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STANDARD ASSET DATA

ASSET & METERING DATA

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SAD 0008 WHITE SHEETS

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1.0 PURPOSE

To define both the basic and detailed requirements and layouts required to complete a White Sheet. White Sheet is the methodology used to supply correcting information for the Network Asset Information Systems of Endeavour Energy.

2.0 SCOPE

This Standard applies to all anomalies observed in the field generating a White Sheet to correct that information within the Network Asset Information Systems of Endeavour Energy.

This Standard applies to White Sheets that are completed to notify Network Data & Performance of all changes to electrical network, inconsistencies and corrections to all Network Data & Performance asset management systems, including but not limited to, GIS and Ellipse.

3.0 REFERENCES

Internal
Group Board Policy 4.0 – Environment
Company Policy 9.0 – Network Asset Management
Company Policy 9.6.1 – Network Connection
Company Policy 9.6.5 – Contestable Works
Company Policy 9.6.9 – Facilities Access (Shared Infrastructure)
Company Policy 15.3.1 – Information Management
Company Procedure GAM 0104 – Network Asset Information
Division Procedure GNV 1059 – Notification of Network Alteration (White Sheet) Process
Branch Procedure NAD 0008 Network Data and Performance Capture Process
Branch Form FAD 2001 – Notification of Network Alteration Sheet (White Sheet)
Network Management Plan December 2013 Revised
Mains Design Instruction MDI 0044 – Easements Property Tenure
Standard Asset Data SAD 0001 – Project drawing standard
Standard Asset Data SAD 0004 – Recording and lodgement of WAE network information

External
ENA National Electricity Network Safety Code (Doc.01-2008)

4.0 DEFINITIONS AND ABBREVIATIONS

A&MD
Asset and Metering Data Branch

Asset
Any item, equipment or device that contributes to the operation of the electrical network in its capacity to convey electrical energy.

CCP
Customer connection point, the position on an individual site where the customer takes supply. This point may supply one or more customers, for example, multi-unit residential development and factory units. All assets from this point onwards are owned, operated and maintained by the customer.

DBYD
Dial Before You Dig.
Delink
Assets requiring a link between GIS and Ellipse occasionally require delinking to allow certain fields to be amended in Ellipse.

DINIS
Distribution Network Information System.

ELLIPSE
Corporate database including equipment register, interfaced to GIS.

FAD2001
Notification of network alteration sheet (White Sheet).

GIS
Geographical Information System.

GISCAD
An application used by the designers that allow GIS exports to be opened in AutoCAD and used as the basis for project drawings. These AutoCAD drawings can in turn be re-imported into GIS, reflecting the changes made by the designer.

NECF
National Energy Customer Framework.

NOSW
Notification Of Service Work.

NOSMR
Notice Of Service Mains Replacement.

OMS
Outage Management System.

Pink Sheet
The Company’s form for notification of high voltage system alterations

Projtrack
A Construction Project tracking System that has been developed to record and track all GIS and SOPS Projects.

Relink
Assets requiring a link between GIS and Ellipse occasionally require delinking to allow certain fields to be amended in Ellipse. Once this work has been completed, the asset is then relinked to Ellipse via a GIS edit.

RequestIT
The Company’s network access request system.

UG
Underground.

White Sheet
Notification of alterations and additions to the distribution network. It is also used to notify additions, changes or corrections to GIS information (Branch Form FAD 2001 – Notification of Network Alteration Sheet [White Sheet])
5.0 ACTIONS

5.1 General requirements

The White Sheet process provides a framework of basic needs used in the provision of information to correct asset management systems within Endeavour Energy. This Standard will provide relative requirements of what type of White Sheet shall be created and how it should be drafted to allow Asset & Metering Data to cleanse data as required within Company Procedure GAM0030 – Network Asset Information Data Cleansing.

5.1.1 The concept of a White Sheet

White Sheets are to be created for a distinct number of events within the network and their operations within Endeavour Energy. These events are as follows:

- low voltage or streetlight network alterations;
- emergency network rectification;
- data cleansing;
- when the Asset Management Systems do not match the field;
- when Asset Management Systems do not match each other; and
- NECF.

5.1.2 White Sheet template

The White Sheet template is found on the BMS as Branch Form FAD 2001 - Notification of Network Alteration Sheet (White Sheet) in MS Word format. The White Sheet template consists of two (2) sheets, a Notification of Network Alteration White Sheet which is used for data cleansing tasks and a NECF White Sheet which is used for network customer update and connection. Branch Form FAD 2001 – Notification of Network Alteration Sheet (White Sheet) is to be used with only one of the two (2) templates provided (delete irrelevant template) and submitted in pdf form. Pdf files can be submitted as multiple pages.

5.1.3 Title block

In the submission of all White Sheets, all fields in the title block are compulsory. The title block consists of the following mandatory fields:

- work order/Project no;
- work location;
- service no;
- name;
- map no;
- phone;
- source;
- address;
- date;
- description of work; and
- image area.
Example 1 – White Sheet Template

### NOTIFICATION OF NETWORK ALTERATION SHEET
(White Sheet)

This form is to advise any alterations and/or additions to the Low Voltage and Streetlight Networks and the infrastructure supporting all networks. It is also used to notify any additions, changes or corrections to the GIS information.

<table>
<thead>
<tr>
<th>Work order or Project No.</th>
<th>Work Location</th>
<th>Service No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Map No:</td>
<td>Phone:</td>
</tr>
<tr>
<td>Source:</td>
<td>Address:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

**Description of Work (Circle):**
- Low Voltage
- Streetlight
- Data Cleansing
- Poles
- Pillars / Columns
- Other

Deliver to Asset and Metering Data via the ProjTrack Application
Work Order or Project number (1)

- Work Order number / Project Number – Ellipse generated number that field staff use to conduct work associated with either project or non-project work (for example, fault)
- Projtrack number – Projtrack generated number used internally with Asset & Metering Data or regional staff off their projects

Name (2)

Name of White Sheet owner/creator are to be supplied. Initials are not accepted.

Source (3)

This is defined as how or what tools were used for the creator to identify these changes, for example found in the field, GPS co-ordinates, desktop review. The information in this field should be sufficient to identify the accuracy as defined in SAD 0004 - Recording and lodgement of WAE network information.

Work location (4)

The work location field is site specific and is optional. This field is to establish areas of which work is carried out on sites where location cannot be identified simply by address, for example Work Location: National park - 500m off Hawkesbury Sandstone Cliffs Gate entry.

Map no. (5)

The map number required for the White Sheet refers to the Inspection Map number, which is found in GIS.

Address (6)

Clear locality description consisting of the nearest road and suburb name must be provided. Lot or address number is optional.

Service No. (7)

Endeavour Energy or ASP employee service number must be supplied.

Phone (8)

White Sheet owner’s extension number or mobile number is to be provided.

Date (9)

Date of when the White Sheet has been created and filled out must be supplied.

Description of work (10)

The description of work is to be CIRCLED with the supplied categories of work. Multiple selections are permitted, for example low voltage and data cleansing.

Image area (11)

This area is provided for the placement of screenshots or sketches of the affected area requested for alteration.
Any discrepancies between the field and GIS must be shown on a graphic plot/screenshot of GIS and communicated through clear instruction by electronic mark ups with appropriate notations. The plot/screenshot must include readable asset numbers, street names, lot numbers or a unique identifier which can be searchable in GIS. If there are assets with only non-unique numbers visible, a corresponding searchable identifier must be supplied (for example, a pole number in a remote area with an asset number of 24 must be searchable by supplying a structured plant number or equipment number if the screenshot has no other searchable criteria; such as lot number or street name to identify the exact location).

Example 2 – NECF White Sheet Template
Request number (1)

The request number is the number generated and supplied through RequestIT which can be found on the customer log sheet for planned interruption notices.

Name (2)

Name of White Sheet owner/creator are to be supplied. Initials are not accepted.

Source (3)

This is defined as how or what tools were used for the creator to identify these changes, for example, found in the field, GPS co-ordinates, desktop review. The information in this field should be sufficient to identify the accuracy as defined in SAD 0004 - Recording and lodgement of WAE network information.

Work location (4)

The work location field is site specific and is optional. This field is to establish areas of which work is carried out on sites where location cannot be identified simply by address, for example, Work Location: National park - 500m off Hawkesbury Sandstone Cliffs Gate entry.

Map no. (5)

The map number required for the White Sheet refers to the Inspection Map number, which is found in GIS.

Address (6)

Clear locality description consisting of the nearest road and suburb name must be provided. Lot or address number is optional.

Service No. (7)

Endeavour Energy or ASP employee service number must be supplied.

Phone (8)

White Sheet owner’s extension number or mobile number is to be provided.

Date (9)

Date of when the White Sheet has been created and filled out must be supplied.

Image area (10)

NECF White Sheet submissions are accepted using G-NetViewer plots/ screenshots and/or supporting documentation produced by field investigations that indicate where CCPs are located, how they are fed and the premise codes associated (If known). This image must be clear and tidy and must not be submitted with crossed out information as this can be open to interpretation. This must be marked up with the standard notations and symbolgy.
5.1.4 Sheets

Multiple sheets are acceptable (refer to SAD 0001 – Project drawing standard). If multiple sheets are required, all sheets must be incorporated and saved as one (1) pdf. document.

5.1.5 Text sizes

The drawing template should be filled out with the default font and size Arial 11 pt or similar result, ensuring it is clearly distinguishable. All other text specific to the White Sheet must read clearly.

5.1.6 Scales

White Sheets are not required to be to scale. If captured to scale, make sure the ratio is noted.

5.1.7 Measurements

All measurements are to be shown in metres. In order to obtain horizontal location of assets in relation to property lines, a distance shall be marked from the property line that represents the road frontage and from the nearest side property line in addition to requirements set out in SAD 0004 – Recording and lodgement of WAE network information.

5.1.8 Conductor codes

If possible, all conductor codes shall be verified and noted at time of field investigation and marked up on White Sheet submission.

5.1.9 Symbology

All symbols used on project drawings shall correspond with those shown on the standard symbols SAD 0005 – NAI system symbology and can be downloaded from the Endeavour Energy Standards website or as available through Endeavour Energy’s GISCAD application.

5.1.10 Level of detail

Minimum details required when submitting a White Sheet to NDP are as follows, however if drawn by hand, similar results are acceptable (see example 1):

- all mark ups are to be RED;
- asset numbers and location must be clearly and correctly identified as set out by the requirements of SAD0004 – Recording and lodgement of WAE network Information;
- house numbers, lot numbers, any identifying network assets or other features where applicable, are to be clearly identified to enable correct placement in GIS;
- all removed assets are not to be displayed;
- clear and concise information is required to enable information to be added and maintained in GIS;
- service connection points when adjoining an open point and which the side of the open point must be identified on the drawing;
- any 3 phase must be identified. If no phase is shown, single phase will be acknowledged as default;
- clearly identify areas that have been subdivided but not shown on the GIS maps. This is especially required when a new customer connection has occurred;
- if available, provide meter numbers for customers that are not on the requestIT list;
- all labels of affected or nearby assets and premise identification must be supplied in readable format to enable correct placement in GIS;
• all text mark ups are to use approximately ARIAL 11 bold font (or similar result);
• any electric symbols inserted as a text symbol must be approximately 16pt bold;
• all overhead (OH) lines are to be solid with an approximate 1.5pt weight;
• all underground (UG) lines are to be dashed with an approximate 1.5pt weight. Views or layouts

For each alteration submission, a view or clear sketch drawing must be included in order to highlight the specifics of what the network alteration is.

5.1.11 Drawing orientation

North point does not need to be supplied on the White Sheet; however, the drawing orientation must be placed at North as shown on the GNetviewer/GIS screenshot view.

5.1.12 White Sheet types and uses

White Sheets are created to allow Asset & Metering Data to cleanse data as required by Branch Procedure NAD 0008 – Network Data & Performance Capture Process.

<table>
<thead>
<tr>
<th>TASK</th>
<th>WS</th>
<th>NECF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV network alterations</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Emergency network rectification</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Data cleansing</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>When the Asset Management Systems do not match the field</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Emergency network rectification</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>When Asset Management Systems do not match each other</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>NECF</td>
<td></td>
<td>✔</td>
</tr>
</tbody>
</table>
Example 3 – Filled out NECF WS sample with mark-ups displaying level of detail

5.2 NETWORK CUSTOMER UPDATE AND CONNECTION (NECF WHITE SHEET)

This form is to advise of any alterations and/or additions customers of Endeavour Energy and the infrastructure they are connected to. It is also used to notify of additions, changes or corrections to the System Asset information for the purposes of NECF.

<table>
<thead>
<tr>
<th>Request No.</th>
<th>Work Location</th>
<th>Service No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td></td>
<td>38383</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vesna Davidovic</td>
<td>Bellevue ST North Parramatta 2151</td>
<td>(Ext) 48157</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Map No.</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found in the field</td>
<td>UC0521</td>
<td>14/08/2013</td>
</tr>
</tbody>
</table>

Deliver to Asset and Metering Data via the ProjTrack Application
Scenarios and samples

Included are 15 samples of scenarios in the field and a sample of how each of those scenarios’ are to be displayed on a submitted white sheet.

The included scenarios are that of common constructions found in the field and are included to assist the employee deliver accurate information to Asset & Metering Data. This will lead to greater accuracy in the corporate GIS.

**Important note:**

*Images shown below are to reflect assets historically in the field. These images may or may not reflect current design practices and should not be used as an indicator that these are an allowable design practice.*

*For design construction standards please refer to current relevant design standards available on the Standards website.*
5.2.1 Low voltage network alterations

On the identification of any changes to the low voltage network not covered by a WAE, a White Sheet is to be raised identifying all details of the changes including affected asset, changes to asset numbers and the network configuration. Examples of this are LV switching, service mains replacement and pole replacement.

In the field

On the white sheet

Existing LV Mains are E47 – 95mm2 AC ABC
Between pole 1973 & 1977
5.2.2 Streetlight network alterations

On the identification of any changes to the streetlight assets and network not covered by a WAE, a White Sheet is to be raised identifying all details of the changes including affected asset, changes to asset numbers and the network configuration. Examples of this are streetlight bulk change, lamp replacement, arm replacement or column replacement.

In the field

![Diagram showing re-numbering of PE 235485]

On the white sheet

![Diagram showing the location of PE 235485 and its re-numbering as SL235485]

SHOULD BE SL235485 - PLACE CORRECT LIGHT

Re-number PE 235485
5.2.3 High voltage alterations

On the identification of any changes to the high voltage network not covered by a Pink Sheet, a White Sheet is to be raised identifying all details of the changes including affected asset, changes to asset numbers and spatial configuration. Examples of this are pole placement corrections and incorrect asset location.

In the field

On the white sheet

MOVE ABS OPEN POINT FROM POLE 3TJ383 TO 3TJ381
5.2.4 Nightwatch notification

On the identification of a new, removed or amended Nightwatch agreement, a White Sheet is to be raised identifying the position of the Nightwatch asset and agreement number.

In the field

On the white sheet
5.2.5 Emergency network rectification

On the identification of any changes created by emergency network rectification or fault repair not covered by a WAE, a White Sheet is to be raised identifying all details of the changes including affected asset, changes to asset numbers and operational configuration. Examples of this are joint replacements and destruction of assets.

In the field

![Emergency cable joint diagram]

On the white sheet

![White sheet diagram]
5.2.6  DBYD

On the identification of an underground data anomaly within the DBYD customer response process, a White Sheet is to be raised to correct the data held within the GIS. This is an Asset Metering & Data internal function.

In the field

On the white sheet
5.2.7 Data cleansing

On the identification of any anomalies found within any of the asset management systems, a White Sheet is to be raised identifying all details of the needed changes including affected asset, changes to asset numbers, operational configuration and the systems impacted. An example of this is a dyslexic labelling of an asset or an incorrect tariff code or incorrect description within Ellipse or even an incorrect EGI within Ellipse.

In the field

On the white sheet

The positions of substations No. 31707 & No. 31566 North of Mansfield Road currently shown in GNet are incorrect. Please move the HV line, poles & substations into their correct positions.
Poles 3R1926 to 3R1935 are poles that need to be repositioned.
5.2.8 Discrepancies found in the field

On the identification of any anomalies between the field and any of the asset management systems, a White Sheet is to be raised identifying all details of the needed changes including affected asset, changes to asset numbers, operational configuration and the systems impacted. An example of this is asset number variance between the field and GIS.

In the field

![Diagram showing swap numbers of private poles in GIS]

On the white sheet

![Map showing swap numbers of poles]
5.2.9 Definitions – supply from overhead distribution mains

In the field

On the white sheet
In the field

On the white sheet
In the field

On the white sheet
In the field

On the white sheet
5.2.10 Definition – supply from underground distribution mains - single link pillar

In the field

On the white sheet

5.2.11
**Definition – Supply from underground distribution mains - double link pillar**

**In the field**

![Diagram of underground distribution mains with double link pillar]

**On the white sheet**

![Diagram with labels "CONNECTED THIS SIDE OF SWITCH" and "NOW OPEN"]
In the field – single link pillar

On the white sheet
In the field – double link pillar

On the white sheet
In the field

On the white sheet
In the field

On the white sheet
In the field

Now OPEN

Now CLOSED

On the white sheet

NOW OPEN

NOW CLOSED
**Important note:**

*Images shown above are to reflect assets historically in the field. These images may or may not reflect current design practices and should not be used as an indicator that these are an allowable design practice.*

*For design construction standards please refer to current relevant design standards available on the Standards website.*
5.2.12 Mark-up symbology legend

- **CCP**
- **REMOVE CONDUCTOR**
- **REPLACE OVERHEAD WITH UNDERGROUND CONDUCTOR**
- **UNDERGROUND CONDUCTOR**
- **OVERHEAD CONDUCTOR**
- **POINTER (TO SPECIFIC)**
- **MOVE**
- **POLE**
- **PILLAR**
- **UG**
- **UNDERGROUND**
- **NOW UG**
- **OVERHEAD SERVICE IS NOW UNDERGROUND**
- **CONN**
- **CONNECTION**
- **LV GEN WIND**
- **LV GENERATOR WIND POWERED**
- **LV GEN SOLAR**
- **LV GENERATOR SOLAR POWERED**
- **MOVE POLE**
- **MOVE POLE TO SPECIFIED LOCATION**
- **NEW CONN**
- **NEW CONNECTION**
- **PREM 123456**
- **PREMISE CODE**
- **PHASE CHANGE**
- **CHANGE EXISTING PHASE TO NEW (SUPPLIED)**
- **NEW CONN NOT IN BANNER**
- **ADD A NEW CONNECTION WHICH IS NOT SHOWING IN BANNER**
- **WRONG PARCEL**
- **CCP IS ON WRONG PARCEL – MOVE REQUIRED**
5.2.13 Notes, details and labels

Any notes and details specifically requested or deemed necessary for alterations to the network are required on the drawings.

6.0 AUTHORITIES AND RESPONSIBILITIES

Manager Asset Standards & Design has the authority and responsibility for approving this Standard

Regional Managers have the authority and responsibility to make sure employees are aware of this Standard and that they adhere to the outlined process.

Manager Network Connections has the authority and responsibility to make sure employees/ASPs are aware of this Standard and that they adhere to the outlined process.

Manager Asset & Metering Data has the authority and responsibility for:

- making sure Standards;
- seeking the Manager Asset Standards & Design approval or endorsement of Standards;
- making sure employees under their control comply with this Standard;
- facilitating the collection, management and distribution of asset data;
- periodically reviewing this Standard with stakeholders; and
- making sure all drawings submitted comply with this Standard before updating Asset Systems and loading onto the Document Management System.

Regional Services Managers have the authority and responsibility to make sure employees are aware of this Standard and that they adhere to the outlined process.

Operations Managers have the authority and responsibility to make sure employees are aware of this Standard and that they adhere to the outlined process.

Strategic Property Manager has the authority and responsibility to make sure employees are aware of this Standard and that they adhere to the outlined process.

Employees have the authority and responsibility for:

- taking appropriate action to make sure that any data errors and discrepancies observed are corrected or a White Sheet is submitted for the correction of the data; and
- ongoing veracity of the network asset information.

7.0 DOCUMENT CONTROL

Documentation content coordinator: Manager Asset & Metering Data

Documentation process coordinator: Standards Process Coordinator