

# ESTATE REGISTER INFORMATION MODEL (ERIM) SUPPLEMENTARY INFORMATION

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## **INTRODUCTION**

### **Scope**

1. This document provides guidance and additional information to assist Estate Register Information Model (ERIM) users understanding the structure of the ERIM and, where required, its relationship to the Estate Upkeep (EU) Service Definition Table (SDT). This document also outlines the relationship between ERIM and the Defence Garrison & Estate Management System (GEMS) tools for uploading information. The GEMS tools are structured to meet GEMS data upload requirements and are referred to as the GEMS Estate Data Requirements (EDR). The GEMS upload tools and the EDR are on the GEMS section of the Defence Estate Quality Management System (DEQMS).

### **Document Structure**

2. The document provides an explanation of the following supplementary information in support of the Estate Maintenance and Operations Services (EMOS) contract, EU service:

- a. Estate Data Structure;
- b. ERIM structure;
- c. EDR – Estate and Equipment;
- d. EDR – Environment Factors (including asbestos) & Hazards; and
- e. asset identification and linkage to the SDT.

3. This information is also relevant to miscellaneous service providers (MSP) and other EMOS services, particularly Management Integration and Co-ordination (MIC) - Estate Appraisal (EA) as the service activities in EA are qualified by estate classes (EC).

## **ESTATE DATA STRUCTURE**

4. The ERIM is a description of how Estate and Infrastructure Group (E&IG) captures and records the Defence estate in the Defence Estate Information System (DEIS). A core element is EC, which is a four level classification system, to which every item to be managed on the Defence estate is mapped (see Figure 1). Estate data exchanged between the DEIS and other information systems, including data provider systems, must comply with the ERIM.

5. Items within the same EC fulfil similar functions and are expected to be maintained in the same manner. The default maintenance strategy for each item is defined in the ERIM. The particular data recorded about each estate element (data fields, sometimes referred to as attributes or characteristics) are also defined by the ERIM.

## **Extent of Estate Class**

6. Estate class classifications have been applied to Defence estate data, covering the following key estate classifications (EC 1):

- a. Property,
- b. Land Space,
- c. Building,
- d. Levels,
- e. Spaces,
- f. Infrastructure System,
- g. Infrastructure,
- h. Equipment System,
- i. Equipment,
- j. Hazard,
- k. Precinct, and
- l. Land Parcel

7. The EC 2 classification covers over 190 classes eg “Airfield”, “Electrical” and “Hydraulic”. EC 3 typically classifies estate elements that are general in nature, eg “Emergency and Exit Lighting” or “Sentry Post”. EC 4 classification is the lowest, most detailed level of classification, typically describing very specific items, eg “Alarm Panel”, or “Portable Fire Extinguisher”. In total there are over 1000 EC, each with a unique EC Identifier (ECID) that typically comprises four parts that mimic the four level EC hierarchy.

8. Whilst these form a logical hierarchy, the EC serve as a method of classification only. It is not intended that the maintenance strategy, data fields or other details are to be inferred across estate elements by virtue of sharing common (higher) EC. For example, it is not expected that a ‘Medical Gas Isolation Panel’ will be maintained and recorded in the same way as a ‘Medical Utility Panel’ simply because they share the same EC 3 (Equipment / Medical / Panels and Pendants).

## **Data Fields**

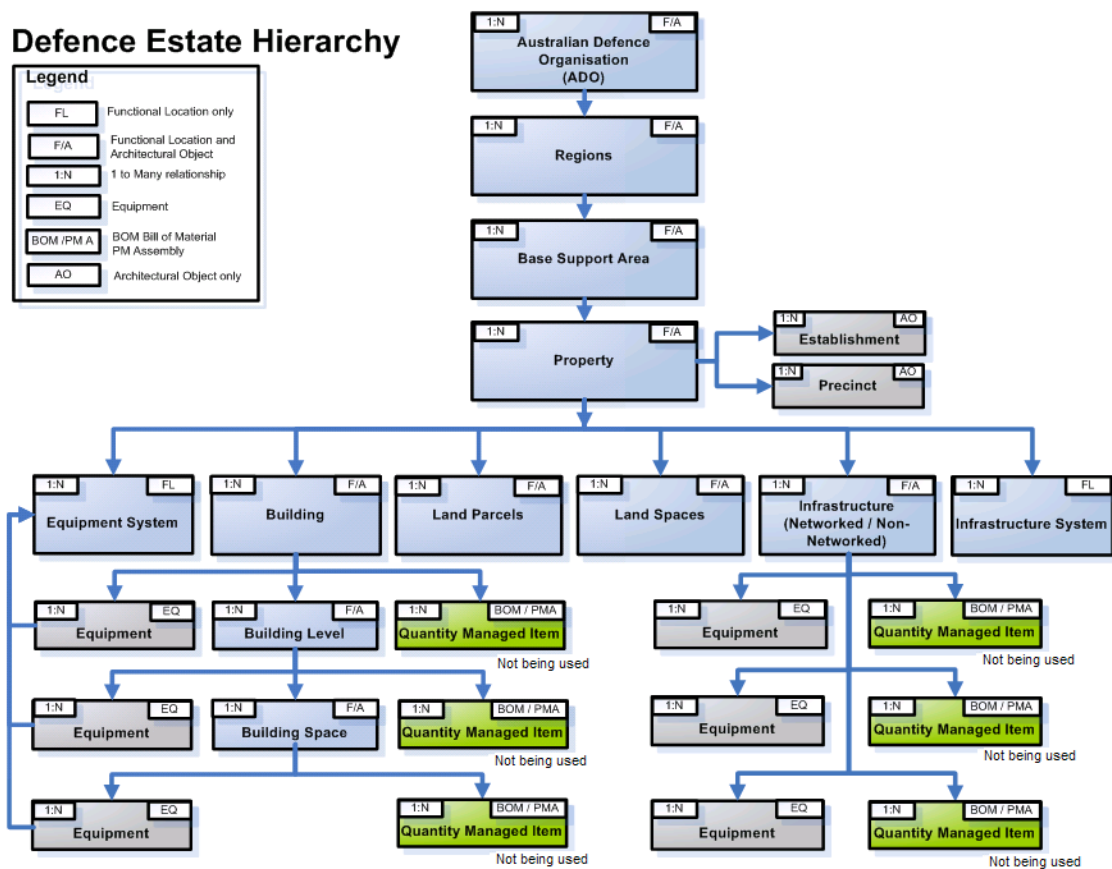
9. The data fields applicable to an EC describe specific information to be recorded for each estate element within that EC. For example the data field “Height” (ERIM Attribute 2025) applies to all building-related EC and some infrastructure items such as flagpoles and masts. The ERIM defines applicable data fields for each EC. In many cases, the data entries are

controlled by value lists that determine the range of valid entries in to the information system. Data rules are provided in support of the ERIM.

### Physical Parents

10. All estate elements have a physical parent which is a record of where the element is physically found. Estate elements are considered to fall in a hierarchical structure that has the Australian Defence Organisation at its top. For example, a piece of equipment in a plant room will have a physical parent of a building space which in turn has a physical parent of building level, then building, then property and then base support area (BSA). This allows key data (such as address) to be inherited to all estate elements.

11. The nature of this hierarchy is illustrated in Figure 1. Guidance regarding acceptable parents to estate elements are included in the ERIM and elaborated below.



**Figure 1 - Hierarchy of Estate Elements**

### Infrastructure System & Equipment Systems (Functional Groups)

12. Some EC are described as functional groupings or systems. Systems aggregate a number of elements linked to provide a single purpose or function. These elements may be equipment or infrastructure described elsewhere in the ERIM, and also include items which are too small to warrant specific records, but are otherwise essential parts of the system. For example a fire

sprinkler system is a nominated equipment system (ECID ES.Fi.WS.03) which has child elements such as pumps and tanks recorded in the EDR. This system will also have valves, pipes, sprinkler heads and other components which make it functional. These ancillary items may not require specific records in the estate data. In all cases the intent is to manage and maintain the system and all participating items, whether listed or not, as a system.

13. These relationships have been used to construct a list of all systems and the estate elements that fall under (or are the 'children') of these systems. A list of EC and their functional parent group are found in the ERIM - Functional Groups Tab.

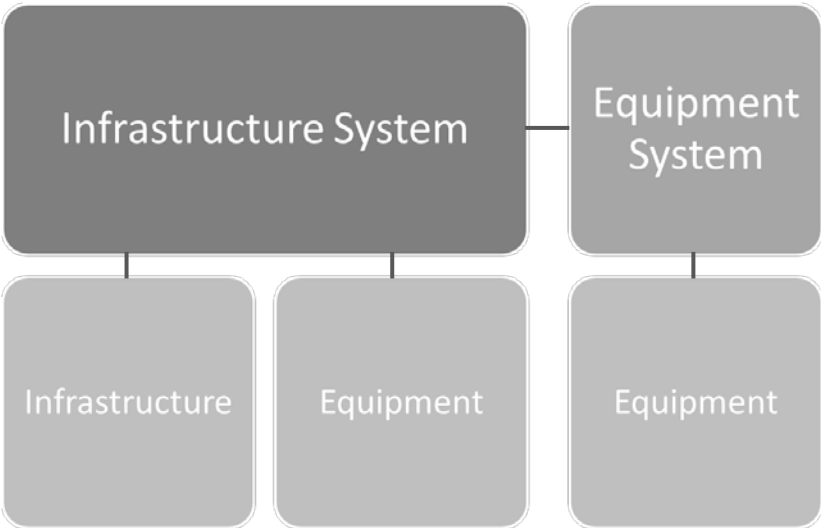
14. If the asset is part of a functional group (refer to 'Functional Group' tab of ERIM) then a functional parent will need to be recorded for that asset. The functional parent data field can be found in the 'Characteristics' tab in the GEMS Data Load (GDL) sheet. The value entered will be the applicable GEMS asset functional location (FLOC) ID (FLOC ID) of the parent system.

15. For example, the booster pump for a fire sprinkler system will have a physical parent FLOC ID that corresponds to the FLOC ID of the building/level/space where the pump is located. The functional parent will be FLOC ID of the system (equipment system/equipment or infrastructure system/infrastructure) to which the booster pump belongs.

**Parent Rules**

16. The ERIM provides the expected EC of the physical parents for all ECID. Some ECID also have an expected functional parent as they are elements that are expected to operate within a functional group or system.

17. The functional parents are always either an infrastructure system or an equipment system ie with an ECID beginning with IS or ES. An equipment system is always a functional parent to equipment, whereas the infrastructure system may be a functional parent to infrastructure, equipment or equipment system as illustrated in Figure 2.



**Figure 2 - Functional Parents Acceptable Relationships**

18. There is also a range of acceptable physical parents. The ERIM initially sets out the expected physical parent for each Estate Class. There are, however, exceptions to these rules and the following rules have been developed to establish acceptable physical parent-child relationships.

19. The following table summarises these rules.

Child	Physical Parent							Comments
	Space	Level	Building	Infrastructure	Land Space	Property	Base Support Area	
Property							Y	Only occurs as part of the BSA.
Land Space						Y		Only occurs on property.
Building				Y	Y	Y		Usually occurs on property.
Level			Y					Only occurs in a building. Each building must have at least one level. If only one level, it will be referred to as the ground floor.
Space		Y						Only occurs on a level. Each level must have at least one space.
Infrastructure	Y	Y	Y	Y	Y	Y		Infrastructure may occur in a variety of locations. Most commonly on property.
Infrastructure System						Y		Mostly occurs on property.
Equipment	Y	Y	Y	Y	Y	Y		Equipment may occur in a variety of locations. Physical Parent should be recorded at lowest possible level.
Equipment System		Y	Y	Y		Y		Equipment systems may occur in a variety of locations.

**Table 1 - Acceptable Physical Parent Relationships**

### Estate Classes

20. **Property.** Property records define an area related to a common occupancy or stewardship arrangement where Defence has rights over the land. A property may encompass an entire occupied “locality” such as a Defence base with multiple buildings and infrastructure, a training area, individual buildings and any combination thereof. Properties also relate to leased and other areas where Defence has an interest. Each property has a parent BSA and has a number of specific data fields including function, Federal, State and Local government electoral districts.

Property records may have one or more land parcel records associated with them to provide details of the individual legal titles that make up a single property.

21. **Land Spaces.** Estate elements where the EC 1 is land space, refer to the base environs associated with the property. Typically the land space element is coincident with the boundaries of the property but not always. There are a number of non-geographically-continuous properties, where there will be multiple land elements associated with the one property.

22. There may also be multiple land elements on a property where the land use or service delivery requirement is significantly different. An example is a separate definition of the urban area and the training area of a property, where the operational and maintenance requirements are different.

23. **Buildings.** Estate elements where the EC 1 is building, refer to buildings as defined in the Building Code of Australia (BCA). Buildings are further categorised by the BCA class (in accordance with the certificate of occupancy or equivalent) applied as EC 2. EC 3 refers to the primary purpose or function of the building and EC 4 is not used for buildings. All buildings will have general data fields such as address, status, and size information. Some buildings have specific data fields that only apply to some building classes. For example the data field “Beds”, applies to some building types such as living-in accommodation and houses, but not other EC.

24. **Levels.** Levels refer to the floor identifier of buildings. Levels are only applicable to building estate elements.

25. **Spaces.** Spaces refer to the rooms or areas within a building level. Spaces are only applicable to building level estate elements.

26. **Infrastructure Systems.** Estate elements where the EC 1 is infrastructure system refer to a linear network such as a road or pipe networks. These systems may also include logical collections of spatial infrastructure items such as airfield aprons. Infrastructure systems may contain child estate elements of type infrastructure, equipment system or equipment. The relationship between a “parent” infrastructure system and “child” estate elements is shown in the estate data by use of the characteristic (data field) functional parent. Infrastructure systems are described by general data fields such as address and status along with specific data fields according to estate class.

27. An infrastructure system is defined as always having a physical parent of property, ie, it cannot exist within a building or infrastructure element. It can, however, have an infrastructure element or facility included as part of the system.

28. EU service activities that relate to infrastructure systems apply to the system or functional group facility as a whole.

29. **Infrastructure.** Estate elements where the EC 1 is infrastructure include items classified as BCA Class 10b among other items. They are either an individual segment in an infrastructure system network such as a road or length of pipe, or are manageable items on their own, such as a sporting or military training facility. Infrastructure may also include facility type elements such as Defence fuel installations and water treatment plants. Infrastructure estate elements may be associated with an infrastructure system to show the relationship with other elements on the estate.

30. Infrastructure elements are described by the set of general data fields such as address, status, size information along with specific data fields according to estate class.

31. **Equipment Systems.** Estate elements where the EC 1 is equipment system refer to networks of equipment elements that deliver a common purpose or function. Equipment systems may contain child equipment estate elements. The relationship between parent equipment system and child equipment is shown in the estate data by use of the characteristic functional parent. Equipment systems are described by the set of general data fields such as address and status along with specific data fields according to EC.

32. EU service activities that relate to equipment systems apply to the system or functional group facility as a whole.

33. **Equipment.** Estate elements where the EC 1 is equipment, refer to individual items of equipment. They are either an individual segment in an equipment system or are manageable items of equipment on their own. Equipment estate elements may be associated with an infrastructure system to show the relationship with other elements on the estate. Equipment elements are described by the set of general data fields such as location, manufacturer, model and serial number along with specific data fields according to estate class.

## ERIM STRUCTURE

34. The ERIM is presented in an Excel spreadsheet format and uses tabs to group the information. The information tables are described in detail in the following tabs: EC, functional groups, attributes and value lists.

### EC Tab

35. The purpose of this tab is to describe all EC to which all estate elements are assigned. This tab lists the ECID and corresponding EC 1 to 4 for all classifications applied to the estate data. Usage guidance provides commentary on the elements that fall within each EC. The recording granularity indicates whether items are recorded individually or as a group with quantity recorded. This tab also includes an indication of whether estate elements will be child elements of functional system (infrastructure system or equipment system). The expected physical parent type is also provided.

36. In support of the EU statement of work, there is an indication of the default maintenance responsibility, default maintenance strategy and EU price schedule (PEUnn.nnn) for EC. Where maintenance responsibility is “EU”, maintenance is to be provided using the corresponding maintenance strategy as defined in the ‘EU Description and Deliverables’ document and the EU SDT, Annex A. Criticality is also indicated in support of EU requirements.

37. The applicable attributes for each EC are given as a set of common attributes and any EC specific attributes. Further detail regarding the attributes and attribute sets are provided in tabs by the same name.

38. The following table contains a description of each of the columns in the ERIM EC tab. An example for EC E.El.05.02, external lights is also provided.



<b>Column</b>	<b>Description</b>	<b>Example E.El.05.02</b>
ECID	This is the unique ECID and is case-sensitive. Full stops are used to separate individual codes for each EC level.	E.El.05.02
EC 1	The first level of EC.	Equipment
EC 2	The second level of EC. For buildings, this broadly equates to BCA Class.	Electrical
EC 3	The third level of EC. This is the lowest level estate class for buildings and infrastructure systems.	Lighting
EC 4	The lowest level of EC and it commonly names type of equipment. EC 4 is not used for buildings or infrastructure systems and rarely used for equipment systems.	Light - External
Usage Guidance	This gives an explanation of the EC and what estate elements fall under this classification. Further information may include the expected 'granularity' - the level of detail and aggregation expected in records falling under this EC. Guidance may include synonyms or colloquial names for the estate elements.	Lighting suitable for use in exterior environments including security, street and area lighting. Excludes obstruction, navigation and any airfield visual aids. Recording granularity to be one record for each.
Pricing Id	This describes the pricing identifier for the EC as identified by the service activities in the EU SDT. The pricing id is also provided on the actual data record as well.  There are circumstances where multiple pricing id may appear. Where the EC can be a child of a number of different functional groups (systems) and those systems are linked to different pricing id. In this case, the pricing id for the item is determined by the system it belongs to.	PEU05.001
Functional Grouping (System)	This lists the ECID of the system(s) in which estate elements classified under this EC are expected to operate.  In some cases, there may be multiple alternative systems that may be acceptable, however, in all cases a single estate element will only belong to one system, as determined by the relevant record.  In this example, external lights are expected to be part of the EC for street and security lighting. EC IS.El.SL is found in this tab for which maintenance requirements are defined.	IS.El.SL

<b>Column</b>	<b>Description</b>	<b>Example E.El.05.02</b>
Physical Parent	The anticipated physical parents are listed here. The codes relate to the ECID, but typically give only the first level of the ID. In this example, it is expected that external lights are expected to be physically connected to property, buildings or infrastructure. Any estate element with an EC starting with P, B or I would be acceptable parents to an external light.  If the estate element is located in or on a building it is expected that the record will show the applicable level or space as the physical parent.	P B (All) I (All)
Criticality	This is the default criticality but is adjusted based on the contribution factor (CF) of the record. EC with criticality of “No” will always be “No”. EC with criticality of “Yes” will only retain this rating if the CF of the particular item shown in the data is 1 or 2.	N
Maintenance Responsibility	This field describes the default maintenance responsibility anticipated for estate elements that fall under this EC.	EU
Maintenance Strategy	This describes the default maintenance strategy (for EU services) expected for estate elements that fall under this EC. In this case, external lights are expected to be maintained under responsive maintenance.	Responsive Maintenance
Attribute Set ID	This lists the attribute sets that apply to estate elements under this EC. This alphabetic code relates to attribute sets as named in the adjacent cell, and listed in the Attribute tab. There are 19 different sets, and multiple sets may apply as in the example.	A D H GE W
Attribute Set Name	This names the applicable attribute sets.  In this example there are a total of five sets applied to external lights.	General Estate Attributes Document HEA Equipment General Equipment Warranty
Attribute ID	This lists the Attribute Id for the EC specific attributes. In this example there are three attributes to add to those included in the sets – a total of 70 attributes may apply for this EC.	5255 2090 5270
Attribute Name	This lists the applicable estate class-specific attributes by their attribute name.	Lighting Purpose Energy Source Lamp

Column	Description	Example E.El.05.02
Default Granularity rules	This lists the recording granularity for the item. In this example it says 'Record per Instance' you should also refer to the Usage Guidance as the granularity will depend on particular conditions for the lights.	Record per Instance

**Table 2 - Definition of EC in the ERIM**

### Functional Groups Tab

39. The purpose of this tab is to present the parent-child relationships described in the EC tab in an alternative, more intuitive, format. It is not referenced by any other tabs.

40. This list shows the relationship between infrastructure systems and the child estate elements that may comprise the infrastructure system. Note that child elements of infrastructure system can include infrastructure, equipment system and equipment elements. The following table contains a description of each of the columns in the functional groups tab. An example showing the relationship between infrastructure system, street and security lighting and child equipment external lighting is provided. Most functional groups can have many child items.

	Column	Description	Example IS.El.SL
Equipment Systems, Infrastructure Systems, Infrastructure	EC ID	This is the ECID for the applicable system.	IS.El.SL
	EC 1	The first level of EC of the parent functional system.	Infrastructure System
	EC 2	The second level of EC of the parent functional system.	Electrical
	EC 3	The third level of EC of the parent functional system.	Street and Security Lighting
	EC 4	The fourth level of EC of the parent functional system. It is rarely used and only for equipment system.	Not used
Valid Associated Child Items	ECID	This is the ECID of the valid child item that can participate in the parent system. In this case, external lights fall into the system of street and security lighting.	E.El.05.02
	EC 1	The first level of EC for the child item.	Equipment
	EC 2	The second level of EC for the child item.	Electrical
	EC 3	The third level of EC for the child item.	Lighting
	EC 4	The fourth level of EC for the child item.	Light - External

**Table 3 - Example Functional Group Relationship in ERIM (Functions Groups Tab)**

41. Most functional groups have many child items. For example an Airfield Arrestor and Alarm System ES.A.AA (Equipment System → Airfield → Arrestor and Alarm) can have the following child equipment items associated: Arrestor Cable, Cable Reel, Arrestor Barrier, Arrestor Barrier Mechanism, Alarm Panel, Alarm Speaker and/or Battery and Charger. A

specific instance of such a functional system does not need all child items associated, but typically one or more would be expected.

**Attributes Tab**

42. The purpose of this tab is to define the attributes used in the ERIM and to provide guidance on its applicability for each of the EC 1. Attributes are referenced on the ERIM EC tab via the attribute set and/or the specific attribute identifier.

43. The attributes tab lists the attributes by a unique numeric identifier. The attribute name and description are provided. Where an attribute belongs to an attribute set, this is identified. Some attributes belong to multiple attribute sets. A list of all sets and the attributes that comprise them is not included. This can be derived from the information provided. Some attribute sets are grouped attributes where all the attributes within the set act together to provide a set of information about the item they are applied to. For example the attribute set AL is a grouped attribute set and contains 11 attributes. These bits of information are required to be linked together to provide useful data. A list of attribute sets used is provided below.

<b>Attribute Set ID</b>	<b>Attribute Set Name</b>	<b>Grouped Attributes</b>
A	General Estate Attributes	No
AC	Access/Operating Hours	Yes
ACM	Asbestos Attributes	Yes
AL	Airfield Light	Yes
AP	Airfield Paving	No
BS	Building Space Attributes	No
CR_H	RP - Crane & Hoist	No
D	Document	Yes
GB	General Building	No
GE	General Equipment	No
GP	General Property	No
H	HEA Equipment	No
Haz 1	Hazard Group 1	Yes
Haz 2	Hazard Group 2	Yes
Haz 3	Hazard Group 3	Yes
PT	Protective Treatment	Yes
RP	Registrable Plant	No
RP_PV	RP – Pressure Vessel	No
W	Warranties	Yes

**Table 4 - Attribute Sets Used in ERIM**

44. The engineering unit of the recorded data, where applicable, is included in the attribute name or attribute description. The required format of the data held is listed, provided for data

handling purposes. Where the required format is give as 'List', then the entry of data into this attribute must comply with a list of valid entries provided in the value list tab. The following table contains a description of each of the columns in the attributes tab. An example for attribute number 1140 – Tenure is also provided.

<b>Column</b>	<b>Description</b>	<b>Example 1140 Tenure</b>
Attribute Set	This lists the attribute sets to which this attribute belongs by Attribute Id.	A GP
Attribute Class	This lists the name of attribute set(s) to which this attribute belongs. If blank, the attribute is not part of an attribute set.	General Estate Attributes General Property
Attribute - ID	This is the unique identifier for the attribute.	1140
Attribute Name	This is the name of the Attribute	Tenure
Attribute Description	This is the description of the attribute	The nature of the relationship between the facility and Defence ownership
Single or Multiple Records Entered	This indicates whether a single attribute record or multiple attribute records are applicable.	Single
Attribute Data Format	This provides details of the format that the attribute is recorded. In this case there is a list of acceptable entries.	List
Format	This provides the data format for the content (eg. numeric, text, etc)	Refer List
Length	This provides the maximum length of the attribute field	Refer List
Decimals	This provides the number of decimal places allowed for this attribute field (if applicable)	N/A
Value List Name	This provides the name of the list of acceptable entries. Details can be found in the value list tab. In this case, there are 12 different tenure types provided in the value list	Tenure
Units of Measurement	This provides the unit of measure for the attribute record (if applicable)	

**Table 5 - Description of Columns on Attribute Tab**

### **Values Lists Tab**

45. The purpose of this tab is to define the range of acceptable entries to attributes of the relevant estate elements. It is referenced by the attributes tab via the list name. The list shows

all valid choices for those attributes where a validation list applies. List values are listed against list names, with further descriptions where necessary. The following example shows the value list for attribute 1140 Tenure for which there are 12 acceptable values.

Column	Description	Example 1140 Tenure
List Name	This is the list name, repeated for as many entries as apply.	Tenure
List Values	This is the unique list value. For attribute 1140, there are 12 valid choices.	CADETLEASE EXPENSELEASE MGMTORD MOU NFA OCCUPLIC OWN PERMISOC PPP REVENUEGFF REVENUELEASE REVENUELICEN
Value Description	This provides further guidance on how the list entry or value is to be interpreted.	Example for MOU “Memorandum of Understanding. A legal document outlining the terms and details of an agreement between parties, including each parties requirements and responsibilities.”

**Table 7 - Structure of Value Lists Tab**

**EDR - ESTATE & EQUIPMENT**

46. The ERIM information requirement for GEMS recording of estate and equipment items (as defined by GEMS processes) has been provided in series of pivot table reports on the GEMS DEQMS pages as the EDR workbooks. The EDR workbooks provide a shortened view of the ERIM information to present the requirements for each ECID. Where there is a conflict between information in the ERIM and the EDR, the ERIM takes precedence. The EDR workbook contains the following tabs and each is described in the following sections:

- a. EDR Reporting Overview;
- b. ECID Usage Guide;
- c. EDR by ECID;
- d. Field Value Lists;
- e. Physical Parent Guide;

- f. Functional Group Guide;
- g. EMOS Price ID & Maintenance Strategy;
- h. Infrastructure (Systems) type; and
- i. Estate Data Business Owner.

## **EDR Reporting Overview**

47. The purpose of this tab is to describe the use of each reporting tab in the EDR workbook structure.

## **ECID Usage Guide**

48. The purpose of this tab is to describe all EC to which all estate elements are assigned. Establishing the ECID of an estate element is the first step to be undertaken when creating a new record. This tab lists the ECID and corresponding EC 1 to 4 for all classifications. Usage guidance provides information on the elements that fall within each EC. The recording granularity indicates whether items are recorded individually or as a group with quantity recorded. This tab informs which ECID to apply when creating a new asset and creating a single record for all like assets at a location or individual asset records.

## **EDR by ECID**

49. This tab provides a list of data fields including a description of what the data field is capturing relevant to an ECID. This report also shows the data format and the field length, field business rules (where applicable), who is responsible for providing the information and at what stage of a project Defence would expect to have the information. The tab informs what information (data fields or characteristics) are to be provided for each estate element once the applicable ECID has been established. The data fields by ECID are the only fields that are required to be filled in on the GDL tool relevant to the ECID selected.

## **Field Value Lists**

50. This tab shows the relevant values for data fields where the data format required is 'Value List'. These values are provided for selection in the GDL tool.

## **Physical Parent Guide**

51. This tab provides a guide on the expected EC of the physical parent of an estate element.

## **Functional Group Guide**

52. The purpose of this tab is to present the parent-child relationships of estate elements. This list shows the relationship between infrastructure and equipment systems and the child estate elements that may comprise these systems. Note that child elements of infrastructure system can include infrastructure, equipment system and equipment elements. Filter by ECID (column C) to display all systems that an estate element can belong to. For example E.HV.02.16 (Equipment/HVAC/Distribution/Non-Ducted Air Handling Unit) can belong to either ES.HV.AD (Equipment System/HVAC/Air Distribution) or ES.HV.Sp (Equipment System/HVAC/Split Air Conditioning).

53. There are instances where a functional group will have no child items listed. In this case do not record all of the child items that apply to a system. For example ES.El.LP (Equipment System/Electrical/Lightning Protection) has no child elements listed.

## **EMOS Price Id and Maintenance Strategy**

54. The purpose of this tab is to show the default maintenance strategy (with applicable EMOS EU Pricing Id) and maintenance responsibility applicable to each ECID. If an ECID is showing a default maintenance strategy or responsibility that is different from what is required for a particular item eg. ECID indicates maintenance strategy is responsive maintenance but the manufacturer's recommendation is for a scheduled service every six months then the EMOS should contact Directorate of Estate Planning & Upkeep (DEPU) for advice and instruction.

55. If the maintenance responsibility applicable to a particular item is other than EU eg. CASG or CIOG then the Handover/Takeover (HOTO) process identifies the responsible party for these items. If there is a dispute about maintenance responsibility, the EMOS should contact DEPU for advice and instruction.

56. EU Pricing Id is an internal code for EMOS EU and DEPU reference.

## **Infrastructure & Infrastructure System Type**

57. The purpose of this tab is to provide direction on the four character convention to describe the different types of infrastructure and infrastructure systems.

## **Estate Data Business Owner**

58. The purpose of this tab is to align each EC data field to E&IG accountable officers and their responsibilities for:

- a. confirming that the data field is required;
- b. identifying the purpose of the captured data, eg. contract tendering, asset identification, maintenance operations, maintenance performance analysis, estate planning, security or contract tendering;
- c. confirming the value lists are up to date and complete (where applicable); and



d. providing business rules for use of the characteristic and values (where applicable).

59. Assurance processes will be established to ensure that data fields are populated with accurate and current data. The accountable officer may be required to facilitate the data provision and accuracy where gaps are identified.

### **EDR – Environmental Factors (Asbestos and Hazards)**

60. An EDR for Environment Factor records including asbestos and hazard records is under development. Information model requirements for these items is included in the ERIM.

### **ASSET IDENTIFICATION & LINKAGE TO EU SDT**

61. Each estate asset record contains two key identifiers which link it to the EU SDT. These include the ECID and the Pricing Id. These two identifiers provide a cross-reference to the SDT for deriving the relevant scope of work applicable to each estate data record.

62. Estate data should be reviewed in context of the services applied as defined in the SDT. The GEMS estate business identifier (EBI), along with the physical and functional parents, provides the location of the item. The Pricing Id provides the link to the required services defined in the EU SDT, Annex A. Where more than one service activity applies to the EC, such as maintenance in one Pricing Id and performance based or scheduled operations in another Pricing Id, if the maintenance strategy is responsive maintenance, scheduled operations and scheduled inspection Pricing Id do not appear in the ERIM, but are provided in the estate data.

63. Each estate item record includes the ECID that describes the EC the item belongs to. The ECID may be specifically referenced in the EU SDT, Annex A.

64. The functional parent data field contains the GEMS EBI of the parent equipment system, infrastructure system or infrastructure record that the item belongs to. The physical parent attribute contains the GEMS EBI of the physical parent ie, where the item is physically located. The data also includes the EBI, which in some cases is the legacy identifier, to provide a cross reference to legacy estate data systems.

### **Interpretation of Data Field ‘Maintenance Responsibility’**

65. Each EC in the ERIM is designated a default maintenance responsibility. There are cases where specific estate records contain a maintenance responsibility that differs from the ERIM. This may be due to legacy arrangements for particular facilities and where lease conditions override. Values in the data take precedence over the ERIM default values.

66. The valid maintenance responsibility values included in the estate data are:

<b>Maintenance Responsibility</b>	<b>Interpretation</b>
<b>Army</b>	Army owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.
Capability, Acquisition & Sustainment Group (CASG)	CASG owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.
Chief Information Officer Group (CIOG) Maintained	These items are maintained by Defence CIOG. Item are listed for information only.
Defence Housing Authority (DHA)	DHA owns or has acknowledged responsibility for maintenance of this item. Items are listed for information only. Some DHA houses are subject to meter reading activity in EU.
Department of Home Affairs (DOHA)	Maintenance is the responsibility of DOHA for this item. Item may be owned by Defence and be temporarily in use by DOHA.
Defence Scientific & Technology Group (DSTG)	DSTG owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.
Estate Appraisal (EA)	Item maintained under the EA service in the Base Services contracts.
Estate Upkeep (EU)	Item maintained under the EU service in Base Services contracts.
Furniture and Fittings	The item is maintained by E&IG but is not included in EU.
Land Management	Item maintained under the Land Management service in Base Services contracts.
Navy	Navy owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.
Not Applicable	Refers only to Properties. These records are to represent the property and do not attract maintenance. Land space records are used to represent the land associated with the property.
Other	Other arrangements are in place for these items. Details of the arrangements are included in the long text field(s).
Public Private Partnership (PPP)	This item is maintained through PPP arrangements.
Refer Lease Conditions	These elements are the subject of lease arrangements. For pricing purposes, tenderers should assume that estate maintenance services are limited to receipt and routing of maintenance requests through the Base Services Support Centre to the agency responsible for such maintenance.
RAAF	RAAF owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.

Maintenance Responsibility	Interpretation
Thales	Thales owns or has acknowledged responsibility for maintenance of this item. Item listed for information only.
Unit owned	The item is owned and maintained by the operating.
WHS obligations - MIC	Item maintained under the MIC service in Base Services contracts.

**Table 8 - Maintenance Responsibility Values**

### Interpretation of Data Field ‘Asset Status’

67. The data provides an asset status for each asset type. Elements with a status of ‘Disposed’ are not included in the EU service. The following table outlines the valid values for asset status shown in the estate data and how these should be interpreted.

Asset Status	Interpretation
Critical Spare	Asset is a Defence owned spare. Contractor to manage and maintain.
Disposed	Asset has been demolished or disposed of and is no longer on site.
In Use	In use and to be maintained as per the maintenance responsibility.
Not In Use	Asset not in use but is still required to be maintained.
Out Of Service	Not in use - not maintained. Asset has been decommissioned or removed from service. Would require recommissioning if required again.
Proposed	The asset is a proposed asset which may or may not be constructed. Construction is yet to begin or acquisition has not commenced.
In Storage	In storage - not maintained. The value is used for items that have been salvaged for reuse at a later date or have been purchased for future installation.
Under Construction	An asset which has been approved and is currently under-construction or acquisition. For noting and further consideration during the commissioning process.

**Table 9 - Asset Status Values**

### Interpretation of Data Field ‘Ownership Lifecycle’

68. The estate data records include an indication of the lifecycle status of the asset. The following table outlines the valid values of ownership lifecycle in the data. This information is provided for information and for the purpose of the EU. Contractors are advised that this attribute supports development of strategic impacts in the Estate Appraisal (EA) process delivered through the Management Integration and Coordination (MIC) service. Contractors should also consider data field asset status values (described above) to determine if an item is to be included in the EU service.

Ownership Lifecycle	Interpretation
Active	In use and to be maintained.
Disposed	Asset has been disposed of
Inactive	Asset is not in use.
Planned Acquisition	The asset is a proposed asset which may or may not be available.
Planned Disposal	Asset is planned to be disposed of in the future.

**Table 10 - Ownership Life Cycle Value**

## Interpretation of Data Field ‘Tenure’

69. The tenure attribute is applied to buildings, land spaces and properties. The following table outlines the valid values for tenure that occur in the estate data and how these should be interpreted for EU purposes.

<b>Tenure</b>	<b>Estate Upkeep Maintenance Responsibility</b>
Cadet Lease	Refer to data field “Maintenance Responsibility”
Expenditure Lease	Refer to data field “Maintenance Responsibility”
Management Order	Refer to data field “Maintenance Responsibility”
Memorandum of Understanding	Refer to data field “Maintenance Responsibility”
No Formal Agreement	Refer to data field “Maintenance Responsibility”
Occupation Licence	Refer to data field “Maintenance Responsibility”
Owned	Maintained under Base Services
Permissive Occupancy	Refer to data field “Maintenance Responsibility”
Public Private Partnership	Refer to data field “Maintenance Responsibility”
Revenue GFF	Refer to data field “Maintenance Responsibility”
Revenue Lease	Refer to data field “Maintenance Responsibility”
Revenue Licence	Refer to data field “Maintenance Responsibility”

**Table 11 - Tenure Value**

## Interpretation of Data Field ‘Criticality’

70. For the purposes of managing critical systems and spares, criticality has been determined by a combination of CF, which indicates its importance to Defence capability and EC. Critical ECs are identified on DEQMS under “Estate Classes for Critical Systems Recovery”. The critical attribute in the data is set to “Y” only when the specific asset is a critical EC and where the data field CF is CF=1 (Major Asset) or CF=2 (Important Asset). For example, residual current devices (RCD) (Estate Class E.El.08.10) have Criticality = Y in the ERIM Estate Classes tab. Individual RCD records will have data field Criticality = Y, only when the data field Contribution Factor = 1 or 2.

## Data Field Pricing ID

71. Each record in the estate data has at least one entry for data field price schedule. Some items have more than one Pricing Id and there are two circumstances where this can occur:

- a. There are multiple services defined in the SDT such as scheduled maintenance in one pricing schedule and scheduled operations in another Pricing Id.
- b. Some EU services apply to a defined range of locations, referred to as location specific services. These locations may be defined as a whole base or may be specifically identified estate records themselves. In these cases, an additional Pricing Id may apply to those location specific estate records only.