Initial Health Score	Observed Condition	Measured Condition	Safety Consequences	Environmental Consequences	Net. Performance Consequences	Financial Consequences	Total Data Inputs	Percentage Collected
A – LV UGB	Required			1	6	1	2		3		13	77%
	Collected			1	6	1	1		1		10	
B – LV Switchgear and Other	Required	4		1	7	3	2		3	2	22	82%
	Collected	4		1	7	3	1		1	1	18	
C – HV Switchgear (GM) - Distribution	Required	4		1	5	5	2	3	3	1	24	75%
	Collected	4		1	3	4	2	2	1	1	18	
D – HV Switchgear (GM) - Primary	Required	4	1	1	5	6	2	3	3	1	26	77%
	Collected	4	1	1	4	4	2	2	1	1	20	
E – EHV Switchgear (GM)	Required	4	1	1	6	6	2	3	2	1	26	77%
	Collected	4	1	1	4	4	2	2	1	1	20	
F – 132kV CB	Required	4	1	1	7	6	2	3	2	1	27	74%
	Collected	4	1	1	4	4	2	2	1	1	20	
G – HV Transformer	Required	4	1	1	1	3	3	3	3	2	21	86%
	Collected	4	1	1	1	2	3	2	2	2	18	
H – EHV Transformer	Required	4	2	3	10	7	2	3	2	2	35	86%
	Collected	4	2	3	9	5	1	3	1	2	30	
I – 132kV Transformer	Required	4	2	3	10	7	2	3	2	2	35	86%
	Collected	4	2	3	9	5	1	3	1	2	30	
J – LV Pole	Required	4		2	4	1	2		3	2	18	56%
	Collected	1		2	3	1	1		1	1	10	
K – HV Pole	Required	4		2	4	1	2		3	2	18	78%
	Collected	4		2	4	1	1		1	1	14	
L – EHV OHL Support – Pole	Required	4		2	4	1	2		2	2	17	82%
	Collected	4		2	4	1	1		1	1	14	
M – EHV OHL Support - Tower	Required	3		4	6		2		2	2	19	84%
	Collected	3		4	5		1		1	2	16	
N – EHV OHL Fittings	Required	3		1	4	2	2		2	2	16	81%
	Collected	3		1	4	1	1		1	2	13	
O –EHV OHL Conductor (Tower Lines)	Required	3		2	2	2	2		2	1	14	71%
	Collected	3		2	2	0	1		1	1	10	
P – 132kV OHL support (Towers)	Required	3		4	6		2		2	2	19	84%
	Collected	3		4	5		1		1	2	16	
Q – 132kV OHL Fittings	Required	3		1	4	2	2		2	2	16	81%
	Collected	3		1	4	1	1		1	2	13	
R –132kV OHL Conductor (Tower Lines)	Required	3		2	2	2	2		2	1	14	71%
	Collected	3		2	2	0	1		1	1	10	
S – EHV UG Cable (Oil)	Required		2	2		1	1	1	2	0	9	78%
	Collected		2	2		1	0	1	1	0	7	
T – EHV UG Cable (Gas)	Required		2	2		1	1	1	2	0	9	78%
	Collected		2	2		1	0	1	1	0	7	
U – 132kV UG Cable (Oil)	Required		2	2		1	1	1	2	0	9	78%
	Collected		2	2		1	0	1	1	0	7	
V – 132kV UG Cable (Gas)	Required		2	2		1	1	1	2	0	9	78%
	Collected		2	2		1	0	1	1	0	7	

5.7 Column {10} of the Information Gathering Plan tables, contained in Appendices A to V, shows areas where WPD is looking to introduce additional data collection over the next few years. In some cases this additional data collection relates to the collection of additional data to be used in the CNAIM, in other cases it relates to collection of data at an increased frequency. The following table summarises the main changes that will be introduced.

Ref	Asset Category	Input Data Type	Action Proposed	Comments	IGP Clause
Z1	HV Transformer (GM), EHV Transformer (GM) 132kV Transformer (GM)	Condition Data	Amend maintenance policies to specify recording of condition data (External Condition/ Bushings Condition) at time of maintenance	Policy change to be implemented during 2016. Data to be collected over the maintenance cycle of transformers (up to 18 years HV, 6 years for EHV/132kV)	G7, H10, H12, H15, H16, H17, I10, I12, I15, I16, I17
Z2	EHV Transformer (GM) 132kV Transformer (GM)	Kiosk Defect	Amend inspection and maintenance policies to include recording of defects affecting marshalling kiosks	Policy change to be implemented during 2016. Data to be collected over the inspection cycle (within one year)	H13, I13
Z3	HV Switchgear (GM) - Distribution, HV Switchgear (GM) - Primary, EHV Switchgear (GM) 132kV CBs	Condition Data	Amend maintenance policies to specify recording of External Condition assessment at time of maintenance. Currently only collected at end of life assessments	Policy change to be implemented during 2016. Data to be collected over the maintenance cycle of switchgear (up to 18 years HV, 9 years for EHV and 6 years for 132kV)	C6, D7, E7, F7
Z4	EHV Towers, EHV Fittings, 132kV Towers, 132kV Fittings	Condition Data	Amend formats of condition assessments used for high resolution photographic survey and ad-hoc climbing survey - so that the assessments produce results in consistent format.	Policy change to be implemented during 2016. Data to be collected over the inspection cycle of towers (10 years for high resolution photography, 2 years for foot patrols)	M8, M9 , M10, M11, M12, N5, N6, N7, N8, P8, P9, P10, P11, P12, Q5, Q6, Q7, Q8
Z5	EHV Tower Line Conductor 132kV Tower Line Conductor	Condition Data	Introduce requirement for recording the results of conductor sampling	Policy change to be implemented during 2016. Data to be collected once conductor is 40 years old (30 years in coastal areas). Data population is dependent upon age of conductor.	O8, O9, R8, R9
Z6	EHV Towers 132kV Towers	Tower foundation defect	Introduce tower foundation defect to record issues identified following foundation assessment.	Policy change to be implemented during 2016. Data to be collected once tower is 50 years old. Data population is dependent upon age of towers.	M13, P13

Ref	Asset Category	Input Data Type	Action Proposed	Comments	IGP Clause
Z7	LV Switchgear & Other, HV Switchgear (GM) - Distribution, HV Switchgear (GM) - Primary, EHV Switchgear (GM), 132kV CBs, HV Transformer (GM), EHV Transformer (GM) 132kV Transformer (GM)	External Condition Data/ Switchroom Environment Condition Data	Introduce a new 'major inspection' (every 3 years) - to include recording of external condition assessment for substation plant and a new 'Switchroom Environment' Condition data point (for indoor switchgear assets)	Policy change to be implemented during 2016. Data to be collected over the inspection cycle of 3 years.	B6, C6, C10, D7, D11, E7, E11, F7, F11, G7, H10, H15, I10, I15

5.8 The majority of additional data will be collected as part of routine, cyclical activities. Whilst this may take slightly longer to collect a full population of data, it avoids the need for bespoke, one-off, costly data collection exercises. The additional data will refine the CNAIM assessments and until the data is collected default CNAIM values will be used.

5.9 Inspection and maintenance frequencies have evolved and been optimised over time and they vary in length dependent upon the specific historic experience and requirements for different sub-types within asset categories. The frequencies balance cost against the requirements to maintain reliability and safety. Data collection results as a consequence of this work and should not be a prime driver for how often it is be carried out.

5.10 It should be noted that some of the additional data collection outlined in the Information Gathering Plan tables is dependent upon system and process changes.

6 OVERVIEW OF INFORMATION GATHERING PLAN FOR EACH HEALTH INDEX ASSET CATEGORY

6.1 The Information Gathering Plan is detailed in the tables contained in Appendix A to Appendix V. Each appendix relates to a separate Health Index Asset Category.

6.2 An Information Gathering Plan has been produced for only those Health Index Asset Categories where WPD has agreed Network Asset Secondary Deliverables for the RIIO-ED1 period.

6.3 In accordance with clause 51.14 of Condition 51 in the Standard Conditions of the Electricity Distribution Licence, the Information Gathering Plan shown in Appendices A to V includes:-

- the scope and form of the data to be collected; and
- the frequency of collection.

6.4 The Information Gathering Plan considers each of the data inputs required for the implementation of the CNAIM. These data inputs are identified in columns {1}, {2} and {3} in each of the tables in Appendices A to V.

6.5 In each of the tables, column {4} shows where WPD will collect data for the implementation of the CNAIM. The type of input data collected by WPD, or held within existing asset management systems, is identified in columns {5}, {6} and {7}.

6.6 WPD will provide inputs for the calculation of Network Asset Indices using data that is collected by existing Inspection and Maintenance policies or currently held within existing asset management systems. As such, the information gathered by WPD will, in many cases, be in a different format to that shown in the CNAIM. Within the implementation of the CNAIM, WPD shall incorporate any mappings, transformations or calculations necessary to translate this information into the required CNAIM input data format. These mappings and transformations shall be detailed within the WPD NAIM.

6.7 In determining the Observed Condition or Measured Condition inputs for the CNAIM, WPD will, in some cases, use 'defect' data. This is a generic term that encompasses items which relate to defective assets and also items which relate to asset condition. In either case, only the presence of a defect is recorded. The presence of a defect can enable a specific condition issue to be positively identified, therefore providing a suitable input to the CNAIM. However, no inference relating to an asset's condition can be drawn where a defect is not recorded. This is different from 'condition assessment' data, where a score that reflects the asset's condition is always assigned as part of the assessment.

6.8 The CNAIM input, for some Observed Condition or Measured Condition points, may be derived using multiple defect, condition assessment or test result data items. The combination of multiple data items to provide the required CNAIM input will be managed by defined mappings and translations.

6.9 In the tables, column {8} shows the type of events where each data input will be collected.

6.10 For plant assets, certain data relating to the health of the asset is collected during an 'End of Life assessment'. Such an assessment is an ad-hoc event that may be undertaken where replacement of an asset is being considered. The Information Gathering Plan identifies any data that is collected during such assessments in column {8}.

6.11 For large transformers and ground mounted switchgear at major substations additional condition assessment, over and above that undertaken at the time of routine inspection and maintenance, is undertaken as an asset approaches its nominal life. Where plant items are retained in service beyond their nominal life, repeat assessments are to be undertaken at intervals of no greater than every five years. These assessments are referred to as 'near End of Life assessments' in column {8}.

6.12 Where data is collected during routine events, such as routine inspection or maintenance, the frequency of collection is shown in column {9} of the tables.

6.13 Within a Health Index Asset Category, the frequency of routine inspection or maintenance may vary amongst assets, depending upon:-

- the type of asset (e.g. operating voltage, insulation medium, make/ type etc.); and/ or
- the location of the asset (e.g. type of substation).

The frequency of collection shown in column {9} will be typical of most assets within the Health Index Asset Category.

7 INFORMATION GATHERING PLAN APPENDICES

APPENDIX A			Information Gathering Plan: LV UGB								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
A1	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
A2	Observed Condition	Steel Cover & Pit Condition	Table 34 (Appendix B.5.2)	Yes	Condition Observation: Gas In Pit	Defect	Condition Observation (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
				Yes	Recorded Defect (Steel Cover and Pit Condition)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A3	Observed Condition	Water/ Moisture	Table 35 (Appendix B.5.2)	Yes	Condition Observation: Condensation	Defect	Condition Observation (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
				Yes	Recorded Defect (Water/ Moisture)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A4	Observed Condition	Bell Condition	Table 36 (Appendix B.5.2)	Yes	Recorded Defect (Bell Condition)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A5	Observed Condition	Insulation Condition	Table 37 (Appendix B.5.2)	Yes	Condition Observation: Compound	Defect	Multiple Condition Observations (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
				Yes	Recorded Defect (Insulation Condition)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-

APPENDIX A			Information Gathering Plan: LV UGB								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
A6	Observed Condition	Signs Of Heating	Table 38 (Appendix B.5.2)	Yes	Condition Observation: Link Burning; Links Misaligned	Defect	Multiple Condition Observations (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
				Yes	Recorded Defect (Signs of Heating)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A7	Observed Condition	Phase Barriers	Table 39 (Appendix B.5.2)	Yes	Recorded Defect (Phase Barrier)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A8	Measured Condition	Operational Adequacy	Table 131 (Appendix B.6.2)	Yes	Recorded Defect (Operational Adequacy)	Defect	Defect Present (Y/N)	Inspection & Maintenance/ End of Life assessment	12yr	None	-
A9	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
A10	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Site Risks	Site attribute	Site risk classification (Low; Medium; High)	Analysis of geographic mapping system data - identified risks added to asset site record	-	None	-
A11	Network Performance Consequences	Number of Connected Customers	Eq. 37 (section 7.6.2.2)	Yes	Number of customers on LV feeder	Circuit attribute	Value	Semi-static data, periodically refreshed	-	None	-

APPENDIX A			Information Gathering Plan: LV UGB								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
A12	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
A13	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor

APPENDIX B			Information Gathering Plan: LV Switchgear and Other								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
B1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
B2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
B3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
B4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
B5	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
B6	Observed Condition (LV Pillar/ LV Circuit Breaker/LV Board)	Switchgear External Condition	Table 40 (Appendix B.5.3); Table 41 (Appendix B.5.4); Table 44 (Appendix B.5.5)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	18yr	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs)	-
				Yes	Recorded Defect (Tank/Paint)	Defect	Defect Present (Y/N)	Inspection/ Maintenance/ End of Life assessment	1yr (insp)/ 18yr (maint)	None	-

APPENDIX B			Information Gathering Plan: LV Switchgear and Other								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
B7	Observed Condition (LV Pillar/ LV Board)	Compound Leaks	Table 42 (Appendix B.5.4); Table 45 (Appendix B.5.5)	Yes	Recorded Defect (Compound)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B8	Observed Condition (LV Board)	Internal Condition & Operation	Table 43 (Appendix B.5.4)	Yes	Condition Assessment: Busbar Support/ Barrier Insulation; Internal Condition	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	18yr	None	-
				Yes	Recorded Defect (Bushings/ Insulators)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B9	Observed Condition (LV Pillar)	Internal Condition & Operation	Table 46 (Appendix B.5.5)	Yes	Condition Assessment: Internal Condition	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	18yr	None	-
B10	Observed Condition (LV Pillar)	Insulation Condition	Table 47 (Appendix B.5.5)	Yes	Condition Assessment: Busbar Support/ Barrier Insulation	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	18yr	None	-
				Yes	Recorded Defect (Bushings/ Insulators)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-

APPENDIX B			Information Gathering Plan: LV Switchgear and Other								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
B11	Observed Condition (LV Pillar)	Signs Of Heating	Table 48 (Appendix B.5.5)	Yes	Recorded Defect (Thermographic)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B12	Observed Condition (LV Pillar)	Phase Barriers	Table 49 (Appendix B.5.5)	Yes	Recorded Defect (Phase Barriers)	Defect	Defect Present (Y/N)	Inspection/ Maintenance/ End of Life assessment	1yr (insp)/ 18yr (maint)	None	-
B13	Measured Condition (LV Pillar/ LV Board)	Operational Adequacy	Table 133 (Appendix B.6.4); Table 135 (Appendix B.6.5)	Yes	Recorded Defect (Internal Condition/ Operation)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B14	Measured Condition (LV Circuit Breaker)	Operational Adequacy	Table 132 (Appendix B.6.3)	Yes	Condition Assessment: Internal Condition; Busbar Support/ Barrier Insulation	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	18yr	None	-
				Yes	Recorded Defect (Operation)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B15	Measured Condition (LV Board)	Security	Table 134 (Appendix B.6.4)	Yes	Recorded Defect (Screening/ Fixing)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	18yr	None	-
B16	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases

APPENDIX B			Information Gathering Plan: LV Switchgear and Other								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
B17	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-
B18	Network Performance Consequences	Number of Connected Customers	Eq. 37 (Section 7.6.2.2)	Yes	Number of customers at substation	Site attribute	Value	Semi-static data, periodically refreshed	-	None	-
B19	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
B20	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
B21	Financial Consequences (LV Board)	Financial Type (i.e. Asbestos Clad?)	Table 212 (Appendix D.1.2.1)	No	-	-	-	-	-	None	Instances of asbestos clad LV switchgear are believed to be very exceptional within WPD
B22	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX C			Information Gathering Plan: HV Switchgear (GM) - Distribution								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
C1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
C2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
C3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
C4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
C5	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
C6	Observed Condition	Switchgear External Condition	Table 55 (Appendix B.5.7)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	ad-hoc	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-

APPENDIX C			Information Gathering Plan: HV Switchgear (GM) - Distribution								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Condition Assessment: External Bushing	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	12-18yr (maint)	None	-
				Yes	Recorded Defect (Tank/Paint, Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	1yr (insp)/ 12-18yr (maint)	None	-
C7	Observed Condition	Oil Leaks / Gas Pressure	Table 56 (Appendix B.5.7)	Yes	Recorded Defect (Oil/ SF_6 leak)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	1yr (insp)/ 12-18yr (maint)	None	-
C8	Observed Condition	Thermographic Assessment	Table 57 (Appendix B.5.7)	No	-	-	-	-	-	None	-
C9	Observed Condition	Switchgear Internal Condition & Operation	Table 58 (Appendix B.5.7)	Yes	Condition Assessment: Operating Mechanism; Internal Insulation; Interlock Functionality; Isolating & Shutter Mechanisms	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	12-18yr	None	-
				Yes	Recorded Defect (Internal Condition/ Operation, Busbars/ Insulators)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	12-18yr	None	-

APPENDIX C			Information Gathering Plan: HV Switchgear (GM) - Distribution								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
C10	Observed Condition	Indoor Environment	Table 59 (Appendix B.5.7)	No	-	-	-	-	-	Introduce new condition assessment point to collect Switchroom Environment condition data (include as part of a 3 yearly 'major' Inspection)	-
C11	Measured Condition	Partial Discharge	Table 142 (Appendix B.6.7)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	1yr	None	-
C12	Measured Condition	Ductor Test	Table 143 (Appendix B.6.7)	Yes	Test Result (Ductor Test)	Test Result	Value (μΩ)	Maintenance	12-18yr	None	-
C13	Measured Condition	Oil Tests	Table 144 (Appendix B.6.7)	Yes	Oil Test Results (Moisture; Crackle; Breakdown)	Test Results	Value (ppm); Result (Pass; Fail); Value (kV)	Maintenance	12-18yr	None	-
C14	Measured Condition	Temperature Readings	Table 145 (Appendix B.6.7)	No	-	-	-	-	-	None	-
C15	Measured Condition	Trip Test	Table 146 (Appendix B.6.7)	Yes	Test Result (Trip Test) & Acceptable Trip Test Time Limit	Test Result	Values (ms)	Maintenance	12-18yr	None	-
C16	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-

APPENDIX C			Information Gathering Plan: HV Switchgear (GM) - Distribution								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
C17	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-
C18	Environmental Consequences	Type Environment Rating	Table 221 (Appendix D.3.2)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
C19	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
C20	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	No	-	-	-	-	-	None	Within WPD this asset type is only located within a bund in very exceptional cases
C21	Network Performance Consequences	Number of Connected Customers	Eq. 37 (section 7.6.2.2)	Yes	Number of customers on feeder	Circuit attribute	Value	Semi-static data, periodically refreshed	-	None	-
C22	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
C23	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
C24	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX D			Information Gathering Plan: HV Switchgear (GM) - Primary								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
D1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
D2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
D3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
D4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
D5	Duty Factor	Number of Operations	Table 31 (Appendix B.4)	Yes	Autoreclosing Function Indicator	Asset attribute	Indicator (Y/N)	Function recorded against Asset Record	-	None	-
D6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
D7	Observed Condition	Switchgear External Condition	Table 50 (Appendix B.5.6)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 50 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-

APPENDIX D			Information Gathering Plan: HV Switchgear (GM) - Primary								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Condition Assessment: External Bushing	Condition Assessment Data	Condition Assessment Score	Maintenance/ 'near End of Life' assessment/ End of Life assessment	9-12yr (maint)/ 5yr (once asset age is over 50 years ('near EOL'))	None	-
				Yes	Recorded Defect (Tank/Paint, Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	1yr (insp)/ 9-12yr (maint)	None	-
D8	Observed Condition	Oil Leaks / Gas Pressure	Table 51 (Appendix B.5.6)	Yes	Recorded Defect (Oil/ SF_6 leak)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	1yr (insp)/ 9-12yr (maint)	None	-
D9	Observed Condition	Thermographic Assessment	Table 52 (Appendix B.5.6)	Yes	Recorded Defect (Thermographic Issue)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
D10	Observed Condition	Switchgear Internal Condition & Operation	Table 53 (Appendix B.5.6)	Yes	Condition Assessment: Operating Mechanism; Internal Insulation; Interlock Functionality; Isolating & Shutter Mechanisms	Condition Assessment Data	Condition Assessment Score	Maintenance/ End of Life assessment	9-12yr	None	-
				Yes	Recorded Defect (Internal Condition/ Operation, Busbars/ Insulators)	Defect	Defect Present (Y/N)	Maintenance/ End of Life assessment	9-12yr	None	-

APPENDIX D			Information Gathering Plan: HV Switchgear (GM) - Primary								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
D11	Observed Condition	Indoor Environment	Table 54 (Appendix B.5.6)	No (Future)	-	-	-	-	-	Introduce new condition assessment point to collect Switchroom Environment condition data (include as part of a 3 yearly 'major' Inspection)	-
D12	Measured Condition	Partial Discharge	Table 136 (Appendix B.6.6)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	1yr	None	-
D13	Measured Condition	Ductor Test	Table 137 (Appendix B.6.6)	Yes	Test Result (Ductor Test)	Test Result	Value (μΩ)	Maintenance	9-12yr	None	-
D14	Measured Condition	IR Test	Table 138 (Appendix B.6.6)	No	-	-	-	-	-	None	-
D15	Measured Condition	Oil Tests	Table 139 (Appendix B.6.6)	Yes	Oil Test Results (Moisture; Crackle; Breakdown)	Test Results	Value (ppm); Result (Pass; Fail); Value (kV)	Maintenance	9-12yr	None	-
D16	Measured Condition	Temperature Readings	Table 140 (Appendix B.6.6)	No	-	-	-	-	-	None	-
D17	Measured Condition	Trip Test	Table 141 (Appendix B.6.6)	Yes	Test Result (Trip Test) & Acceptable Trip Test Time Limit	Test Result	Values (ms)	Maintenance	9-12yr	None	-
D18	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-

APPENDIX D			Information Gathering Plan: HV Switchgear (GM) - Primary								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
D19	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-
D20	Environmental Consequences	Type Environment Rating	Table 221 (Appendix D.3.2)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
D21	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
D22	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	No	-	-	-	-	-	None	Within WPD this asset type is only located within a bund in very exceptional cases
D23	Network Performance Consequences	Number of Connected Customers	Eq. 37 (section 7.6.2.2)	Yes	Number of customers on feeder	Circuit attribute	Value	Semi-static data, periodically refreshed	-	None	-
D24	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
D25	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
D26	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX E			Information Gathering Plan: EHV Switchgear (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
E1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
E2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
E3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
E4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
E5	Duty Factor	Number of Operations	Table 31 (Appendix B.4)	Yes	Autoreclosing Function Indicator	Asset attribute	Indicator (Y/N)	Function recorded against Asset Record	-	None	-
E6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
E7	Observed Condition	Switchgear External Condition	Table 60 (Appendix B.5.8)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 50 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-

APPENDIX E			Information Gathering Plan: EHV Switchgear (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Condition Assessment: External Bushing	Condition Assessment Data	Condition Assessment Score	Maintenance/ 'near End of Life' assessment/ End of Life assessment	6-12yr (maint)/ 5yr (once asset age is over 50 years ('near EOL'))	Collect External Bushing condition assessment data at a 'major' Inspection (every 3yrs)	-
				Yes	Recorded Defect (Tank/Paint, Compound, Bushings/Insulators)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6-12yr (maint)	None	-
E8	Observed Condition	Oil Leaks / Gas Pressure	Table 61 (Appendix B.5.8)	Yes	Recorded Defect (Oil leak, Gas Pressure)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6-12yr (maint)	None	-
E9	Observed Condition	Thermographic Assessment	Table 62 (Appendix B.5.8)	Yes	Recorded Defect (Thermographic Issue)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
E10	Observed Condition	Switchgear Internal Condition & Operation	Table 63 (Appendix B.5.8)	Yes	Condition Assessment: Operating Mechanism; Internal Insulation; Interlock Functionality; Isolating & Shutter Mechanisms	Condition Assessment Data	Condition Assessment Score	Maintenance	6-12yr	None	-

APPENDIX E			Information Gathering Plan: EHV Switchgear (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Recorded Defect (Internal Condition/ Operation, Busbars/ Insulators)	Defect	Defect Present (Y/N)	Maintenance	6-12yr	None	-
E11	Observed Condition	Indoor Environment	Table 64 (Appendix B.5.8)	No (Future)	-	-	-	-	-	Introduce new condition assessment point to collect Switchroom Environment condition data (include as part of a 3 yearly 'major' Inspection)	-
E12	Observed Condition	Support Structures	Table 65 (Appendix B.5.8)	No	-	-	-	-	-	None	Steel support structures are integral to the CBs and therefore would be assessed as part of overall external condition assessment
E13	Measured Condition	Partial Discharge	Table 147 (Appendix B.6.8)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	1yr	None	-
E14	Measured Condition	Ductor Test	Table 148 (Appendix B.6.8)	Yes	Test Result (Ductor Test)	Test Result	Value (μΩ)	Maintenance	6-12yr	None	-
E15	Measured Condition	IR Test	Table 149 (Appendix B.6.8)	No	-	-	-	-	-	None	-
E16	Measured Condition	Oil Tests/ Gas Tests	Table 150 (Appendix B.6.8)	Yes	Oil Test Results (Breakdown; Moisture)	Test Result	Values (kV; ppm)	Maintenance	6-12yr	None	-

APPENDIX E			Information Gathering Plan: EHV Switchgear (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
E17	Measured Condition	Temperature Readings	Table 151 (Appendix B.6.8)	No	-	-	-	-	-	None	-
E18	Measured Condition	Trip Test	Table 152 (Appendix B.6.8)	Yes	Test Result (Trip Test) & Acceptable Trip Test Time Limit	Test Result	Values (ms)	Maintenance	6-12yr	None	-
E19	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
E20	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-
E21	Environmental Consequences	Type Environment Rating	Table 221 (Appendix D.3.2)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
E22	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
E23	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	No	-	-	-	-	-	None	Within WPD this asset type is only located within a bund in very exceptional cases
E24	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-

APPENDIX E			Information Gathering Plan: EHV Switchgear (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
E25	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
E26	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX F			Information Gathering Plan: 132kV CBs								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
F1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
F2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
F3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
F4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
F5	Duty Factor	Number of Operations	Table 31 (Appendix B.4)	Yes	Autoreclosing Function Indicator	Asset attribute	Indicator (Y/N)	Function recorded against Asset Record	-	None	-
F6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
F7	Observed Condition	Switchgear External Condition	Table 66 (Appendix B.5.9)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 50 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-

APPENDIX F			Information Gathering Plan: 132kV CBs								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Condition Assessment: External Bushing	Condition Assessment Data	Condition Assessment Score	Maintenance/ 'near End of Life' assessment/ End of Life assessment	6yr (maint)/ 5yr (once asset age is over 50 years ('near EOL'))	Collect External Bushing condition assessment data at a 'major' Inspection (every 3yrs)	-
				Yes	Recorded Defect (Tank/Paint, Compound, Bushings/Insulators)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-
F8	Observed Condition	Oil Leaks / Gas Pressure	Table 67 (Appendix B.5.9)	Yes	Recorded Defect (Oil leak, Gas Pressure)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-
F9	Observed Condition	Thermographic Assessment	Table 68 (Appendix B.5.9)	Yes	Recorded Defect (Thermographic Issue)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
F10	Observed Condition	Switchgear Internal Condition & Operation	Table 69 (Appendix B.5.9)	Yes	Condition Assessment: Operating Mechanism; Internal Insulation; Interlock Functionality; Isolating & Shutter Mechanisms	Condition Assessment Data	Condition Assessment Score	Maintenance	6yr	None	-

APPENDIX F			Information Gathering Plan: 132kV CBs								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Recorded Defect (Internal Condition/ Operation, Busbars/ Insulators)	Defect	Defect Present (Y/N)	Maintenance	6yr	None	-
F11	Observed Condition	Indoor Environment	Table 70 (Appendix B.5.9)	No (Future)	-	-	-	-	-	Introduce new condition assessment point to collect Switchroom Environment condition data (include as part of a 3 yearly 'major' Inspection)	-
F12	Observed Condition	Support Structures	Table 71 (Appendix B.5.9)	No	-	-	-	-	-	None	Steel support structures are integral to the CBs and therefore would be assessed as part of overall external condition assessment
F13	Observed Condition	Air Systems	Table 72 (Appendix B.5.9)	No	-	-	-	-	-	None	Very few air blast circuit breakers in commission (less than 2.5% of population)
F14	Measured Condition	Partial Discharge	Table 153 (Appendix B.6.9)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	1yr	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	1yr	None	-
F15	Measured Condition	Ductor Test	Table 154 (Appendix B.6.9)	Yes	Test Result (Ductor Test)	Test Result	Value (μΩ)	Maintenance	6yr	None	-
F16	Measured Condition	IR Test	Table 155 (Appendix B.6.9)	No	-	-	-	-	-	None	-

APPENDIX F			Information Gathering Plan: 132kV CBs								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
F17	Measured Condition	Oil Tests/ Gas Tests	Table 156 (Appendix B.6.9)	Yes	Oil Test Results (Breakdown; Moisture)	Test Result	Values (kV; ppm)	Maintenance	6yr	None	-
F18	Measured Condition	Temperature Readings	Table 157 (Appendix B.6.9)	No	-	-	-	-	-	None	-
F19	Measured Condition	Trip Test	Table 158 (Appendix B.6.9)	Yes	Test Result (Trip Test) & Acceptable Trip Test Time Limit	Test Result	Values (ms)	Maintenance	6yr	None	-
F20	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
F21	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-
F22	Environmental Consequences	Type Environment Rating	Table 221 (Appendix D.3.2)	Yes	Insulation Medium	Asset attribute	Text description (Oil; SF_6; Air; Other)	Recorded against Asset Record	-	None	-
F23	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
F24	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	No	-	-	-	-	-	None	Within WPD this asset type is only located within a bund in very exceptional cases

APPENDIX F			Information Gathering Plan: 132kV CBs								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
F25	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
F26	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
F27	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX G			Information Gathering Plan: HV Transformer (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
G1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
G2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
G3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
G4	Location Factor	Indoor/ Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
G5	Duty Factor	% utilisation	Table 32 (Appendix B.4)	Yes	Maximum Demand; Rating	Site attribute; Asset attribute	Values (kVA)	Recorded against Asset Record	-	None	-
G6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
G7	Observed Condition	Transformer External Condition	Table 73 (Appendix B.5.10)	Yes	Condition Assessment: External Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	ad hoc	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-

APPENDIX G			Information Gathering Plan: HV Transformer (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Recorded Defect (Tank/ Paint, Oil, Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	1yr (insp)/ 18yr (maint)	None	-
G8	Measured Condition	Partial Discharge	Table 159 (Appendix B.6.10)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	ad hoc	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	ad hoc	None	-
G9	Measured Condition	Oil Acidity	Table 160 (Appendix B.6.10)	Yes	Oil Test Result	Test Result	Value (ppm)	Maintenance	18yr (maint)	None	-
G10	Measured Condition	Temperature Readings	Table 161 (Appendix B.6.10)	No	-	-	-	-	-	None	Not practical to apply in CNAIM, as to determine expected temperature requires monitoring of loading and ambient temperature over a period of time (and thermal modelling of transformer)
G11	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
G12	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1yr	None	-

APPENDIX G			Information Gathering Plan: HV Transformer (GM)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
G13	Environmental Consequences	Size Environment Rating	Table 222 (Appendix D.3.2)	Yes	Transformer Rating	Asset attribute	Value (kVA)	Recorded against Asset Record	-	None	-
G14	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
G15	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	No	-	-	-	-	-	None	Within WPD this asset type is only located within a bund in very exceptional cases
G16	Network Performance Consequences	Number of Connected Customers	Eq. 37 (section 7.6.2.2)	Yes	Number of customers at substation	Site attribute	Value	Semi-static data, periodically refreshed	-	None	-
G17	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
G18	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	Yes	Maximum Demand; Number of customers at substation	Site attribute	Value (kVA); Value (number of customers)	Recorded against main Asset Record	-	None	-
G19	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Transformer Rating	Asset attribute	Value (kVA)	Recorded against Asset Record	-	None	-
G20	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
H1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
H2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
H3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
H4	Location Factor	Indoor/Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
H5	Duty Factor	% utilisation	Table 33 (Appendix B.4)	Yes	Maximum Demand; Number of transformers at Substation; Rating	Site attribute; Site attribute; Asset attribute	Value (MVA); Value (number of transformers); Value (MVA)	Recorded against Asset Record	-	None	-
H6	Duty Factor	Avg. Number Taps per Day	Table 33 (Appendix B.4)	Yes	Observed average number of tap change operations per day	Test Result	Value	Inspection/ Maintenance	3mnth (insp)	None	-

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
H7	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Acquisition Date	Event Date	Date	Recorded against Asset Record	-	None	-
H8	Initial Health Score	Age - transformer	Eq. 4 (Section 6.1.6 & also see 6.2)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
H9	Initial Health Score	Age - tapchanger	Eq. 4 (Section 6.1.6 & also see 6.2)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
H10	Observed Condition - Transformer	Main Tank Condition	Table 74 (Appendix B.5.11)	Yes	Condition Assessment: Transformer External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-
				Yes	Recorded Defect (Tank/Paint, Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-
H11	Observed Condition - Transformer	Coolers / Radiator Condition	Table 75 (Appendix B.5.11)	Yes	Recorded Defect (Fans/ Pumps)	Defect	Defect Present (Y/N)	Maintenance	6yr	None	-
H12	Observed Condition - Transformer	Bushings Condition	Table 76 (Appendix B.5.11)	Yes	Condition Assessment: Bushings Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect Condition Assessment Data at maintenance (every 6 yr)	-
				Yes	Recorded Defect (Bushings)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
H13	Observed Condition - Transformer	Kiosk Condition	Table 77 (Appendix B.5.11)	No (Future)	-	-	-	-	-	Introduce recording of a new defect type for marshalling kiosk defects	-
H14	Observed Condition - Transformer	Cable Boxes Condition	Table 78 (Appendix B.5.11)	Yes	Recorded Defect (Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-
H15	Observed Condition - Tapchanger	Tapchanger External Condition	Table 79 (Appendix B.5.12)	Yes	Condition Assessment: Tapchanger External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/ End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-
				Yes	Recorded Defect (Tank/ Paint, Oil)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 6yr (maint)	None	-
H16	Observed Condition - Tapchanger	Internal Condition	Table 80 (Appendix B.5.12)	Yes	Condition Assessment: Tapchanger Internal Condition; Internal Insulation Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	-	Collect Condition Assessment Data at maintenance (every 6 yr)	-
				Yes	Recorded Defect (Internal Condition)	Defect	Defect Present (Y/N)	Maintenance	6yr (maint)	None	-
H17	Observed Condition - Tapchanger	Drive Mechanism Condition	Table 81 (Appendix B.5.12)	Yes	Condition Assessment: Tapchanger Operating Mechanism Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	-	Collect Condition Assessment Data at maintenance (every 6 yr)	-

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Recorded Defect (Tapchanger Mechanism)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
H18	Observed Condition - Tapchanger	Condition of Selector & Diverter Contacts	Table 82 (Appendix B.5.12)	Yes	Recorded Defect (Tapchanger Contacts)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
H19	Observed Condition - Tapchanger	Condition of Selector & Diverter Braids	Table 83 (Appendix B.5.12)	Yes	Recorded Defect (Tapchanger Braids)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
H20	Measured Condition - Transformer	Partial Discharge	Table 162 (Appendix B.6.11)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	ad hoc	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	ad hoc	None	-
H21	Measured Condition	Temperature Readings	Table 163 (Appendix B.6.11)	No	-	-	-	-	-	None	Not practical to apply in CNAIM, as to determine expected temperature requires monitoring of loading and ambient temperature over a period of time (and thermal modelling of transformer)

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
H22	Measured Condition - Tapchanger	Partial Discharge	Table 164 (Appendix B.6.12)	No	-	-	-	-	-	None	PD testing of tapchanger not undertaken separately to PD testing of whole transformer - hence only main transformer PD Test input to be populated
H23	Oil Test - Transformer	Oil Tests	Tables 196-198 (Appendix B.7)	Yes	Oil Test Results (Moisture; Acidity; Breakdown)	Test Result	Values (ppm; mgKOH/g; kV)	Maintenance	6yr	None	-
H24	FFA Test - Transformer	FFA Tests	Table 208 (Appendix B.9)	Yes	FFA Test Result	Test Result	Value (ppm)	Maintenance	6yr	None	-
H25	Oil Test - Tapchanger	Oil Tests	Tables 196-198 (Appendix B.7)	Yes	Oil Test Results (Moisture; Acidity; Breakdown)	Test Result	Values (ppm; mgKOH/g; kV)	Maintenance	6yr	None	-
H26	DGA Test	DGA Test	Tables 201-205 (Appendix B.8)	Yes	DGA Test Results (Hydrogen; Acetylene; Ethylene; Methane; Ethane)	Test Result	Values (ppm)	Maintenance	3yr	None	-
H27	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases

APPENDIX H			Information Gathering Plan: EHV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
H28	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	3mnth	None	-
H29	Environmental Consequences	Size Environment Rating	Table 222 (Appendix D.3.2)	Yes	Transformer Rating	Asset attribute	Value (MVA)	Recorded against Asset Record	-	None	-
H30	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
H31	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	Yes	Asset Bunded Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-
H32	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Site attribute	Value (MVA)	-	-	None	-
H33	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
H34	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Transformer Rating	Asset attribute	Value (MVA)	Recorded against Asset Record	-	None	-
H35	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
I1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
I2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
I3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
I4	Location Factor	Indoor/ Outdoor	Section 6.4.5/ 6.4.6	Yes	Asset Environment/ Housing	Asset attribute	Text description of asset housing/ environment	Recorded against Asset Record	-	None	-
I5	Duty Factor	% utilisation	Table 33 (Appendix B.4)	Yes	Maximum Demand; Number of transformers at Substation; Rating	Site attribute; Site attribute; Asset attribute	Value (MVA); Value (number of transformers); Value (MVA)	Recorded against Asset Record	-	None	-
I6	Duty Factor	Avg. Number Taps per Day	Table 33 (Appendix B.4)	Yes	Observed average number of tap change operations per day	Test Result	Value	Inspection/ Maintenance	3mnth (insp)	None	-

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
I7	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Acquisition Date	Event Date	Date	Recorded against Asset Record	-	None	-
I8	Initial Health Score	Age - transformer	Eq. 4 (Section 6.1.6 & also see 6.2)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
I9	Initial Health Score	Age - tapchanger	Eq. 4 (Section 6.1.6 & also see 6.2)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
I10	Observed Condition - Transformer	Main Tank Condition	Table 84 (Appendix B.5.13)	Yes	Condition Assessment: Transformer External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-
				Yes	Recorded Defect (Tank/Paint, Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 3yr (maint)	None	-
I11	Observed Condition - Transformer	Coolers / Radiator Condition	Table 85 (Appendix B.5.13)	Yes	Recorded Defect (Fans/ Pumps)	Defect	Defect Present (Y/N)	Maintenance	3yr	None	-
I12	Observed Condition - Transformer	Bushings Condition	Table 86 (Appendix B.5.13)	Yes	Condition Assessment: Bushings Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect Condition Assessment Data at maintenance (every 3yr)	-
				Yes	Recorded Defect (Bushings)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 3yr (maint)	None	-

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
I13	Observed Condition - Transformer	Kiosk Condition	Table 87 (Appendix B.5.13)	No (Future)	-	-	-	-	-	Introduce recording of a new defect type for marshalling kiosk defects	-
I14	Observed Condition - Transformer	Cable Boxes Condition	Table 88 (Appendix B.5.13)	Yes	Recorded Defect (Compound)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 3yr (maint)	None	-
I15	Observed Condition - Tapchanger	Tapchanger External Condition	Table 89 (Appendix B.5.14)	Yes	Condition Assessment: Tapchanger External Condition	Condition Assessment Data	Condition Assessment Score	'near End of Life' assessment/End of Life assessment	5yr (once asset age is over 45 years ('near EOL'))	Collect External Condition condition assessment data at 'major' Inspection (every 3yrs) and also as part of routine maintenance	-
				Yes	Recorded Defect (Tank/ Paint, Oil)	Defect	Defect Present (Y/N)	Inspection/ Maintenance	3mnth (insp)/ 3yr (maint)	None	-
I16	Observed Condition - Tapchanger	Internal Condition	Table 90 (Appendix B.5.14)	Yes	Condition Assessment: Tapchanger Internal Condition; Internal Insulation Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	-	Collect Condition Assessment Data at maintenance (every 3yr)	-
				Yes	Recorded Defect (Internal Condition)	Defect	Defect Present (Y/N)	Maintenance	3mnth (insp)/ 3yr (maint)	None	-
I17	Observed Condition - Tapchanger	Drive Mechanism Condition	Table 91 (Appendix B.5.14)	Yes	Condition Assessment: Tapchanger Operating Mechanism Condition	Condition Assessment Data	Condition Assessment Score	End of Life assessment	-	Collect Condition Assessment Data at maintenance (every 3yr)	-

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
				Yes	Recorded Defect (Tapchanger Mechanism)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
I18	Observed Condition - Tapchanger	Condition of Selector & Diverter Contacts	Table 92 (Appendix B.5.14)	Yes	Recorded Defect (Tapchanger Contacts)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
I19	Observed Condition - Tapchanger	Condition of Selector & Diverter Braids	Table 93 (Appendix B.5.14)	Yes	Recorded Defect (Tapchanger Braids)	Defect	Defect Present (Y/N)	Maintenance	-	None	-
I20	Measured Condition - Transformer	Partial Discharge	Table 165 (Appendix B.6.13)	Yes	Recorded Defect (Partial Discharge)	Defect	Defect Present (Y/N)	Maintenance	ad hoc	None	-
				Yes	Test Result (Partial Discharge)	Test Result	Value (dB)	Maintenance	ad hoc	None	-
I21	Measured Condition	Temperature Readings	Table 166 (Appendix B.6.13)	No	-	-	-	-	-	None	Not practical to apply in CNAIM, as to determine expected temperature requires monitoring of loading and ambient temperature over a period of time (and thermal modelling of transformer)

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
I22	Measured Condition - Tapchanger	Partial Discharge	Table 167 (Appendix B.6.14)	No	-	-	-	-	-	None	PD testing of tapchanger not undertaken separately to PD testing of whole transformer - hence only main transformer PD Test input to be populated
I23	Oil Test - Transformer	Oil Tests	Tables 196-198 (Appendix B.7)	Yes	Oil Test Results (Moisture; Acidity; Breakdown)	Test Result	Values (ppm; mgKOH/g; kV)	Maintenance	3yr	None	-
I24	FFA Test - Transformer	FFA Tests	Table 208 (Appendix B.9)	Yes	FFA Test Result	Test Result	Value (ppm)	Maintenance	3yr	None	-
I25	Oil Test - Tapchanger	Oil Tests	Tables 196-198 (Appendix B.7)	Yes	Oil Test Results (Moisture; Acidity; Breakdown)	Test Result	Values (ppm; mgKOH/g; kV)	Maintenance	3yr	None	-
I26	DGA Test	DGA Test	Tables 201-205 (Appendix B.8)	Yes	DGA Test Results (Hydrogen; Acetylene; Ethylene; Methane; Ethane)	Test Result	Values (ppm)	Maintenance	1yr	None	-
I27	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases

APPENDIX I			Information Gathering Plan: 132kV Transformer								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
I28	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	3mnth	None	-
I29	Environmental Consequences	Size Environment Rating	Table 222 (Appendix D.3.2)	Yes	Transformer Rating	Asset attribute	Value (MVA)	Recorded against Asset Record	-	None	-
I30	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Distance To Water Course	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
I31	Environmental Consequences	Bunding Rating	Table 223 (Appendix D.3.2)	Yes	Asset Bunded Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-
I32	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Site attribute	Value (MVA)	-	-	None	-
I33	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
I34	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Transformer Rating	Asset attribute	Value (MVA)	Recorded against Asset Record	-	None	-
I35	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Underground Substation/ Confined Space indicators	Site attribute	Indicator (Y/N)	Recorded against Asset Site Record	-	None	-

APPENDIX J			Information Gathering Plan: LV OHL Support								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
J1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	No	-	-	-	-	-	None	Data point only relevant to a small proportion of LV Poles (i.e. steel poles in coastal proximity) {in WPD, the total number of Steel/ Concrete poles only account for approx. 1% of LV pole population}
J2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	No	-	-	-	-	-	None	Data point only relevant to a small proportion of LV Poles (i.e. steel poles in coastal proximity) {in WPD, the total number of Steel/ Concrete poles only account for approx. 1% of LV pole population}
J3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	No	-	-	-	-	-	None	Data point only relevant to a small proportion of LV Poles (i.e. steel poles in coastal proximity) {in WPD, the total number of Steel/ Concrete poles only account for approx. 1% of LV pole population}
J4	Location Factor	Material (Poles)	Table 22 (Appendix B.3.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-

APPENDIX J			Information Gathering Plan: LV OHL Support								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
J5	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-
J6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
J7	Observed Condition	Visual Pole Condition	Table 95 (Appendix B.5.16)	Yes	Recorded Defect (Pole condition, Foundation/ Burying depth)	Defect	Defect Present (Y/N)	Inspection	7yr	None	-
J8	Observed Condition	Visual Pole Condition: Pole Top Rot	Table 96 (Appendix B.5.16)	No	-	-	-	-	-	None	Pole only inspected from ground level - therefore pole top rot not observable
J9	Observed Condition	Pole Leaning	Table 97 (Appendix B.5.16)	Yes	Recorded Defect (Pole leaning)	Defect	Defect Present (Y/N)	Inspection	7yr	None	-
J10	Observed Condition	Bird / Animal Damage	Table 98 (Appendix B.5.16)	Yes	Recorded Defect (Bird/ Animal Damage)	Defect	Defect Present (Y/N)	Inspection	7yr	None	-
J11	Measured Condition	Pole Decay/ Deterioration	Table 185 (Appendix B.6.22)	Yes	Pole Status	Test Result	Pole decay classification (N;P;L;S;D;R)	Pole test	7yr	None	-
J12	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases

APPENDIX J			Information Gathering Plan: LV OHL Support								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
J13	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	7yr	None	-
J14	Network Performance Consequences	Number of Connected Customers	Eq. 37 (Section 7.6.2.2)	Yes	Number of customers on LV feeder	Circuit attribute	Value	Semi-static data, periodically refreshed	-	None	-
J15	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
J16	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
J17	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Pole Material; Pole Type	Asset attribute	Text description of pole material; pole construction type	Recorded against Asset Record	-	None	-
J18	Financial Consequences	Type Access Criteria	Table 213 (Appendix D.1.2.1)	No	-	-	-	-	-	None	-

APPENDIX K			Information Gathering Plan: HV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
K1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
K2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
K3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
K4	Location Factor	Material (Poles)	Table 22 (Appendix B.3.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-
K5	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-
K6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
K7	Observed Condition	Visual Pole Condition	Table 99 (Appendix B.5.17)	Yes	Recorded Defect (Pole condition; Foundation/ Burying depth)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-

APPENDIX K			Information Gathering Plan: HV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
K8	Observed Condition	Visual Pole Condition: Pole Top Rot	Table 100 (Appendix B.5.17)	Yes	Recorded Defect (Pole top rot)	Defect	Defect Present (Y/N)	Inspection	2yr (helicopter patrol)	None	-
K9	Observed Condition	Pole Leaning	Table 101 (Appendix B.5.17)	Yes	Recorded Defect (Pole leaning)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-
K10	Observed Condition	Bird / Animal Damage	Table 102 (Appendix B.5.17)	Yes	Recorded Defect (Bird/ Animal Damage)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-
K11	Measured Condition	Pole Decay/ Deterioration	Table 186 (Appendix B.6.23)	Yes	Pole Status	Test Result	Pole decay classification (N;P;L;S;D;R)	Pole Test	7yr	None	-
K12	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
K13	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	7yr	None	-
K14	Network Performance Consequences	Number of Connected Customers	Eq. 37 (Section 7.6.2.2)	Yes	Number of customers on feeder	Circuit attribute	Value	Semi-static data, periodically refreshed	-	None	-
K15	Network Performance Consequences	Customer Sensitivity Factor	Eq. 36 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor

APPENDIX K			Information Gathering Plan: HV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
K16	Network Performance Consequences	KVA Band Per Customer	Table 18 (Section 7.6.2.2)	No	-	-	-	-	-	None	CNAIM specifies that this is a discretionary factor
K17	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Pole Material; Pole Type (i.e. equipment on pole)	Asset attribute	Text description of pole material; Indicator (Y/N) for equipment on pole	Recorded against Asset Record	-	None	-
K18	Financial Consequences	Type Access Criteria	Table 213 (Appendix D.1.2.1)	No	-	-	-	-	-	None	-

APPENDIX L			Information Gathering Plan: EHV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
L1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
L2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
L3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
L4	Location Factor	Material (Poles)	Table 22 (Appendix B.3.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-
L5	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Pole Material	Asset attribute	Text description of pole material	Recorded against Asset Record	-	None	-
L6	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Acquisition/ Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
L7	Observed Condition	Visual Pole Condition	Table 103 (Appendix B.5.18)	Yes	Recorded Defect (Pole condition; Foundation/ Burying depth)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-

APPENDIX L			Information Gathering Plan: EHV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
L8	Observed Condition	Visual Pole Condition: Pole Top Rot	Table 104 (Appendix B.5.18)	Yes	Recorded Defect (Pole top rot)	Defect	Defect Present (Y/N)	Inspection	2yr (helicopter patrol)	None	-
L9	Observed Condition	Pole Leaning	Table 105 (Appendix B.5.18)	Yes	Recorded Defect (Pole leaning)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-
L10	Observed Condition	Bird / Animal Damage	Table 106 (Appendix B.5.18)	Yes	Recorded Defect (Bird/ Animal Damage)	Defect	Defect Present (Y/N)	Inspection	1yr (alternate foot patrol/ helicopter patrol)	None	-
L11	Measured Condition	Pole Decay/ Deterioration	Table 187 (Appendix B.6.24)	Yes	Pole Status	Test Result	Pole decay classification (N;P;L;S;D;R)	Pole test	7yr	None	-
L12	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
L13	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	7yr	None	-
L14	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
L15	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX L			Information Gathering Plan: EHV OHL Support - Poles								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
L16	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Pole Material; Pole Type (i.e. equipment on pole)	Asset attribute	Text description of pole material; Indicator (Y/N) for equipment on pole	Recorded against Asset Record	-	None	-
L17	Financial Consequences	Type Access Criteria	Table 213 (Appendix D.1.2.1)	No	-	-	-	-	-	None	-

APPENDIX M			Information Gathering Plan: EHV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
M1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
M2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
M3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
M4	Initial Health Score	Age (Tower)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Steelwork Erected	Event Date	Date	Event recorded against Asset Record	-	None	-
M5	Initial Health Score	Age (Paintwork)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Painted	Event Date	Date	Event recorded against Asset Record	-	None	-
M6	Initial Health Score	Expected Life Sub division (Foundation)	Table 20 (Appendix B.1)	Yes	Foundation Type	Asset attribute	Text description (Concrete; Earth Grillage)	Recorded against Asset Record	-	None	-
M7	Initial Health Score	Age (Foundation)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Foundation Installed	Event Date	Date	Event recorded against Asset Record	-	None	-

APPENDIX M			Information Gathering Plan: EHV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
M8	Observed Condition - Tower	Tower Legs	Table 107 (Appendix B.5.19)	Yes	Condition Assessment: Tower Legs	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
M9	Observed Condition - Tower	Bracings	Table 108 (Appendix B.5.19)	Yes	Condition Assessment: Bracings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
M10	Observed Condition - Tower	Crossarm	Table 109 (Appendix B.5.19)	Yes	Condition Assessment: Crossarm	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
M11	Observed Condition - Tower	Peak	Table 110 (Appendix B.5.19)	Yes	Condition Assessment: Tower Peak	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.

APPENDIX M			Information Gathering Plan: EHV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
M12	Observed Condition - Paintwork	Paintwork Condition	Table 111 (Appendix B.5.20)	Yes	Condition Assessment: Paintwork	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
M13	Observed Condition - Foundation	Foundation Condition	Table 112 (Appendix B.5.21)	No (Future)	-	-	-	-	-	Introduce recording of a new defect type for foundation condition defects	WPD policy dictates that foundations are tested when towers are 50 years old, but records are held locally rather than in corporate systems.
M14	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
M15	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
M16	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
M17	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX M			Information Gathering Plan: EHV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
M18	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Tower Type	Asset attribute	Text description of tower type (suspension; tension)	Recorded against Asset Record	-	None	-
M19	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX N			Information Gathering Plan: EHV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
N1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
N2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
N3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
N4	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Date fitting erected	Event Date	Date	Event recorded against Asset Record	-	None	-
N5	Observed Condition	Tower Fittings Condition	Table 119 (Appendix B.5.25)	Yes	Condition Assessment: Tower Fittings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
N6	Observed Condition	Conductor Fittings Condition	Table 120 (Appendix B.5.25)	Yes	Condition Assessment: Conductor Fittings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.

APPENDIX N			Information Gathering Plan: EHV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
N7	Observed Condition	Insulators - Electrical Condition	Table 121 (Appendix B.5.25)	Yes	Condition Assessment: Insulators - Electrical	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
N8	Observed Condition	Insulators - Mechanical Condition	Table 122 (Appendix B.5.25)	Yes	Condition Assessment: Insulators - Mechanical	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
N9	Measured Condition	Thermal Imaging	Table 188 (Appendix B.6.25)	Yes	Recorded Defect (Hot Joint)	Defect	Defect Present (Y/N)	Thermal survey	2yr	None	Routine thermal survey carried out on 66kV overhead lines only
N10	Measured Condition	Ductor Test	Table 189 (Appendix B.6.25)	No	-	-	-	-	-	None	Activity not currently performed on this asset type
N11	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
N12	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
N13	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-

APPENDIX N			Information Gathering Plan: EHV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
N14	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
N15	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Fitting Type	Asset attribute	Text description (Suspension; Tension)	Recorded against Asset Record	-	None	-
N16	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX O			Information Gathering Plan: EHV OHL Conductor (Tower Lines)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
O1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
O2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
O3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
O4	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
O5	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Conductor Type	Asset attribute	Text description of conductor size/ material	Recorded against Asset Record	-	None	-
O6	Observed Condition	Visual Condition	Table 127 (Appendix B.5.27)	Yes	Condition Assessment: Visual Condition	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	None	-
				Yes	Recorded Defect (Damaged Conductor)	Defect	Defect Present (Y/N)	Inspection	1 - 2yr	None	-

APPENDIX O			Information Gathering Plan: EHV OHL Conductor (Tower Lines)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
O7	Observed Condition	Number Of Midspan Joints	Table 128 (Appendix B.5.27)	Yes	Presence of midspan joints	Asset attribute	Indicator (Y/N)	Inspection	10yr (high resolution photographic survey)	None	-
O8	Measured Condition	Conductor Sampling	Table 192 (Appendix B.6.27)	No (Future)	-	-	-	-	-	Introduce collection of 'ad-hoc' Conductor Sampling results.	Conductor Sampling already undertaken on an 'ad-hoc' basis but results not recorded against asset record.
O9	Measured Condition	Corrosion Monitoring Survey	Table 193 (Appendix B.6.27)	No (Future)	-	-	-	-	-	Introduce collection of 'ad-hoc' Corrosion Monitoring results.	Corrosion Monitoring already undertaken on an 'ad-hoc' basis but results not recorded against asset record.
O10	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
O11	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
O12	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
O13	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
O14	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX P			Information Gathering Plan: 132kV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
P1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
P2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
P3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
P4	Initial Health Score	Age (Tower)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Steelwork Erected	Event Date	Date	Event recorded against Asset Record	-	None	-
P5	Initial Health Score	Age (Paintwork)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Painted	Event Date	Date	Event recorded against Asset Record	-	None	-
P6	Initial Health Score	Expected Life Sub division (Foundation)	Table 20 (Appendix B.1)	Yes	Foundation Type	Asset attribute	Text description (Concrete; Earth Grillage)	Recorded against Asset Record	-	None	-
P7	Initial Health Score	Age (Foundation)	Eq. 4 (Section 6.1.6 & also see 6.3)	Yes	Date Foundation Installed	Event Date	Date	Event recorded against Asset Record	-	None	-

APPENDIX P			Information Gathering Plan: 132kV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
P8	Observed Condition - Tower	Tower Legs	Table 113 (Appendix B.5.22)	Yes	Condition Assessment: Tower Legs	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
P9	Observed Condition - Tower	Bracings	Table 114 (Appendix B.5.22)	Yes	Condition Assessment: Bracings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
P10	Observed Condition - Tower	Crossarm	Table 115 (Appendix B.5.22)	Yes	Condition Assessment: Crossarm	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
P11	Observed Condition - Tower	Peak	Table 116 (Appendix B.5.22)	Yes	Condition Assessment: Tower Peak	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.

APPENDIX P			Information Gathering Plan: 132kV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
P12	Observed Condition - Paintwork	Paintwork Condition	Table 117 (Appendix B.5.23)	Yes	Condition Assessment: Paintwork	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
P13	Observed Condition - Foundation	Foundation Condition	Table 118 (Appendix B.5.24)	No (Future)	-	-	-	-	-	Introduce recording of a new defect type for foundation condition defects	WPD policy dictates that foundations are tested when towers are 50 years old, but records are held locally rather than in corporate systems.
P14	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
P15	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
P16	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
P17	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX P			Information Gathering Plan: 132kV OHL Support - Towers								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
P18	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Tower Type	Asset attribute	Text description of tower type (suspension; tension)	Recorded against Asset Record	-	None	-
P19	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX Q			Information Gathering Plan: 132kV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
Q1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
Q2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
Q3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
Q4	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Date fitting erected	Event Date	Date	Event recorded against Asset Record	-	None	-
Q5	Observed Condition	Tower Fittings Condition	Table 123 (Appendix B.5.26)	Yes	Condition Assessment: Tower Fittings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
Q6	Observed Condition	Conductor Fittings Condition	Table 124 (Appendix B.5.26)	Yes	Condition Assessment: Conductor Fittings	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.

APPENDIX Q			Information Gathering Plan: 132kV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
Q7	Observed Condition	Insulators - Electrical Condition	Table 125 (Appendix B.5.26)	Yes	Condition Assessment: Insulators - Electrical	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
Q8	Observed Condition	Insulators - Mechanical Condition	Table 126 (Appendix B.5.26)	Yes	Condition Assessment: Insulators - Mechanical	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	Introduce collection of 'ad-hoc' climbing survey data in addition to high resolution photographic survey data	'Ad-hoc' climbing surveys already undertaken prior to remedial work being carried out to scope out detailed material requirements, but this data is not recorded against asset record.
Q9	Measured Condition	Thermal Imaging	Table 190 (Appendix B.6.26)	Yes	Recorded Defect (Hot Joint)	Defect	Defect Present (Y/N)	Thermal survey	2yr	None	-
Q10	Measured Condition	Ductor Test	Table 191 (Appendix B.6.26)	No	-	-	-	-	-	None	Activity not currently performed on this asset type
Q11	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
Q12	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
Q13	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-

APPENDIX Q			Information Gathering Plan: 132kV OHL Fittings								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
Q14	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
Q15	Financial Consequences	Financial Type	Table 212 (Appendix D.1.2.1)	Yes	Fitting Type	Asset attribute	Text description (Suspension; Tension)	Recorded against Asset Record	-	None	-
Q16	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX R			Information Gathering Plan: 132kV OHL Conductor (Tower Lines)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
R1	Location Factor	Distance From Coast	Table 22 (Appendix B.3.1)	Yes	Distance From Coast	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
R2	Location Factor	Altitude	Table 23 (Appendix B.3.1)	Yes	Altitude	Site attribute	Value (m)	Determined from geographic mapping system data	-	None	-
R3	Location Factor	Corrosion Category	Table 24 (Appendix B.3.1)	Yes	Corrosion Category	Site attribute	Zinc Corrosion Index category	Determined from geographic mapping system data	-	None	-
R4	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Event recorded against Asset Record	-	None	-
R5	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Conductor Type	Asset attribute	Text description of conductor size/ material	Recorded against Asset Record	-	None	-
R6	Observed Condition	Visual Condition	Table 129 (Appendix B.5.28)	Yes	Condition Assessment: Visual Condition	Condition Assessment Data	Condition Assessment Score	Inspection	10yr (high resolution photographic survey)	None	-
				Yes	Recorded Defect (Damaged Conductor)	Defect	Defect Present (Y/N)	Inspection	1 - 2yr	None	-

APPENDIX R			Information Gathering Plan: 132kV OHL Conductor (Tower Lines)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
R7	Observed Condition	Number Of Midspan Joints	Table 130 (Appendix B.5.28)	Yes	Presence of midspan joints	Asset attribute	Indicator (Y/N)	Inspection	10yr (high resolution photographic survey)	None	-
R8	Measured Condition	Conductor Sampling	Table 194 (Appendix B.6.28)	No (Future)	-	-	-	-	-	Introduce collection of 'ad-hoc' Conductor Sampling results.	Conductor Sampling already undertaken on an 'ad-hoc' basis but results not recorded against asset record.
R9	Measured Condition	Corrosion Monitoring Survey	Table 195 (Appendix B.6.28)	No (Future)	-	-	-	-	-	Introduce collection of 'ad-hoc' Corrosion Monitoring results.	Corrosion Monitoring already undertaken on an 'ad-hoc' basis but results not recorded against asset record.
R10	Safety Consequences	Type Safety Rating	Table 218 (Appendix D.2.2.1)	No	-	-	-	-	-	None	No applicable Type considerations relevant to asset type - therefore default to be applied in all cases
R11	Safety Consequences	Location Safety Rating	Table 218 (Appendix D.2.2.1)	Yes	ESQCR Site Risks	Site attribute	Site Risks Identified (Y/N - per site risk type)	Inspection	1 - 2yr	None	-
R12	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
R13	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-
R14	Financial Consequences	Type Access Criteria	Table 214 (Appendix D.1.2.1)	Yes	Major Crossing Indicator	Asset attribute	Indicator (Y/N)	Recorded against Asset Record	-	None	-

APPENDIX S			Information Gathering Plan: EHV UG Cable (Oil)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
S1	Duty Factor	% Utilisation	Table 30 (Appendix B.4)	Yes	Load; Rating; Operating Voltage	Circuit attribute; Asset attribute; Asset attribute	Value (MVA); Value (A); Value (kV)	-	-	None	-
S2	Duty Factor	Operating Voltage/ Design Voltage ratio	Table 30 (Appendix B.4)	Yes	Operating Voltage; Design Voltage	Asset attribute	Values (kV)	Recorded against Asset Record	-	None	-
S3	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Recorded against Asset Record	-	None	-
S4	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Cable Type	Asset attribute	Text description of cable size/ material/ type	Recorded against Asset Record	-	None	-
S5	Removed from CNAIM v1.0										
S6	Measured Condition	Leakage	Table 172 (Appendix B.6.16)	Yes	Oil Top Up Volumes	Circuit attribute	Volume of oil (l) 'topped up' over 5 year period	Top up volumes collated monthly	-	None	-
S7	Safety Consequences	Location Safety Rating	Table 219 (Appendix D.2.2.3)	No	-	-	-	-	-	None	-
S8	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Cable Within 50m of Water Course	Asset attribute	Indicator (Y/N)	Determined from geographic mapping system data	-	None	-

APPENDIX S			Information Gathering Plan: EHV UG Cable (Oil)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
S9	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
S10	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX T			Information Gathering Plan: EHV UG Cable (Gas)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
T1	Duty Factor	% Utilisation	Table 30 (Appendix B.4)	Yes	Load; Rating; Operating Voltage	Circuit attribute; Asset attribute; Asset attribute	Value (MVA); Value (A); Value (kV)	-	-	None	-
T2	Duty Factor	Operating Voltage/ Design Voltage ratio	Table 30 (Appendix B.4)	Yes	Operating Voltage; Design Voltage	Asset attribute	Values (kV)	Recorded against Asset Record	-	None	-
T3	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Recorded against Asset Record	-	None	-
T4	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Cable Type	Asset attribute	Text description of cable size/ material/ type	Recorded against Asset Record	-	None	-
T5	Removed from CNAIM v1.0										
T6	Measured Condition	Leakage	Table 174 (Appendix B.6.17)	Yes	Leakage Rating	Circuit attribute	Leak Rating (None; Low; Medium; High; Very High)	Annual review	-	None	-
T7	Safety Consequences	Location Safety Rating	Table 219 (Appendix D.2.2.3)	No	-	-	-	-	-	None	-
T8	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-

APPENDIX T			Information Gathering Plan: EHV UG Cable (Gas)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
T9	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX U			Information Gathering Plan: 132kV UG Cable (Oil)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
U1	Duty Factor	% Utilisation	Table 30 (Appendix B.4)	Yes	Load; Rating; Operating Voltage	Circuit attribute; Asset attribute; Asset attribute	Value (MVA); Value (A); Value (kV)	-	-	None	-
U2	Duty Factor	Operating Voltage/ Design Voltage ratio	Table 30 (Appendix B.4)	Yes	Operating Voltage; Design Voltage	Asset attribute	Values (kV)	Recorded against Asset Record	-	None	-
U3	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Recorded against Asset Record	-	None	-
U4	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Cable Type	Asset attribute	Text description of cable size/ material/ type	Recorded against Asset Record	-	None	-
U5	Removed from CNAIM v1.0										
U6	Measured Condition	Leakage	Table 179 (Appendix B.6.19)	Yes	Oil Top Up Volumes	Circuit attribute	Volume of oil (l) 'topped up' over 5 year period	Top up volumes collated monthly	-	None	-
U7	Safety Consequences	Location Safety Rating	Table 219 (Appendix D.2.2.3)	No	-	-	-	-	-	None	-
U8	Environmental Consequences	Proximity Rating	Table 223 (Appendix D.3.2)	Yes	Cable Within 50m of Water Course	Asset attribute	Indicator (Y/N)	Determined from geographic mapping system data	-	None	-

APPENDIX U			Information Gathering Plan: 132kV UG Cable (Oil)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
U9	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-
U10	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-

APPENDIX V			Information Gathering Plan: 132kV UG Cable (Gas)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
V1	Duty Factor	% Utilisation	Table 30 (Appendix B.4)	Yes	Load; Rating; Operating Voltage	Circuit attribute; Asset attribute; Asset attribute	Value (MVA); Value (A); Value (kV)	-	-	None	-
V2	Duty Factor	Operating Voltage/ Design Voltage ratio	Table 30 (Appendix B.4)	Yes	Operating Voltage; Design Voltage	Asset attribute	Values (kV)	Recorded against Asset Record	-	None	-
V3	Initial Health Score	Age	Eq. 4 (Section 6.1.6)	Yes	Commissioning Date	Event Date	Date	Recorded against Asset Record	-	None	-
V4	Initial Health Score	Expected Life Sub-division	Table 20 (Appendix B.1)	Yes	Cable Type	Asset attribute	Text description of cable size/ material/ type	Recorded against Asset Record	-	None	-
V5	Removed from CNAIM v1.0										
V6	Measured Condition	Leakage	Table 181 (Appendix B.6.20)	Yes	Leakage Rating	Circuit attribute	Leak Rating (None; Low; Medium; High; Very High)	Annual review	-	None	-
V7	Safety Consequences	Location Safety Rating	Table 219 (Appendix D.2.2.3)	No	-	-	-	-	-	None	-
V8	Network Performance Consequences	Actual Load Supplied By Asset	Eq. 40 (Section 7.6.3.2)	Yes	Load	Circuit attribute	Value (MVA)	-	-	None	-

APPENDIX V			Information Gathering Plan: 132kV UG Cable (Gas)								
Ref	**(1) CNAIM Calculation Step**	**(2) Data Required**	**(3) CNAIM Document Reference**	**(4) Data Collected**	**(5) WPD Data Used To Provide CNAIM Input**	**(6) Data Type Used**	**(7) Format Of Data**	**(8) Existing Data Collection Policy**	**(9) Frequency Of Data Collection**	**(10) Proposed Future Additional Data Collection**	**(11) Comments**
V9	Network Performance Consequences	Network Type Factor	Eq. 39 (Section 7.6.3.2)	No	-	-	-	-	-	None	-