

## Interim Advice Note 84/10 Part 4

### Amendment 2 (Incorporating Amendment 1 and Errata)

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**VOLUME 10 ENVIRONMENTAL DESIGN AND  
MANAGEMENT  
SECTION 0 HIGHWAYS AGENCY  
ENVIRONMENTAL INFORMATION  
SYSTEM –EnvIS**

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#### **PART 4**

#### **Data Management**

#### **Contents**

##### Chapter

1. Introduction
  2. HAGIS and EnvIS
  3. Context of EnvIS and the HA Data Warehouse
  4. What is EnvIS Data Management
  5. Data Collection and Submission
  6. EnvIS Resource Requirements
  7. GIS Requirements
- Annex A Interface File Specifications  
Annex B Examples of scenarios affecting data submission  
Annex C Look up table listing and use by dataset matrix  
Annex D Data Management in English DBFO schemes

**November 2013. Amendments to Part 4 IAN 84/10**

As a result of operational experience of data uploads, it has been identified that a minor amendment to the permitted flow controls values available in Water\_Source\_Point is required to ensure the permitted flow controls are consistent with those set out in HD 43/04. This amendment should also help Service Providers upload Water\_Source\_Point data more successfully. Further guidance is provided to clarify the information that should be provided when suppliers submit data along with a change to the postal address. Clarification is also provided on the versions of ESRI Personal Geodatabases that are supported.

Section	Comment
2.5	Change in contact details for large data extracts
5.1.9	Additional guidance provided to assist data processing and change of address.
6.2.2	Change in email address for look up table enquiries.
7	GIS Requirements. We currently only support ESRI Personal Geodatabases versions 9.0, 9.1 and 9.2
Annex A A1.1.3	Change in email address for Agent ID requests.
Annex A A1.1.5	GIS Data. We currently only support ESRI Personal Geodatabases versions 9.0, 9.1 and 9.2
Annex A A4.1	The acceptable values for Flow_Controls set out in the "Comments and Rules" column of the Detail record table is corrected from:  Flap valve Penstock Sluice gate. To Flow control present No flow control present

**January 2011. - Errata No. 1**

Section	Comment
Section 7 Page 19	Table corrected from:  ENVIS_NCE_WILDLIFE_LINE ENVIS_NCE_WILDLIFE_POINT To ENVIS_NCE_WILDLIFE_STRUCTURES_LINE ENVIS_NCE_WILDLIFE_STRUCTURES_POINT

**December 2010 - Amendments to Part 4 IAN 84/10**

As a result of feedback, Part 4 has been enhanced to provide explicit instructions to aid Service Providers in preparing and submitting valid data.

Section	Comment
Index/TOC	This has been updated owing to additional text inserted into the document
Footer	Updated to November 2010
4.2.1	Added text to 3 <sup>rd</sup> row 'data sets'
4.3.3	Added NOTE to last paragraph
5.1.3	Added enhanced description and explanations to file headers and footers. Removed non-standard TAB characters and inserted descriptions
7	Added new bulleted item on table naming and list of acceptable table names. Added new bullet point for TXT files. Moved and enhanced definition of rule for NULL values
A1.1.4	Enhanced description of Header and Footer rules
A1.1.5	Enhanced definition
A2.2	Enhanced rule for Geo type for Native Vegetation types
A4.7	Deleted erroneous spaces in Abstraction-rate field name
A9	Added paragraph in box to specify supply of documents. This enhances the description in 4.1 which is not contained in a box. The rule is now explicit
A9.1	Doc Ref and Doc Description fields made mandatory
A9.2	Subset field length increased by 1 byte to 7. Shape description made mandatory and example included
A9.3	Enhanced the logic of DOCID and Doc_Unique_ID fields
A9.4	Enhanced the logic of DOCID fields and enhanced description of Element_unique_ID rules
A11.1	Changed field type for Fulfil_status to VARCHAR to accommodate 3 state value of 0,1 and NULL to fit in with data processing rules for NULL values
A11.2	Corrected reserved word problem by renaming DATE field to DATE_EMI in DBF column
A11.3	Corrected reserved word issue for field DESC to DESC_WASTE
A11.4	Corrected reserved word issue for field DESC to DESC_MAT

<b>1</b>	<b>Introduction .....</b>	<b>7</b>
1.1	Structure of this Part .....	7
<b>2</b>	<b>HAGIS and Envis .....</b>	<b>8</b>
2.1	Highways Agency Geographical Information system (HAGIS) .....	8
2.2	Environment Information System -Envis .....	8
2.3	Technical Platform .....	8
2.4	Benefits of using HAGIS .....	8
2.5	Limitations of using HAGIS .....	9
2.6	Access to HAGIS .....	9
2.7	Remote performance of HAGIS .....	9
<b>3</b>	<b>The Context of Envis and the Highways Agency Data Warehouse .....</b>	<b>10</b>
3.1	Data warehouse basics .....	10
3.2	Context of Data Warehouse usage .....	10
<b>4</b>	<b>What is Envis Data Management? .....</b>	<b>11</b>
4.1	Record Types .....	11
4.2	Data Management .....	11
4.2.1	Provision of Third Party data .....	11
4.2.2	Provision of Look Up tables .....	11
4.2.3	HA and Environmental Objectives .....	12
<b>5</b>	<b>Data collection and submission .....</b>	<b>13</b>
5.1	Envis Interface File Specifications and Data Rules .....	13
5.1.1	10 character Unique Identifiers- HAID, DOCID, CONTID, ATTACH_ID, HAEMIID etc .....	13
5.1.2	Agent_ID .....	13
5.1.3	File Formats .....	13
5.1.4	Objectives .....	14
5.1.5	Removal of Inventory Elements .....	15
5.1.6	Change of status of Inventory Elements .....	15
5.1.7	Invalid File Submission .....	15
5.1.8	Frequency of Data Submission .....	15
5.1.9	Envis Data Processing .....	16
<b>6</b>	<b>Envis Resource Requirements .....</b>	<b>17</b>
6.1	Specialist resources .....	17
6.1.1	Geographical Information System (GIS) .....	17
6.1.2	Database Administrators (DBA) .....	17
6.1.3	Analyst/Programmers .....	17
6.2	Generic Process Management .....	17
6.2.1	Drawing conversion .....	17
6.2.2	Look Up Table management .....	17
6.2.3	Assigning attributes to Elements .....	18
6.2.4	Import/Export routines .....	18
<b>7</b>	<b>GIS requirements .....</b>	<b>19</b>
7.1.1	GIS data quality requirements .....	21
7.1.2	Ordnance Survey Digitising Issues .....	21
7.1.3	HA Indicative estate .....	21

<b>A1 Interface File Format and data Rules .....</b>	<b>22</b>
A1.1 General Principles .....	22
A1.1.1 Uniqueness of Elements.....	22
A1.1.2 Landscape forms the base layer in EnvIS .....	22
A1.1.3 Agent_ID .....	22
A1.1.4 Interface File Formats .....	23
A1.1.5 GIS Data .....	23
A1.1.6 GIS File Format.....	23
A1.1.7 File extensions .....	24
A1.2 GIS File Format .....	25
<b>A2 Landscape Records .....</b>	<b>26</b>
A2.1 Grassland Records .....	26
A2.2 Vegetation Records .....	27
A2.3 Hedge Records.....	29
A2.4 Earthworks Records.....	31
A2.5 Water Body Records.....	32
A2.6 Hard Landscape Records .....	33
A2.7 Accessibility Records.....	35
<b>A3 Nature Conservation and Ecology Management Records .....</b>	<b>36</b>
A3.1 NCE Habitat Records .....	36
A3.2 NCE Species Records.....	38
A3.3 Wildlife Structures Records .....	40
A3.4 Rule Matrix for Wildlife Features.....	42
<b>A4 Water Quality Records.....</b>	<b>43</b>
A4.1 Water Source Point (Highway Drainage Point) .....	44
A4.2 Water Source Continuous (Highway Drainage Continuous) .....	46
A4.3 Water Source Regional (Highway Drainage Regional) .....	49
A4.4 Water Source other Outputs/Inputs.....	51
A4.5 Water Source Third Party Discharge .....	53
A4.6 Water Receptor Surface (Surface water Receptor) .....	54
A4.7 Water Receptor Ground (Ground Water Receptor) .....	57
A4.8 Water Receptor Flood (Floodplain Receptor) .....	59
<b>A5 Cultural Heritage Records.....</b>	<b>61</b>
A5.1 Cultural Heritage.....	61
<b>Air Quality Records .....</b>	<b>66</b>
A5.2 Air Quality Source Records .....	66
A5.3 AQMA status Records .....	68
<b>A6 Noise Records .....</b>	<b>69</b>
A6.1 Road Surface Segment Records .....	69
A6.2 Sensitive Receptors within 300m of the Road Records .....	70
A6.3 Screening Records.....	71
<b>A7 Waste and Material Flows Management Records .....</b>	<b>73</b>
A7.1 Waste and material flows management Environmental inventory records .....	73
<b>A8 Inspect (Study/SURVEY) Inventory record .....</b>	<b>74</b>
<b>A9 Document Attachment.....</b>	<b>75</b>
A9.1 Document record.....	75
A9.2 Document container record .....	76

A9.3	Attaching documents to containers .....	77
A9.4	Attaching documents to Assets.....	78
<b>A10 XML Standards .....</b>		<b>79</b>
A10.1	HA EnvironmenTal XML standards.....	79
<b>A11 Environmental Management Information (emi) Records .....</b>		<b>80</b>
A11.1	Environmental Commitments Records .....	80
A11.2	Environmental Management Information (emi) records.....	82
A11.3	Waste Flows Environmental Management Information (emi) records.....	85
A11.4	Material Flows Environmental Management Information (emi) Records .....	88
<b>Annex B Inventory &amp; emi Scenarios introduction.....</b>		<b>91</b>
<b>B1 Example 1 – Planned Asset.....</b>		<b>92</b>
<b>B2 Example 2 – Existing Asset.....</b>		<b>105</b>
<b>B3 Example 3 – Removed Asset .....</b>		<b>109</b>
<b>B4 Example 4 – On Hold / Abandoned Asset.....</b>		<b>112</b>
<b>B5 Example 5 – Asset with Multiple Objectives.....</b>		<b>118</b>
<b>B6 Example 6 – Outcomes Based on Actual Evaluate Action.....</b>		<b>121</b>
<b>B7 Example 7 – Outcomes Based on Actual Inspect Action Leading to Condition Rating .....</b>		<b>124</b>
<b>B8 Example 8 – Outcomes Based on Actual Inspect Action to Identify Presence of an Asset.....</b>		<b>130</b>
<b>C1 Annex C Look up table listing.....</b>		<b>132</b>

## 1 INTRODUCTION

This Part describes the approach to managing environmental inventory and environmental management information data and sets out the specific requirements for Service Providers recording, updating, transferring and retrieving EnvIS data.

This part is aimed at

- Systems Analysts,
- Analyst Developers,
- Geographical Information System developers and
- Database Administrators.

Annex A to this Part contains detailed rules and conditions for assigning attribute values to required records. This Part should also be read by environmental specialists.

Part 1 should be read prior to using this Part, to ensure a minimum understanding of EnvIS is acquired.

### 1.1 STRUCTURE OF THIS PART

This Part consists of:

- Context of EnvIS Information System requirements including glossary and overall benefits of HAGIS use
- Data management requirements
- Service Provider resource requirements
- Annex A provides a detailed specification of the environmental inventory and environmental management information
- Annex B provides scenarios of events requiring data submission.
- Annex C provides a list of look tables and the data sets that need to reference those tables

## **2 HAGIS AND EnvIS**

### **2.1 HIGHWAYS AGENCY GEOGRAPHICAL INFORMATION SYSTEM (HAGIS)**

The HA utilises a Geographical Information System (GIS) known as Highways Agency Geographical Information System – HAGIS.

HAGIS is a graphical way of viewing data held in the HA Data Warehouse. The HA Data Warehouse consists of data from many sources and systems such as Ordnance Survey National Grid, Asset management systems such as HAPMS (HA Pavement Management System) and SMIS (Structures Management System), Accident data, Part 1 Claims to name a few. It also holds third party datasets which have been sourced from other Government bodies and Agencies.

### **2.2 ENVIRONMENT INFORMATION SYSTEM -EnvIS**

The EnvIS version of HAGIS is a targeted view of environmental data with the focus on displaying data primarily of environmental interest in relation to the Ordnance Survey National Grid. The aim of the EnvIS view of HAGIS is not to display unwanted and unnecessary data sets. The view of EnvIS can be tailored at any time by the user to display more or less data held in the Data Warehouse that is deemed appropriate for the task in hand.

### **2.3 TECHNICAL PLATFORM**

EnvIS data is collated in both an ESRI ArcSDE and SQL Server 2000 spatial database. SQL Server will be upgraded as and when the HA decide to migrate to newer versions.

### **2.4 BENEFITS OF USING HAGIS**

EnvIS consists of environmental data that is owned by the HA and environmental data that is supplied by other bodies and agencies and Service Providers. HAGIS has the ability to display environmental data that is spatially referenced to the Ordnance Survey National Grid, and thus cross referenced to other co-located objects of interest. This is considered to be a key benefit of data sharing whilst only sourcing specific data from specific owners.

Environmental data supplied by other bodies and agencies is sourced by the HA and is available for use by all Service Providers for the management of the trunk road network. A key benefit of this approach is that Service Providers do not have to apply and pay for data individually (should they not want to) as it is available at a consistent level for both the HA and Service Providers to use via EnvIS.

The HA recognizes that, at times, centrally provided data can be inaccurate. However, by providing this data through a single central source ensures that the level of inaccuracy is consistent for everyone and updates can be managed in a controlled environment.

The use of HAGIS to view EnvIS data removes the dependency upon any one GIS tool vendor. HAGIS is viewable via the HA Extranet and Intranet through a web browser interface and does not require software or licensing to be installed on a local machine.

## **2.5 LIMITATIONS OF USING HAGIS**

It is not possible to record data directly into HAGIS. Data supplied for display and use in HAGIS requires submission in accordance with the specified interface files, provided in Annex A, and must go through rigorous import validation routines. It is, however, possible to retrieve data from HAGIS with ease, subject to limitations on file sizes. Large extracts of data should be requested from;

EnvIS Management Team,  
EnvIS\_Support@highways.gsi.gov.uk

## **2.6 ACCESS TO HAGIS**

HAGIS is accessible to all staff within the HA and for Service Providers (should they require it), via the HA Extranet. For Service Providers to gain access to the HA Extranet applications must be made to the relevant HA Project Sponsor / HA Area Team. The process will include security checks on individuals.

## **2.7 REMOTE PERFORMANCE OF HAGIS**

The performance of remote access will depend upon the telecommunications link from the Service Provider to HA. HAGIS is viewable, via the HA Extranet, on the slowest of dial up connections but is not particularly effective at typical dial up speeds of 48kbs. At the present time, the HA does not permit the use of broadband or VPN connections. Alternatives are dial up, ISDN and leased lines.

### **3 THE CONTEXT OF EnvIS AND THE HIGHWAYS AGENCY DATA WAREHOUSE**

#### **3.1 DATA WAREHOUSE BASICS**

EnvIS data is stored in the Highways Agency Data Warehouse. In addition to the environmental data supplied by Service Providers, through EnvIS, the Highways Agency Data Warehouse contains centrally supplied and funded data which is utilized by EnvIS and detailed below:

- Ordnance Survey Mapping
- National and local designations from other bodies and agencies such as Natural England and English Heritage.
- Other HA asset systems such as the HA Pavement Management System (HAPMS) and the Structures Management Information System (SMIS)
- Accident statistics
- HA finance and project systems such as Oracle Financials and Oracle Projects.

EnvIS follows the capture once and share many times approach to data recording and supply.

EnvIS is a view on shared environmental, mapping, designation and other asset data recorded with geospatial co-ordinates.

#### **3.2 CONTEXT OF DATA WAREHOUSE USAGE**

Not all the examples above will be immediately obvious to environment focussed users of EnvIS.

Features from HAPMS and SMIS will be immediately apparent to the user looking at the trunk road network and their corresponding relationship with the Ordnance Survey National Grid. The use of Accident statistics however, lends a degree of additional information that may relate to incidences of road kill and the potential requirement of specialist Wildlife structures such as underpasses. It is by the interrogation of the co-location of these different data items in relation to the Ordnance Survey National Grid that allows users to make informed planning decisions.

Finance and Project systems also allow the identification of 'project output' and overall support of assessment of HA key performance indicators.

## 4 WHAT IS EnvIS DATA MANAGEMENT?

EnvIS data management is about a Service Provider maintaining Environmental inventory records for Elements and any associated environmental management information records (emi) of those Elements.

Service Providers will maintain local databases of EnvIS data (including GIS) and supply new and changed data to the HA as required

### 4.1 RECORD TYPES

There are different record types that cover all Service Provider supplied EnvIS data;

- **Environmental inventory record** - An environmental inventory record details the physical characteristics of an Environmental Element - what it is, where it is – spatially referenced to the Ordnance Survey National Grid, and, where appropriate, intended HA and environmental objectives.
- **environmental management information record** - An environmental management information (**emi**) record details management information, where appropriate, about an Element including details of any commitments made, the condition of the Element and identified environmental management actions
- **Attach documents records** – A number of file formats facilitates a Service Provider to submit electronic documents that relate to an environmental inventory record for subsequent referral through the use of HAGIS. Documents may be attached to Inventory items or Container records. These are defined later in this Part.

Details on the purpose and application of environmental inventory, environmental management information, and attach documents records are supplied in Parts 2 and 3 respectively.

### 4.2 DATA MANAGEMENT

#### 4.2.1 Provision of Third Party data

Third party data will be available centrally within HA and used as layers in EnvIS. Other supplied data will be displayed in its relative Ordnance Survey National Grid spatial position. Third Party data sets are represented as, point, polyline or polygon features. Service Providers will be expected to make use of centrally sourced National Designations. Service Providers will not be expected to supply nationally available designations that are already part of the default EnvIS GIS layers.

#### 4.2.2 Provision of Look Up tables

The HA will supply look up tables of data to Service Providers to assist in the provision of accurate and compliant data. Specific file specifications in Annex A will make reference to the use of look up tables.

An example of a centrally provided look up table is the UK taxonomy listing provided by the JNCC (Joint Nature Conservation Committee). This table has all species of interest to the HA with the unique key that identifies it in the UK Taxon listing coupled with all legislative assignments where applicable. The HA will make use of this national Taxonomy key to cross reference to other environmental records such as identifying legislated weeds and pests. Although the complete Taxonomy table will be issued by the HA, only a subset of its contents are required for EnvIS use.

The use of centrally provided look up tables is aimed at reducing data capture effort and improving the quality of supplied data by preventing any other values being used or typed by various users.

#### **4.2.3 HA and Environmental Objectives**

Two look up tables are provided for these values. Each objective has a start and end date associated with it. As and when the HA makes a change to any objective, an end date will be assigned to the objective being replaced and any new objectives given a new start date but with no end date.

NOTE: Service Providers must only select those objectives that have a start date with no end date when assigning them to new environmental inventory Elements.

Interim Advice

## 5 DATA COLLECTION AND SUBMISSION

EnvIS data management relies upon the submission by Service Providers of Interface files for environmental inventory, environmental management information, and attach documents record types at defined intervals. The adherence to EnvIS interface file specifications ensures the consistency of data definition and reporting. Service Providers will supply data in a standard format that includes spatial references, corresponding to the Ordnance Survey National Grid of the United Kingdom, to the HA.

That data will be transformed into visible layers in HAGIS. Service Providers with HA Extranet access will be able to view, report and retrieve their data in the EnvIS version of HAGIS. The interface file specifications to which all Service Providers must adhere to are provided in Annex A.

### 5.1 EnvIS INTERFACE FILE SPECIFICATIONS AND DATA RULES

Interface file specifications are detailed in Annex A. There is a generally consistent pattern to the structure of each record type. Two of the key identifiers are mentioned here. For ease of interoperability with other systems the HAID, referred to below, will be defined as a Varchar (Text) field type but will be represented by a 10 digit unique numeric value. This field will only contain numeric values. All HA assigned unique IDs will follow the same format.

#### 5.1.1 10 character Unique Identifiers- HAID, DOCID, CONTID, ATTACH\_ID, HAEMIID etc

The only defining key that links all environmental inventory subsets is the use of a unique key created by HA to identify any single Element within and surrounding the HA network. The HA will reference each environmental inventory record supplied and accepted with a 10 digit unique key, known as the HAID. This means that every successfully accepted environmental inventory record can occur only once on the network. All subsequently supplied records will reference this unique identifier. This key will be used to display the reference number in a standard format on reports and on layers in the GIS tool.

Other HA assigned unique identifiers occur in other record types. These will all be 10 character Varchar(Text) fields containing only numeric values to facilitate proprietary GIS software users.

#### 5.1.2 Agent\_ID

The HA will provide a unique ID known as Agent\_ID to each Service Provider supplying EnvIS data. The Agent\_ID will be unique to each Agent/Project combination. Thus, if a Service Provider is allocated a key for a project, this key will not be valid for another project. The purpose of this is to link this identifier with the Service Provider supplied Element unique key to make a reasonably secure key by which to identify individually supplied Environmental inventory items. Agent\_ID and Element Unique ID combinations can be very long and will not be used on screen displays of layers or as a default key in reports. The ten digit HA Unique ID (HAID) will be used for display and reporting purposes.

#### 5.1.3 File Formats

All interface file specifications supplied as TXT files will comply with the basic format of File Header, Detail and File Footer as shown below. Owing to the nature of variable content where descriptions need to be entered, records will be of variable length and not fixed length. No padding is expected for bytes not populated with data. All files are delimited with TAB characters. As an alternative, Service Providers may supply all the associated data in GIS files, in which case no header or footer is supplied and the files are not TAB delimited as they fit GIS file format definitions.

NOTE: Service Provider's supplying GIS files MUST ensure that where a NULL value is specified in a field definition rule, they must use a ZERO value Service providers may NOT create their own table definitions or alter the content or keys of acceptable values for fields defined the files specifications. Table structures and permissible content will be defined by the HA and relevant amendments will made and published by the HA only when approved changes have been created and tested. Associated changes to look up tables will be managed similarly.

#### File Header

ENVIS\_Header(TAB Character)File\_name(TAB Character)Create\_date

**Note: the brackets are not to be included. Header details not required for MDB or DBF files. They are mandatory for TXT files.**

#### Detail

Variable length TAB delimited as per each specification. Note: Column headings must be supplied and if ESRI shapefiles are supplied then the DBF\_FIELD must be used for the column headings. Users of the DBF format must note that the maximum field size for Varchar fields is 254 character and not 255 as defined in the standard. Field sizes for free format or Varchar fields are stated as a maximum length

#### File Footer

ENVIS\_Footer(TAB Character)File\_name(TAB Character)Record\_count

**Note: the brackets are not to be included. Footer details not required for MDB or DBF files. They are mandatory for TXT files.**

The Service Provider is required to submit environmental inventory and environmental management records in accordance with requirements set out above. The environmental inventory record is the primary record for an Element and there are many different file specifications for each of the Element types. In principle, an environmental inventory record must exist before emi records can be assigned to it. An environmental inventory record must always exist before an emi record can be submitted to HA. However, in circumstances that would create an unnecessary time delay in submitting an environmental inventory record before receiving an HA unique ID (HAID) to use in the submission of an emi record an agent may elect to submit an emi record by supplying the Local\_ref as a concatenation of the Agent\_ID and Element\_Unique\_ID used in the environmental inventory record. This is detailed in the emi file layouts in Annex A.

#### 5.1.4 Objectives

Two types of objectives are required for certain records. These are described in detail in Part 2. There are HA Objectives and Environment Objectives. These are supported by look up tables for both. The basic rule is that a primary objective of each type must be supplied as a minimum where management intervention will be required for the Inventory item. The look up tables support the rule that the objective for a record type must belong to the owning dataset i.e. for a Landscape inventory item; the primary objectives can only be those that belong to Landscape. The secondary and tertiary objectives may come from any of the datasets. So a Landscape inventory item will have a Primary objective belonging to Landscape but may have a secondary objective from NCE and a tertiary objective from Noise for instance. This basic rule applies to all dataset types. Objectives may only be submitted that have start date but no end date set in the look up tables.

### 5.1.5 Removal of Inventory Elements

In the event that an existing Inventory Element is to be partly modified, data must be supplied indicating that the Inventory Element is to be completely removed and replaced by a new planned Element or Elements.

For example, if a section of hedgerow were to be removed, data relating to the management actions of removal and the Planning and Design and Construction (including establishment) would need to be submitted to indicate that both:

- The entire hedgerow was being removed
- A new Element or new Elements were being created for those parts of the hedgerow that are to remain

For example the hedgerow might have an opening cut into it thus creating two new hedgerow Inventory Elements with the original single hedgerow being removed.

### 5.1.6 Change of status of Inventory Elements

Environmental elements have an asset status. These are Planned, Existing, Removed, On-hold and Abandoned. The normal process of changing a status after an inventory has been recorded with a status is via the submission of emi records. For example, an Inventory Element may be recorded as a PLANNED asset. The receipt and satisfactory processing of an ACTUAL CONSTRUCT/IMPLEMENT emi record will set the status of that asset to EXISTING. Similarly the receipt and satisfactory processing of an ON-HOLD emi record will set the status of the asset to ON-HOLD. Initially, there will be a pre-dominance of Inventory Elements recorded with an asset status of EXISTING recorded. The change of asset status will be more evident in the new build scenario.

### 5.1.7 Invalid File Submission

Invalid interface file specifications and invalid data will result in the rejection of records and files with an accompanying error report dispatched to the Service Provider for remedial action.

### 5.1.8 Frequency of Data Submission

EnvIS data management relies upon the submission by Service Providers of interface files for environmental inventory and environmental management information record types at regular intervals. Service Providers will submit EnvIS data via the interface file specifications as set out in Annex A. The frequency of the data submission is dependent upon the nature of the work being carried out by Service Providers on the HA network. It should be noted that the requirement is to provide new or changed data only. There is no requirement to re-survey existing environmental inventory data. A data conversion exercise has already taken place within the HA based upon old EDB (Environmental Database) data for Landscape and NCE datasets.

Designers will submit EnvIS data at three clearly defined milestones during the life of a contract. These milestones are as follows:

- **Development Phase (Preliminary Design)** - Environmental Assessment/Statement Publication – environmental data resulting from the statutory or non-statutory assessment of the Preferred Route. Designers collect and submit EnvIS data for all Elements that have influenced or are influenced by the Preferred Route.
- **Development Phase (Construction Preparation)** - Detailed Design Drawings – environmental data detailing the final specification of the project. Designers collect and submit EnvIS data detailing all Elements associated with the planning and design of the project and planned environmental management actions that will be undertaken during the construction period and of the existing Elements likely to be

affected.

- **Construction Phase (Construction)** - As Built Drawings - environmental data detailing the completion of the project prior to handover. Designers collect and submit EnvIS data detailing all Elements associated with the construction of the project and planned environmental management actions that are required to be undertaken by the Network Management Agent as part of operating and maintaining the network Area.

Environmental inventory and emi data must be submitted by Service Providers, in accordance with the interface file specifications set out in this Part. The frequency of environmental inventory data submission, to the HA, is to be in line with the timescales indicated below. A detailed discussion on the frequency of data submission is provided in Part 1.

Designers must submit environmental inventory and emi data at the following three milestones:

- Development Phase (Preliminary Design) - Environmental assessment/statement publication;
- Development Phase (Construction Preparation) - Detailed Design drawings; and
- Construction Phase (Construction) - As Built drawings.

Network Management Agents must submit environmental inventory and emi data in accordance with the following frequencies:

- Quarterly submission (with the exception of waste and material resources) of changed data; and
- Annual submission, at the beginning of the financial year (April), of waste and material resources environmental inventory and emi data.

In scenarios where the minimum submission events would mask the situation say such as damage to an Element changing the condition and the subsequent repair restoring the condition to the previous state, then data will be submitted to provide the full history of events.

#### **5.1.9 EnvIS Data Processing**

EnvIS data will be submitted by the Service Provider to:

EnvIS Management Team (EMT)  
Highways Agency  
Lateral  
8 City Walk  
Leeds  
LS11 9AT

Data will be supplied on a winzip encrypted compact disc with a covering note. This note should provide the contact details of the supplier, their Agent ID and a brief description of the files contained therein. The encryption code should be emailed separately to [EnvIS\\_Support@highways.gsi.gov.uk](mailto:EnvIS_Support@highways.gsi.gov.uk). Guidance on encryption can be obtained from [EnvIS\\_Support@highways.gsi.gov.uk](mailto:EnvIS_Support@highways.gsi.gov.uk). GIS details must be submitted for environmental inventory items.

## **6 EnvIS RESOURCE REQUIREMENTS**

Service Providers will require some specialised resources in order to comply with the rules governing the supply and maintenance of EnvIS data.

Service Providers will be required to maintain individual systems that can record Elements as defined in Part 2 Annex A. Each Element must additionally be geospatially located with a GIS tool. Service Providers systems must be capable of exporting EnvIS data to the standards set out in each interface file specification.

Service Providers will be expected to maintain currency of data reflecting the details of Elements within the prescribed minimum data submission periods. Activity and lack of activity in submitting data will be monitored to ensure compliance.

### **6.1 SPECIALIST RESOURCES**

This list is not exhaustive, nor is it prescriptive. The resources listed below are considered to be a basic requirement in order to comply with EnvIS data management.

#### **6.1.1 Geographical Information System (GIS)**

Service Providers will be expected to use or have access to a GIS system and specialist GIS trained personnel in order to capture the spatial extent of Elements and the associated environmental attributes.

#### **6.1.2 Database Administrators (DBA)**

Service Providers may need access to DBA personnel in order to manage the standard set of lookup tables and the necessary import and export routines for data transfer between the HA and agent.

#### **6.1.3 Analyst/Programmers**

Service Providers may require analyst and programmer resources to develop local applications for assigning attribute data to EnvIS Elements.

### **6.2 GENERIC PROCESS MANAGEMENT**

There are a number of generic processes that need to be undertaken in the maintenance of EnvIS data by Service Providers. How a Service Provider undertakes these processes is not prescriptive. They are mentioned here as they will affect resource requirements.

#### **6.2.1 Drawing conversion**

Most design drawings usually start off as CAD drawings. These drawings serve a purpose as a two dimensional representation of objects of interest on the ground. They do not, on the whole, satisfy the strict requirements of GIS standards. Consideration needs to be given to the conversion process required for existing working documents and the process for going forward by reducing effort and including GIS standards as a design constraint in the first instance.

#### **6.2.2 Look Up Table management**

The HA will supply many look up tables. These may change from time to time and will be need to be maintained in line with new or updated tables issued by the HA. Only the variants issued by the HA will be acceptable for valid values submitted to the HA. Local variants are not acceptable. If a change is required, then the change request should be submitted to [EnvIS\\_Support@highways.gsi.gov.uk](mailto:EnvIS_Support@highways.gsi.gov.uk). There will be a local requirement to maintain tables specific to each Service Provider such as `lut_pin` which would contain details of projects that apply to that Service Provider.

### **6.2.3 Assigning attributes to Elements**

The need to assign attributes to Elements is explicitly stated in each interface file specification.

### **6.2.4 Import/Export routines**

Processes will have to be managed for both the import and export of data between the HA and Service Providers. Unless fully automated processes are put in place, the average user will not be capable of exporting data to the designed standard nor of importing it and ensuring that it meets all criteria for Service Provider systems.

## 7 GIS REQUIREMENTS

The HA does not prescribe the use of any particular GIS tool. The HA recognizes that Service Providers have invested in tools of their choice and is only interested in the consistent recording and submission of ENVIS data. The HA has, however, recognized certain applications as being more acceptable for outputting GIS data from their native formats into an acceptable format. The formats detailed below are the only formats that are acceptable;

- ESRI shapefile/dbf - shapefiles supplied must use the DBF\_FIELD name defined in each record type. Note: The DBF\_FIELD is always defined in UPPERCASE and limited to 10 characters including underscores. If supplying separate shapefiles for different geometry types they should be suffixed \_POLY, \_LINE or \_POINT. All shapefiles should be named as stated in the inventory file structure (for example ENVIS\_LAND\_VEGETATION\_POINT.dbf
- TABLE naming convention. Tables supplied must comply with the following permitted table names. No other table names will be acceptable. The convention applies to all tables submitted so care must be taken in your export routine to ensure compliance. Failure to comply with this convention will result in a critical failure resulting in the rejection of the data from the automated loading tool used to process submitted files.

ENVIS\_LAND\_GRASS  
ENVIS\_LAND\_GRASS\_POLY  
ENVIS\_LAND\_VEGETATION\_POINT  
ENVIS\_LAND\_VEGETATION\_POLY  
ENVIS\_LAND\_ACCESSIBILITY  
ENVIS\_LAND\_ACCESSIBILITY\_LINE  
ENVIS\_LAND\_EARTHWORKS  
ENVIS\_LAND\_EARTHWORKS\_POLY  
ENVIS\_LAND\_HARD\_FEATURE\_LINE  
ENVIS\_LAND\_HARD\_FEATURE\_POINT  
ENVIS\_LAND\_HARD\_FEATURE\_POLY  
ENVIS\_LAND\_HEDGES  
ENVIS\_LAND\_HEDGES\_LINE  
ENVIS\_LAND\_WATER  
ENVIS\_LAND\_WATER\_POLY  
ENVIS\_WATER\_SOURCE\_CONTINUOUS  
ENVIS\_WATER\_SOURCE\_CONTINUOUS\_LINE  
ENVIS\_WATER\_SOURCE\_OI\_LINE  
ENVIS\_WATER\_SOURCE\_OI\_POINT  
ENVIS\_WATER\_SOURCE\_OI\_POLY  
ENVIS\_WATER\_SOURCE\_POINT  
ENVIS\_WATER\_SOURCE\_POINT\_POINT  
ENVIS\_WATER\_SOURCE\_REGIONAL  
ENVIS\_WATER\_SOURCE\_REGIONAL\_POLY  
ENVIS\_WATER\_SOURCE\_TP\_DISCHARGE  
ENVIS\_WATER\_SOURCE\_TP\_DISCHARGE\_POINT  
ENVIS\_WATER\_RECEP\_SURF\_LINE  
ENVIS\_WATER\_RECEP\_SURF\_POLY  
ENVIS\_WATER\_RECEP\_GROUND  
ENVIS\_WATER\_RECEP\_GROUND\_POLY  
ENVIS\_WATER\_RECEP\_FLOOD  
ENVIS\_WATER\_RECEP\_FLOOD\_POLY  
ENVIS\_NCE\_HABITAT\_LINE  
ENVIS\_NCE\_HABITAT\_POLY

ENVIS\_NCE\_SPECIES\_POINT  
ENVIS\_NCE\_SPECIES\_POLY  
ENVIS\_NCE\_WILDLIFE\_STRUCTURES\_LINE  
ENVIS\_NCE\_WILDLIFE\_STRUCTURES\_POINT  
ENVIS\_NOISE\_RSS  
ENVIS\_NOISE\_RSS\_POLY  
ENVIS\_NOISE\_SCREENING\_LINE  
ENVIS\_NOISE\_SCREENING\_POLY  
ENVIS\_NOISE\_SR  
ENVIS\_NOISE\_SR\_POLY  
ENVIS\_CULT\_HERIT\_POINT  
ENVIS\_CULT\_HERIT\_POLY  
ENVIS\_CULT\_HERIT\_LINE  
ENVIS\_AIR\_QUAL\_SOURCE  
ENVIS\_AIR\_QUAL\_SOURCE\_POLY  
ENVIS\_AQMA\_STATUS  
ENVIS\_AQMA\_STATUS\_POLY  
ENVIS\_STUDY\_SURVEY  
ENVIS\_STUDY\_SURVEY\_POLY  
ENVIS\_WMF  
ENVIS\_WMF\_POLY  
ENVIS\_COMM  
ENVIS\_EMI  
ENVIS\_EMI\_WASTE  
ENVIS\_EMI\_MAT  
ENVIS\_DOCUMENT  
ENVIS\_CONTAINER  
ENVIS\_CONTAINER\_POLY  
ENVIS\_ATTACH\_CONTAINER  
ENVIS\_ATTACH\_INV

- ESRI Personal GEODATABASES versions 9.0, 9.1 and 9.2 (mdb files) must have table names compliant with the list above and must use the DBF\_FIELD name defined in each record type. Note: The DBF\_FIELD is always defined in UPPERCASE and limited to 10 characters including underscores. If supplying separate tables for different geometry types they should be suffixed \_POLY, \_LINE or \_POINT. All tables should be named as stated in the inventory file structure (for example ENVIS\_LAND\_VEGETATION\_POINT).
- ESRI personal databases Exports from AutoCAD are acceptable if generated from MAP or MAP3D. See ESRI shapefile above
- TXT files must follow the same naming convention as the table list above
- MAPINFO - MIF/MID files. If supplying separate files for different geometry types they should be suffixed \_POLY, \_LINE or \_POINT as per the table list above. All files should be named as stated in the inventory file structure (for example ENVIS\_LAND\_VEGETATION\_POINT.mif)
- NULL requirements in field types Integer, or Decimal will be converted to ZERO by Service Providers.. Failure to do so will result in critical failures during the data load process and result in a rejection of the data for correction.

- Alternate GIS formats may be acceptable, but must be tested and agreed in writing by the HA prior to use.

GIS file attributes require a link to relevant environmental inventory Elements. The minimum requirement will be for the Agent\_ID and Element\_Unique\_ID to link GIS data with environmental inventory Elements.

GIS file format specifications are proscribed within their own branded applications are not defined in this Part. EnvIS is able to accept certain GIS file formats described in Chapter 2 of this Part.

### **7.1.1 GIS data quality requirements**

Service Providers must ensure that the following conditions are met before transmission of data files to the HA;

- All polygon features must be closed, with coincident start and end vertices.
- Excluded areas (doughnuts) must be voids within the polygon. Another polygon should be submitted to cover the void area (such as a pond in an area of grassland) where the HA is responsible for the land
- All “knots” or “cross-overs” must be removed from polygon features.
- Polygons within a dataset must not overlap.
- Polygons in the landscape layers must not overlap other landscape layer polygons.
- Landscape layer polygons combined must provide coverage for the entire environmental estate
- Instances where such errors exist in files submitted for process by HA will result in the rejection of records failing this quality standard.

### **7.1.2 Ordnance Survey Digitising Issues**

All data should be digitised against the latest available Ordnance Survey Mastermap or Ordnance Survey landline data where those features exist. Where applicable, agents should update their data to reflect any changes in Ordnance Survey National Grid base data caused by resurveys or the Ordnance Survey Positional Accuracy Improvement (PAI) programme.

### **7.1.3 HA Indicative estate**

Service Providers will also be provided with a layer showing the indicative ownership of the HA estate. Excepting any errors or omissions, this dataset represents the expected coverage of environmental inventory polygon layers from each Service Provider. Where Service Providers believe this layer is inaccurate they should bring this to the attention of HA data processing team in Leeds to ensure the records are updated.

## **A1 INTERFACE FILE FORMAT AND DATA RULES**

This Annex contains the detailed interface file specifications that form the basis of data submission standards to the HA for EnvIS.

The basic principles are re-stated in this Annex to facilitate developer and end user interpretation.

### **A1.1 GENERAL PRINCIPLES**

#### **A1.1.1 Uniqueness of Elements**

The only defining key that links all environment classification subsets at a local level is the provision of an Agent Unique Identifier + Element ID (Point, Polyline or Polygon) and Geospatial referencing. This combination should provide a unique local key but this is not considered unique for HA purposes, as there may be cases where these values are duplicated by different Agents. Therefore, an HA Unique ID (HAID) will be created for each environmental inventory Element supplied to the HA. The HA Unique ID will be used to identify environmental inventory Elements and associated environmental management information (emi) records for reporting both in the EnvIS GIS tool and in hard copy reports.

The Commitments, emi, and Waste and Materials emi records will each have a unique key assigned by the HA upon receipt. These unique IDs will be known as HACOMID, HAEMIID, HAEMIWID and HAEMIMID. Where a cross reference to the environmental inventory record is required within these records, reference will be made to the HAID which will form a foreign key in these records.

Document attachment will have unique IDs known as DOCID, CONTID, ATTACH\_ID

#### **A1.1.2 Landscape forms the base layer in EnvIS**

The Landscape polygons, displayed together, form the base layer in EnvIS. All other dataset records are representations of additional specialist information that needs to be associated with the spatial referencing applied to the Landscape layer i.e. they must be referenced to the Ordnance Survey National Grid. The submission of Landscape layer data is the minimum expectation for data supply to the HA. The supply of other dataset data (Nature Conservation & Ecology (NCE), Water, Cultural Heritage, Air Quality, Noise, Material and Waste Flows), is equally important but needs to be viewed in the context of the Landscape feature.

#### **A1.1.3 Agent\_ID**

Each Service Provider needs to be identifiable as a unique entity in providing data for EnvIS. The HA will provide a unique ID known as Agent\_ID to each Service Provider supplying EnvIS data. The purpose of this identifier is to link this with the Service Provider Element unique key to make a locally traceable unique key for an Element against which subsequent data sets may be referenced. The Agent\_ID is project and Service Provider dependent. For example, Service Provider 1 is working on a joint venture for a new build project. An ID will be assigned to the Service Provider in that instance. Service Provider 1 goes on to work with another Service Provider on another joint venture for a different project, A new ID will be assigned to Service Provider 1 on the new project.

Normally a network management Service Provider will use the same Agent\_ID for the bulk of their work but in the case of a LNMS project, then the network Service Provider will have to apply for an ID for that project. In this case say, a network managing Service Provider may have the ID of 2, but for a LNMS project in their area which is separately funded, they may have the ID 9010

All requests for Agent\_IDs will be made to [EnvIS\\_Support@highways.gsi.gov.uk](mailto:EnvIS_Support@highways.gsi.gov.uk)

#### **A1.1.4 Interface File Formats**

All interface files will comply with the basic format of File Header, Detail and File Footer. All files are delimited with TAB characters.

##### File Header

ENVIS\_Header(TAB character)File\_name(TAB character)Create\_date

**Note: the brackets are not to be included. Header details not required for MDB or DBF files. They are mandatory for TXT files.**

##### Detail

Variable length TAB delimited as per each specification.

##### File Footer

ENVIS\_Footer(TAB character)File\_name(TAB character)Record\_count

**Note: the brackets are not to be included. Footer details not required for MDB or DBF files. They are mandatory for TXT files.**

#### **A1.1.5 GIS Data**

GIS data may be supplied in any of the following formats;

ESRI shapefile and MDB files- files of these types supplied must use the DBF\_FIELD name defined in each record type, and must convert NULL requirements to ZERO values for Integer and Decimal field types.

**Note:** The DBF\_FIELD is always defined in UPPERCASE and limited to 10 characters including underscores

ESRI Personal GEODATABASES (only versions 9.0, 9.1 and 9.2 are permitted.)

Note: There is no need to strip out additional columns created in shape or MDB files by the relevant software package. Examples are OBJECTID and SHAPE

MAPINFO - MIF/MID files

**Note:** separate MIF/MID files must be supplied for each record type.

AutoCAD with MAP or MAP3D shape file exports to the standard as defined for ESRI shapefiles.

#### **A1.1.6 GIS File Format**

GIS file attributes require a link to relevant inventory data items. The minimum requirement will be for the Agent\_ID and Element\_Unique\_ID to link GIS data with Inventory attribute data.

Agents supplying GIS files that adhere to the GIS Data section above do not need to supply a separate GIS file.

### **A1.1.7 File extensions**

The only permissible file extensions that will be accepted are;

- .txt
- .dbf
- .mif
- .mid
- .mdb
- .pdf (applies to attached documents)

### A1.2 GIS File Format

For Service Providers opting to supply a file of co-ordinates, rather than native exports from the acceptable GIS formats defined in section 7 to support attribute data as defined in Annex A, they must supply a GIS file of co-ordinates as specified below.

Filename	ENVIS_GIS		
Create date	YYYYMMDD_HHMMSS		
Field	Type	Length	Comments and Rules
HAID	Varchar	10	Created by HA
RECORDTYPE	Varchar	10	INV
SUBSET	Varchar	50	The name of the subset represented by this file for example NCE_Habitat
AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, line or Polygon
GEO_TYPE	Varchar	10	Point, Polyline or Polygon
EASTING	Decimal	8(2)	If Geo_type = Point, then the Easting for the Point, or If Geo_type = Polyline, then the Easting for a Point on or along the Line, or If Geo_type = Polygon, then the Easting for a Point within the Polygon
NORTHING	Decimal	8(2)	If Geo_type = Point, then the Northing for the Point, or If Geo_type = Polyline, then the Northing for a Point on or along the Line, or If Geo_type = Polygon, then the Northing for a Point within the Polygon,
Filename	Varchar	50	ENVIS_GIS
Record count	Integer	6	Record count of detail lines

## A2 LANDSCAPE RECORDS

### A2.1 GRASSLAND RECORDS

#### File header

Filename	ENVIS_LAND_GRASS
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land_Grass
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Grassland_type	GRASS_TYPE	Integer	4	Use <i>lut_grassland_type</i> for these values Supply the ID for the following acceptable values Amenity Grass Areas; Grass Reinforced Walls Grassland with Bulbs; Heath and Moorland Open Grassland; Rock and Scree; Species Rich (or conservation) Grassland;
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_LAND_GRASS
Record count	Integer	6	Record count of detail lines

## A2.2 VEGETATION RECORDS

### File header

Filename	ENVIS_LAND_VEGETATION
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land_Veg
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point, or Polygon
Vegetation_type	VEG_TYPE	Integer	4	<i>Use lut_vegetation_type for these values</i> Supply the ID for the following acceptable values Native Ornamental
Native_Veg_type	NATIVE	Integer	4	<i>Use lut_native_vegetation_type for these values</i> Supply the ID for the following acceptable values Note:unless otherwise specified below, all Vegetation_types have a Geospatial_type of POLYGON Applies if Vegetation_type = Native Else Not Applicable Acceptable values: High Forest; Individual Trees NOTE Geospatial_Type must = POINT; Linear Belts of Trees and Shrubs; Scattered Trees; Scrub; Shrubs; Shrubs with Intermittent Trees; Veteran Tree NOTE Geospatial_Type must = POINT Woodland; Woodland Edge; Not Applicable
Ornamental_Veg_type	ORNAMENTAL	Integer	4	<i>Use lut_ornamental_veg_type for these values</i> Supply the ID for the following acceptable values Applies if Vegetation = Ornamental Else Not Applicable Acceptable values: Amenity Trees and Shrubs; Climbers or Trailers; Groundcover; Offsite Planting; Ornamental Shrubs; Not Applicable
Offsite_planting	OFFSITE	Boolean	1	1 = True 0= False
TPO_type	TROTYPE	Integer	1	<i>Use lut_tpo_type</i> Supply the ID for the following acceptable values Applies if Vegetation_type = Native Individual – (applies to Individual trees or Veteran trees) Blanket TPO (applies to other trees) Not Applicable

Field	DBF_Field	Type	Length	Comments and Rules
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_LAND_VEGETATION
Record count	Integer	6	Record count of detail lines

### A2.3 HEDGE RECORDS

#### File header

Filename	ENVIS_LAND_HEDGES
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land Hedges
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polyline
Vegetation_type	VEG_TYPE	Integer	4	Use <i>lut_vegetation_type</i> for these values Supply the ID for the following acceptable values Native Ornamental
Native_Veg_type	NATIVE	Integer	4	Use <i>lut_native_vegetation_type</i> for these values Supply the ID for the following acceptable values  Applies if Vegetation = Native Else Not Applicable Acceptable values: Combined Hedgerow and Wall Historically Important Hedgerow Native Hedgerows with Trees; Native Species Hedgerows; Native Species Hedgerows (Managed); Not Applicable
Ornamental_veg_type	ORNAMENTAL	Integer	4	Use <i>lut_ornamental_veg_type</i> for these values Supply the ID for the following acceptable values Applies if Vegetation = Ornamental Else Not Applicable Acceptable values: Ornamental Species Hedgerows Not Applicable
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_LAND_HEDGES
Record count	Integer	6	Record count of detail lines

## A2.4 EARTHWORKS RECORDS

### File header

Filename	ENVIS_LAND_EARTHWORKS
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land_Earthwork
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Earthwork	EARTHWORK	Integer	4	Use <i>lut_earthwork</i> for these values Supply the ID for the following acceptable values Earthworks returned to Agricultural use False Cuttings Strengthened Earthworks
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
GDMS_ID	GDMS_ID	Varchar	50	Unique ID for Asset as held in HAGDMS if applicable Else NULL
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_LAND_EARTHWORKS
Record count	Integer	6	Record count of detail lines

## A2.5 WATER BODY RECORDS

### File header

Filename	ENVIS_LAND_WATER
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land_Water_Body
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Waterbody_type	WATERBODY	Integer	4	<i>Use lut_waterbody for these values</i> Supply the ID for the following acceptable values Banks and Ditches Marsh and Wet Grassland; Reed Beds; Water Bodies and Associated Plants
Asset_status	STATUS	Integer	1	<i>Use lut_status for these values</i> Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_LAND_WATER
Record count	Integer	6	Record count of detail lines

## A2.6 HARD LANDSCAPE RECORDS

### File header

Filename	ENVIS_LAND_HARD_FEATURE
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land_Hard_Feature
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point, Polyline or Polygon
Feature_type	FEATURE	Integer	4	Use <i>lut_feature_type</i> for these values Supply the ID for the following acceptable values Fences Other Walls
Feature_char	CHARACTER	Integer	4	Use <i>lut_feature_char</i> for these values Supply the ID for the following acceptable values If Feature_type = WALLS then Block Walls, or Brick Walls, or Dry Stone Walls, or, Stonewalls If Feature_type = FENCES then Highway Boundary Fences or, Railings Else If Feature_type = OTHER then Art, or; Gateway Features, or Paving or. Street Furniture
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g. SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_LAND_HARD_FEATURE
Record count	Integer	6	Record count of detail lines

Interim Advice

## A2.7 ACCESSIBILITY RECORDS

### File header

Filename	ENVIS_LAND_ACCESSIBILITY
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Land Accessibility
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polyline
Feature_type	FEATURE	Integer	4	<i>Use lut_feature_type for these values</i> Supply the ID for the following acceptable values Bridleways Cycle Route Pedestrian Route
Asset_status	STATUS	Integer	1	<i>Use lut_status for these values</i> Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g. SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_LAND_ACCESSIBILITY
Record count	Integer	6	Record count of detail lines

### A3 NATURE CONSERVATION AND ECOLOGY MANAGEMENT RECORDS

#### A3.1 NCE HABITAT RECORDS

##### File header

Filename	ENVIS_NCE_HABITAT
Create date	YYYYMMDD_HHMMSS

##### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	NCE_Habitat
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon or Polyline
Habitat	HABITAT	Varchar	30	Use <i>lut_phase_1</i> for these values Supply the biotope key from <i>lut_phase1</i> (Phase1 Habitat Survey) NOTE: It is not permitted to supply a biotope key for a row that has 1 in the INVALID column. These rows have been highlighted as group headings only. Service Providers must supply a more granular definition from within the table.
UKBAP	UKBAP	Varchar	255	Actual entry in UK BAP
HABAP	HABAP	Integer	4	Use <i>lut_habap</i> for these values HABAP_ID from <i>lut_HABAP</i> if applicable Else NULL
LocalBAP	LOCALBAP	Varchar	255	Actual entry in Local BAP
Wildlife_Corridor	WCORRIDOR	Varchar	255	Description
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 2=Existing 3=Removed
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_NCE_HABITAT
Record count	Integer	6	Record count of detail lines

Interim Advice

### A3.2 NCE SPECIES RECORDS

These are required and the table below specifies the information required.

Initially a Taxon lookup table will be used. This has been supplied by the JNCC (Joint Nature Conservation Committee) and will be updated as and when changes occur. New versions will be published when they occur with the dates they are extant from.

#### File header

Filename	ENVIS_NCE_SPECIES
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	NCE_Species
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point or Polygon
Taxonversion_key	TAXON	Varchar	16	<i>Use lut_taxa for these values</i> The preferred taxonversionkey from lut_taxa Else If a species is not identifiable owing to road kill or inability to identify a specific bat for example then a value of UNSPECIFIED NOTE: The use of UNSPECIFIED is the exception and not the norm. Records containing UNSPECIFIED will be subject to validation and query
Latin_name	LATIN	Varchar	50	<i>Use lut_taxa for these values</i> If Taxonversion_key is populated with the preferred taxonversionkey Then, Preferred name for taxon selected Else NULL
Unspecified_species	UNSPEC	Varchar	50	Brief description of unspecified species e.g. Bat, Owl, Deer NOTE: Values supplied will be analysed and in time a look up table of acceptable values will be created to enable efficient interrogation of this field.
Taxon_Group	TAXONGROUP	Varchar	50	<i>Use lut_taxa for these values</i> If Taxonversion_key = UNSPECIFIED Then The TAXON_GROUP_NAME from lut_taxa e.g Unspecified bat = Terrestrial mammals Else NULL
Survey_season_start	SURV_START	Varchar	2	Displayed as MM
Survey_season_end	SURV_END	Varchar	2	Displayed as MM
UKSAP	UKSAP	Varchar	255	Actual entry in UK SAP

Field	DBF_Field	Type	Length	Comments and Rules
HASAP	HASAP	Integer		Use <i>lut_habap</i> for these values HABAP_ID from <i>lut_habap</i> if applicable Else NULL
LocalSAP	LOCALSAP	Varchar	255	Actual entry in Local SAP
Other_Species_Con servation_Interest	OSCI	Boolean	1	1 = True 0= False
Citation	CITATION	Varchar	255	Citation reference
Wildlife_features	WFEATURE	Integer	4	Use <i>lut_wfeature</i> for these values  Applies to Mammals, Birds, Reptiles, Amphibians, Fish and Invertebrates – see rule matrix
Obstype	OBSTYPE	Integer	4	Use <i>lut_obstype</i> for these values Sighting <b>DOES NOT APPLY</b> to Vascular Plants, Mosses, Liverworts & Hornworts, Lichens, Stoneworts and Fungi Supply the ID for the following acceptable values Anecdotal, Call Road Kill, Sighting, Sign,
Obsdate	OBSDATE	Integer	8	Displayed as YYYYMMDD
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_NCE_SPECIES
Record count	Integer	6	Record count of detail lines

### A3.3 WILDLIFE STRUCTURES RECORDS

#### File header

Filename	ENVIS_NCE_WILDLIFE_STRUCTURES
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	NCE_Structures
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point or Polyline
Structure_type	STR_TYPE	Integer	4	<i>Use lut_wildlife_structure_type for these values</i> Supply the ID for the following acceptable values Wildlife Barrier Wildlife Underpass Structures Wildlife Overpass Structures Wildlife Housing
Structure	STRUCTURE	Integer	4	<i>Use lut_structure for these values</i> Supply the ID for the following acceptable values  If Structure_type = Wildlife Barrier  Then Antidazzle Fencing Badgerproof Fencing or Combined Fencing or Deerproof Fencing, or Electric Fencing, or Livestockproof Fencing Newt/Amphibianproof Fencing, or Otterproof Fencing, or Rabbitproof Fencing, or Reptileproof Fencing  Else  If Structure_type = Wildlife Underpass Structures  Then Amphibian Tunnel Badger Tunnel, Combined Tunnel, Otter Ledge Else  If Structure_type = Wildlife Overpass Structures  Then Badger Bridge, or Bat Bridge, or Deer Bridge, or Dormouse Bridge, or Green/Wildlife Bridge, or Livestock Bridge, or

Field	DBF_Field	Type	Length	Comments and Rules
				Squirrel Bridge Wildlife Warning Post  Else  If Structure_type = Wildlife Housing  Then Artificial Badger Sett, or Artificial Otter Holt, or Artificial Refuge, or Bat Box, or Bird Box, or Dormouse Box/Tube, or Frog/Toad Box, or Hedgehog House, or Insect Box
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_NCE_WILDLIFE_STRUCTURES
Record count	Integer	6	Record count of detail lines

**A3.4 RULE MATRIX FOR WILDLIFE FEATURES**

	Mammals (species)	Birds	Reptiles & Amphibians	Fish	Invertebrates
Breeding Site	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Commuting Route	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Foraging Site/Area	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hibernation Site	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Migration/Dispersal Route	<input checked="" type="checkbox"/>				
Nesting Site	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nursery Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Over Wintering Site	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Spawning Site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Terrestrial Site	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## A4 WATER QUALITY RECORDS

The Water classification is a complex one involving both Source and Receptor records. The Water classification has been filtered to separate out different Source record types and different Receptor record types.

Source record types have been grouped under;

- Point
- Continuous
- Regional
- Discharge

Receptor record types are grouped under;

- Surface
- Ground
- Flood

### NOTE:

The drainage records have a field DDMS\_ID. The purpose of this field is to link to more detailed DDMS details in the DDMS system. Service providers are expected to supply drainage data inventory records regardless of the fact that there may be a record in the DDMS system.

### A4.1 WATER SOURCE POINT (HIGHWAY DRAINAGE POINT)

#### File header

Filename	ENVIS_WATER_SOURCE_POINT
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Source_Point
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point
Highway_Drainage_Type	HDT	Integer	4	Use <i>lut_highway_drainage_type</i> for these values Supply the ID for the following acceptable values Point
Highway_Drainage_Function	HDF	Integer	4	Use <i>lut_highway_drainage_function</i> for these values Supply the ID for the following acceptable values Output Treatment
Point_Drainage_Type	PDT	Integer	4	Use <i>lut_point_drainage_type</i> for these values Supply the ID for the following acceptable values  If Highway Drainage Function = Output Outfall Soakaway  If Highway Drainage Function = Treatment Catchpit Gully Interceptor
Flow_Controls	FC	Integer	4	Use <i>lut_flow_controls</i> for these values Supply the ID for the following acceptable values Flow control present, No flow control present,
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_SOURCE_POINT
Record count	Integer	6	Record count of detail lines

## A4.2 WATER SOURCE CONTINUOUS (HIGHWAY DRAINAGE CONTINUOUS)

### File header

Filename	ENVIS_WATER_SOURCE_CONTINUOUS
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Source_Continuous
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polyline
Highway_Drainage_Type	HDT	Integer	4	Use <i>lut_highway_drainage_type</i> for these values Supply the ID for the following acceptable values Continuous
Highway_Drainage_Function	HDF	Integer	4	Use <i>lut_highway_drainage_function</i> for these values Supply the ID for the following acceptable values Combined or Output
Subsurf_type	SUBSURF	Integer	4	Use <i>lut_subsurf_type</i> for these values Supply the ID for the following acceptable values Sub-surface items Surface and Sub-surface channels and drain items Surface Channel Items
Drainage_type_1	DT1	Integer	4	Use <i>lut_drainage_type_1</i> for these values Supply the ID for the following acceptable values If Highway_Drainage_Function = Output, And,  If Subsurf_type = Sub-surface items  Then Culvert or Land Drainage Else,  If Subsurf_type = Surface Channel Items  Then Grip or Piped Grip Else,  If Subsurf_type = Surface and Sub-surface channels and drain items  Then Counterfort Drain or Informal Drain Else, If Highway_Drainage_Function = Combined, And,

Field	DBF_Field	Type	Length	Comments and Rules
				<p>If Subsurf_type = Surface Channel Items</p> <p>Then Ditch or Swales and Grassed Channels Else,</p> <p>If Subsurf_type = Surface and Sub-surface channels and drain items</p> <p>Then Filter Drain Narrow Filter Drain, Combined surface and groundwater filter drains</p>
Drainage_type_2	DT2	Integer	4	<p>Use <i>lut_drainage_type_2</i> for these values Supply the ID for the following acceptable values If Drainage_type_1 = Culvert or Land Drainage, Or</p> <p>If Subsurf_type = Surface and Sub-surface channels and drain items</p> <p>Then 'Not Applicable' Else</p> <p>If Drainage_type_1 = Grip ,or Ditch, or Swales and Grassed Channels</p> <p>Then Lined or Unlined Else NULL</p>
DDMS_ID	DDMS_ID	Varchar	50	<p>Unique ID for Asset as held in HADDMS if applicable Else NULL</p>
Asset_status	STATUS	Integer	1	<p>Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned</p>
HA_Obj_1	HAOBJ1	Integer	4	<p>Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL</p>
HA_Obj_2	HAOBJ2	Integer	4	<p>Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL</p>
HA_Obj_3	HAOBJ3	Integer	4	<p>Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL</p>
Env_Obj_1	ENVOBJ1	Integer	4	<p>Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL</p>
Env_Obj_2	ENVOBJ2	Integer	4	<p>Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL</p>
Env_Obj_3	ENVOBJ3	Integer	4	<p>Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL</p>

Field	DBF_Field	Type	Length	Comments and Rules
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_SOURCE_CONTINUOUS
Record count	Integer	6	Record count of detail lines

### A4.3 WATER SOURCE REGIONAL (HIGHWAY DRAINAGE REGIONAL)

#### File header

Filename	ENVIS_WATER_SOURCE_REGIONAL
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Source_Regional
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Highway_Drainage_Type	HDT	Integer	4	Use <i>lut_highway_drainage_type</i> for these values Supply the ID for the following acceptable values Regional
Highway_Drainage_Function	HDF	Integer	4	Use <i>lut_highway_drainage_function</i> for these values Supply the ID for the following acceptable values Combined or Treatment
Regional_Drainage_type	RDT	Integer	4	Use <i>lut_regional_drainage_type</i> for these values Supply the ID for the following acceptable values If Highway Drainage Function = Combined then; Retention Pond Infiltration Basin Wetland  If Highway Drainage Function = Treatment, then Detention Pond, Pollution Containment Pond/Tank, Sedimentation Pond,
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_SOURCE_REGIONAL
Record count	Integer	6	Record count of detail lines

#### A4.4 WATER SOURCE OTHER OUTPUTS/INPUTS

##### File header

Filename	ENVIS_WATER_SOURCE_OI
Create date	YYYYMMDD_HHMMSS

##### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Source_OI
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point, or Polyline, or Polygon
Highway_Drainage_Type	HDT	Integer	4	Use <i>lut_highway_drainage_type</i> for these values Supply the ID for the following acceptable values Continuous or Point or Regional
Highway_Drainage_Function	HDF	Integer	4	Use <i>lut_highway_drainage_function</i> for these values Supply the ID for the following acceptable values Input or Output
Depot_discharge_status	DIS_STATUS	Integer	4	Use <i>lut_depot_discharge_status</i> for these values Supply the ID for the following acceptable values Consented Unconsented
Depot_discharge_items	DIS_ITEMS	Integer	4	Use <i>lut_depot_discharge_items</i> for these values Supply the ID for the following acceptable values Foul Sewer, Groundwater Surface water
Catchment_Area_Discharge_Data	CADD	Varchar	255	Free format
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_SOURCE_OI
Record count	Integer	6	Record count of detail lines

## A4.5 WATER SOURCE THIRD PARTY DISCHARGE

### File header

Filename	ENVIS_WATER_SOURCE_TP_DISCHARGE
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Source_TP_Disch
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point
Highway_Drainage_Type	HDT	Integer	4	Use <i>lut_highway_drainage_type</i> for these values Supply the ID for the following acceptable values Point
Highway_Drainage_Function	HDF	Integer	4	Use <i>lut_highway_drainage_function</i> for these values Supply the ID for the following acceptable values Input
Third_Party	TPARTY	Varchar	255	Supply detail of third party responsible for discharge into HA drainage system
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_WATER_SOURCE_TP_DISCH
Record count	Integer	6	Record count of detail lines

#### A4.6 WATER RECEPTOR SURFACE (SURFACE WATER RECEPTOR)

##### File header

Filename	ENVIS_WATER_RECEP_SURF
Create date	YYYYMMDD_HHMMSS

##### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Recep_Surf
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polyline or Polygon
Water_Resource	WATERRES	Integer	4	Use <i>lut_water_resource</i> for these values Supply the ID for the following acceptable value Surface Water
Water_Type	WATERTYPE	Integer	4	Use <i>lut_water_type</i> for these values Supply the ID for the following acceptable values Freshwater Tidal Water
Water_Feature	WFEATURE	Integer	4	Use <i>lut_water_feature</i> for these values Supply the ID for the following acceptable values  If Water_Type = Freshwater  Then Canal, or Lake/Pond, or Main river, or Ordinary Water Course, or Else  If Water_Type = Tidal Water  Then Coastal Estuarine
EC_Fisheries_Designation	ECFD	Integer	4	Use <i>lut_ec_fisheries_designation</i> for these values Supply the ID for the following acceptable values  If Water_Type = Freshwater  Then Salmonid, or Cyprinid, or None  Else, Not Applicable
GQA_Aesthetics	GQAA	Integer	4	Use <i>lut_gqa_aesthetics</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then 1, 2, 3, 4, Else 'Not Applicable'

Field	DBF_Field	Type	Length	Comments and Rules
GQA_Biological	GQAB	Integer	4	Use <i>lut_gqa_biological</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then A, B, C, D, E, F , Else 'Not Applicable'
GQA_Chemistry	GQAC	Integer	4	Use <i>lut_gqa_chemistry</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then A, B, C, D, E, F Else 'Not Applicable'
GQA_Nutrients_Nitrates	GQANN	Integer	4	Use <i>lut_gqa_nutrients_nitrates</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then 1, 2, 3, 4, 5 or 6, Else 'Not Applicable'
GQA_Nutrients_Phosphates	GQANP	Integer	4	Use <i>lut_gqa_nutrients_phosphates</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then 1, 2, 3, 4, 5 or 6, Else 'Not Applicable'
River_Ecosystem_Classification	RIVECOSYS	Integer	4	Use <i>lut_river_ecosystem_classification</i> for these values Supply the ID for the following acceptable values If Water_Type = Freshwater and Water_Feature not equal to Freshwater Lake/Pond Then RE1, RE2, RE3, RE4, RE5 or 'Not defined', Else 'Not Applicable'
OECD_Scheme_Classification	OECDSC	Integer	4	Use <i>lut_oecd_scheme_classification</i> for these values Supply the ID for the following acceptable values If Water_Feature = Freshwater Lake/Pond, then Ultra-Oligotrophic, or Oligotrophic, or Mesotrophic, or Eutrophic, Hypertrophic, or Not defined Else 'Not Applicable'
Tidal_Water_Classification	TWC	Integer	4	Use <i>lut_tidal_water_classification</i> for these values Supply the ID for the following acceptable values If Water_Feature = Tidal Water Estuarine then Good, or Fair, or Poor, or Bad, Else 'Not Applicable'
Abstraction	ABSTRACT	Boolean	1	1 = True 0= False

Field	DBF_Field	Type	Length	Comments and Rules
Responsibility	RESP	Varchar	50	Acceptable values Highways Agency. or Third Party (Define)
Abstraction_rate	ABSRATE	Integer	10	Applies only if Abstraction = True Expressed as <b>Rate in m<sup>3</sup> per day</b>
Monitoring	MONITORING	Boolean	1	1 = True 0= False
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	<i>Use lut_status for these values</i> Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_RECEP_SURF
Record count	Integer	6	Record count of detail lines

## A4.7 WATER RECEPTOR GROUND (GROUND WATER RECEPTOR)

### File header

Filename	ENVIS_WATER_RECEP_GROUND
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Recep_Ground
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Water_Resource	WATERRES	Integer	4	Use <i>lut_water_resource</i> for these values Supply the ID for the following acceptable value Ground Water
Water_Feature	WFEATURE	Varchar	12	Acceptable values: Always = 'Ground Water'
Groundwater_type	GWTYPE	Integer	1	Use <i>lut_groundwater_type</i> for these values Supply the ID for the following acceptable values 1 = Major Aquifer 2 = Minor Aquifer 3 = Non-Aquifer
SVC	SVC	Integer	4	Use <i>lut_svc</i> for these values Supply the ID for the following acceptable values Soil vulnerability classification applies If Groundwater_type = 1 or 2– Then H1, or H2, or H3, or I1, or I2, or L Else Not Applicable
SPZ_type	SPZTYPE	Integer	4	Use <i>lut_spz_type</i> for these values Supply the ID for the following acceptable values R1, or R2, or R3, R4, or R5
SPZ	SPZ	Integer	4	Use <i>lut_spz</i> for these values Supply the ID for the following acceptable values Source Protection Zone applies If Groundwater_type = 1 or 2, Then 1, or 2, or 3 or 4 Else Not Applicable
Abstraction	ABSTRACT	Boolean	1	1 = True 0= False
Abstraction_rate	ABSRATE	Integer	10	Applies only if Abstraction = True Expressed as <b>Rate in m<sup>3</sup> per day</b>
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned

Field	DBF_Field	Type	Length	Comments and Rules
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from lut_ha_obj Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from lut_ha_obj Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from lut_ha_obj Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_RECEP_GROUND
Record count	Integer	6	Record count of detail lines

## A4.8 WATER RECEPTOR FLOOD (FLOODPLAIN RECEPTOR)

### File header

Filename	ENVIS_WATER_RECEP_FLOOD
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Water_Recep_Flood
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Water_Resource	WATERRES	Integer	4	Use <i>lut_water_resource</i> for these values Supply the ID for the following acceptable value Flood Plain
Water_Feature	WFEATURE	Varchar	11	Acceptable values: Always = Flood Plain
Category	CATEGORY	Integer	4	Use <i>lut_category</i> for these values Supply the ID for the following acceptable values Functional No defined floodplain Passive River Tidal
Flood_likelihood	FLIKLEY	Integer	4	Use <i>lut_flood_likelihood</i> for these values Supply the ID for the following acceptable values  River, Tidal
Classification	CLASS	Integer	4	Use <i>lut_classification</i> for these values Supply the ID for the following acceptable values  Significant, Moderate, Low
Flooding_event	FLEVENT	Integer	8	If Category= 'No defined floodplain' then 'Date of event' displayed as YYYYMMDD Else NULL
DDMS_ID	DDMS_ID	Varchar	50	Unique ID for Asset as held in HADDMS if applicable Else NULL
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_WATER_RECEP_FLOOD
Record count	Integer	6	Record count of detail lines

## A5 CULTURAL HERITAGE RECORDS

### A5.1 CULTURAL HERITAGE

#### File header

Filename	ENVIS_CULT_HERIT
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Cult_Herit
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Point, Polyline or Polygon
Protection_Grade	PROTGRADE	Integer	4	<i>Use lut_protection_grade for these values</i> Supply the ID for the following acceptable values Historic Wreck Listed Building Non-designated Parks or Gardens of Special Historic Interest Register of Historic Battlefields Scheduled Ancient Monument World Heritage Site Listed Building beyond 100m of HA boundary
Listed_Grade	LBGRADE	Integer	4	<i>Use lut_listed_grade for these values</i> Supply the ID for the following acceptable values  Applies only if Protection_Grade = Listed Building, or Listed Building beyond 100m of HA boundary or Parks or Gardens of Special Historic Interest  New and old values 1 (I)or, 2 (II*) or, 3 (II)or A or B or C or NG Else NULL
Grade_Number	GRADENO	Varchar	50	If Protection_Grade = Listed Building or Listed Building beyond 100m of HA boundary or Parks or Gardens of Special Historic Interest Supply the Listed Building Number or the unique ID supplied for the park or garden from English Heritage for the Asset as appropriate, Else, If Protection_Grade = Scheduled Ancient Monument SAM monument number Else If Protection_Grade = World Heritage Site Supply the WHS monument number Else NULL

Field	DBF_Field	Type	Length	Comments and Rules
Local_HER	LOCALHER	Varchar	50	Local HER Monument number NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Short_Desc	SHORTDESC	Varchar	255	Free format
Feature_class	FEATCLASS	Integer	4	<i>Use lut_feature_class for these values</i> Supply the ID for the following acceptable values Buried material Earthworks Findspot Historic landscape Industrial Palaeoenvironmental Standing structure Underwater
Type	TYPE	Varchar	255	<i>Use thesaurus and thesaurus_classification_groups for these values</i> Acceptable values:  <b>LIST of TYPES available from</b> Defence of Britain Thesaurus Thesaurus of Monument Types English Heritage Thesaurus of Maritime Craft Types English Heritage Historic Aircraft Thesaurus NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Class	CLASS	Integer	4	<i>Use lut_class for these values</i> Supply the ID for the following acceptable values Agriculture and Subsistence Civil Commemorative Commercial Communications Defence Domestic Education Gardens Parks and Urban Spaces Health and Welfare Industrial Maritime Monument – by form Recreational Religious, Ritual and Funerary Transport Unassigned Water supply and drainage NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Form	FORM	Integer	4	<i>Use lut_monument_form for these values</i> Supply the ID for the following acceptable values: Architectural Component Artefact Scatter Botanical Feature Building Conjectural Evidence Cropmark Demolished Building Destroyed Monument Documentary Evidence Earthwork Enhanced Natural Feature Extant Building Find Levelled Earthwork

Field	DBF_Field	Type	Length	Comments and Rules
				Marine Geophysical Evidence Modified Surface Moved Building Moved Structure Natural Feature Oral Evidence Placename Evidence Ruined Building Stratified Find Structure Sub Surface Deposit Submerged Monument Subterranean Feature Uncertain Evidence Vessel Structure Wreckage NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Period	PERIOD	Integer	4	Use <i>lut_period</i> for these values Supply the ID for the following acceptable values. If a period value has an end date set, it may not be used to assign to Cultural Heritage record. The periods with an end date are for reporting purposes only.  Early Prehistoric Later Prehistoric Prehistoric or Roman Lower Palaeolithic Middle Palaeolithic Upper Palaeolithic Early Mesolithic Late Mesolithic (7000-4000 BC) Early Neolithic (4000-3000 BC) Middle Neolithic (3500-2700 BC) Late Neolithic (3000-2200 BC) Early Bronze Age (2500-1500 BC) Middle Bronze Age (1500-1000 BC) Late Bronze Age (1000-700 BC) Early Iron Age (800-400 BC) Middle Iron Age (400-100 BC) Later Iron Age (100 BC-AD 43) Roman (AD 43-410) Early Medieval or later Early Medieval (AD 410-1066) Post Medieval (AD 1540-1901) 16th Century 17th Century 18th Century 19th Century 20th Century Modern (AD 1901 to present) World War I (1914-1918) World War II (1939-1945) Post War (1945-present) NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Authority	AUTHORITY	Varchar	255	Name and contact details of the statutory authority or curator
Creator	CREATOR	Varchar	255	Full name of person/organisation responsible for dataset creation NULL if Protection Grade = Listed Building beyond 100m of HA boundary

Field	DBF_Field	Type	Length	Comments and Rules
Owner	OWNER	Varchar	255	Name and contact details of land owner NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Other_Party	OTHER_PART	Varchar	255	Record any 3 <sup>rd</sup> party interest in the Cultural Heritage Feature by any other non partner group or society NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Site_Name	SITE_NAME	Varchar	255	Address of the site or common name
Bibliography	BIBLIO	Varchar	255	Source of reference information NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Event_Type	EVENT_TYPE	Integer	4	<i>Use lut_event_type for these values</i> Supply the ID for the following acceptable values Event from which record originated expressed as one of the following; Aerial photograph Archaeological site investigation Auger/borehole survey Chemical soil survey Detailed excavation Documentary source Geophysical survey Metal detector survey Other Remote sensing Topographical survey Walkover survey Watching brief
Event_Code	EVENT_CODE	Varchar	255	Optional field identifying any event code applied by the local authority or archaeological investigator NULL if Protection Grade = Listed Building beyond 100m of HA boundary
Asset_status	STATUS	Integer	1	<i>Use lut_status for these values</i> Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective <i>Supply the ID from lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_CULT_HERIT
Record count	Integer	6	Record count of detail lines

Interim Advice

## AIR QUALITY RECORDS

### A5.2 AIR QUALITY SOURCE RECORDS

#### File header

Filename	ENVIS_AIR_QUAL_SOURCE
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	A_Q_Source
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Road_Layout	ROADLAYOUT	Integer	4	Use <i>lut_road_layout</i> for these values Supply the ID for the following acceptable values HA TfL Local HA
Road_Type	ROADTYPE	Integer	4	Use <i>lut_road_type</i> for these values Supply the ID for the following acceptable values A, B C If Road_Layout = HA, then A, If Road_Layout = TfL, then A or B, If Road_Layout = Local HA, then A, B or C
Traffic_Data_Year	TDY	Integer		Year for which AADT Speed and %HGV being reported expressed as YYYY
AADT	AADT	Integer	10	
Speed	SPEED	Varchar	3	Expressed as MPH
HDV_percent	HDV	Decimal (5.2)	5	Expressed as percentage HDV traffic
Record_status	RECSTATUS	Integer	1	Use <i>lut_record_status</i> for these values Supply the ID for the following acceptable values 1=Predicted 2=Actual
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_AIR_QUAL_SOURCE
Record count	Integer	6	Record count of detail lines

Interim Advice

### A5.3 AQMA STATUS RECORDS

AQMA status is held for 5 years and invariably is in the domain of a local or other highways authority.

#### File header

Filename	ENVIS_AQMA_STATUS
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	AQMA_STATUS
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
AQMA_Status	AQMASTATUS	Integer	4	Use <i>lut_aqma_status</i> for these values Supply the ID for the following acceptable values Existing Borderline
Start_date	STARTDATE	Integer	8	Start date of AQMA Expressed as YYYYMMDD
Expected_Start_date	EXPSTDATE	Integer	8	Acceptable values; If Status = Borderline, Date expressed as YYYYMMDD, Else 0
Expected_expiry_date	EXPEXDATE	Integer	8	This field no longer used wef March 2009
NO2_limit	NO2	Varchar	4	
PM10_limit	PM10	Varchar	4	
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_AQMA_Status
Record count	Integer	6	Record count of detail lines

## A6 NOISE RECORDS

### A6.1 ROAD SURFACE SEGMENT RECORDS

#### File header

Filename	ENVIS_NOISE_RSS
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	RSS
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
RSS_type	RSS_TYPE	Integer	1	Use <i>lut_rss_type</i> for these values Supply the ID for the following acceptable values 1 = Quieter surfacing 2 = Concrete 3 = Other
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_NOISE_RSS
Record count	Integer	6	Record count of detail lines

## A6.2 SENSITIVE RECEPTORS WITHIN 300M OF THE ROAD RECORDS

### File header

Filename	ENVIS_NOISE_SR
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	SR
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
SR_type	SR_TYPE	Integer	2	Use <i>lut_sr_type</i> for these values Supply the ID for the following acceptable values 1 = Cemetery 2 = Heritage Building 3 = Home for Aged Persons 4 = Home for the Blind 5 = Home for the Deaf 6 = Hospital 7 = Laboratory with Sensitive Instruments 8 = Outdoor amenity area with ambient noise level below 50dBA(A) 9 = Public Open space 10 = School
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_NOISE_SR
Record count	Integer	6	Record count of detail lines

### A6.3 SCREENING RECORDS

#### File header

Filename	ENVIS_NOISE_SCREENING
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	Noise_Screening
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon or Polyline
Screen_type	SCRTYPE	Integer	4	<i>Use lut_screen_type for these values</i> Supply the ID for the following acceptable values Barrier (always a Polyline) Bund (always a Polyline)
Length	LENGTH	Integer	6	If Screen_Type = Bund or Barrier Then Length expressed in metres Else NULL
Height	HEIGHT	Decimal	8(2)	If Screen_Type = Bund or Barrier Then Height expressed in metres Else NULL
Width	WIDTH	Decimal	8(2)	If Screen_Type = Bund or Barrier Then Width at base expressed in metres Else NULL
Barrier_type	BARRTYPE	Integer	4	<i>Use lut_barrier_type for these values</i> Supply the ID for the following acceptable values If Screen_Type = Barrier Then Absorptive, or Reflective Else NULL
Material	MATERIAL	Integer	4	<i>Use lut_barrier_material for these values</i> Supply the ID for the following acceptable values If Screen_Type = Barrier Then Concrete, or Other/Mixed, or Polycarbonate, or Steel, or Timber Else NULL
Asset_status	STATUS	Integer	1	<i>Use lut_status for these values</i> Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective <i>Supply the ID from lut_ha_obj</i> Maybe NULL

Field	DBF_Field	Type	Length	Comments and Rules
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from lut_ha_obj Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from lut_env_obj Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from lut_env_obj Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

File Footer

Filename	Varchar	50	ENVIS_NOISE_SCREENING
Record count	Integer	6	Record count of detail lines

## A7 WASTE AND MATERIAL FLOWS MANAGEMENT RECORDS

### A7.1 WASTE AND MATERIAL FLOWS MANAGEMENT ENVIRONMENTAL INVENTORY RECORDS

#### File header

Filename	ENVIS_WMF
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	50	WMF
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
PIN	PIN	Varchar	15	Use <i>lut_pin</i> for these values Project number as held in HA systems
PIN_desc	PINDESC	Varchar	255	Project description. This may be a TPI or LNMS project or a maintenance project.
Asset_status	STATUS	Integer	1	Use <i>lut_status</i> for these values Supply the ID for the following acceptable values 1=Planned 2=Existing 3=Removed 4=On-Hold 5=Abandoned
HA_Obj_1	HAOBJ1	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_2	HAOBJ2	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
HA_Obj_3	HAOBJ3	Integer	4	Highways Agency Strategic objective Supply the ID from <i>lut_ha_obj</i> Maybe NULL
Env_Obj_1	ENVOBJ1	Integer	4	Primary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_2	ENVOBJ2	Integer	4	Secondary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Env_Obj_3	ENVOBJ3	Integer	4	Tertiary environmental objective Supply the ID from <i>lut_env_obj</i> Maybe NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_WMF
Record count	Integer	6	Record count of detail lines

## A8 INSPECT (STUDY/SURVEY) INVENTORY RECORD

There are times when a study or survey has to be undertaken that does not refer to any one particular Asset. This record type is defined to capture those instances by defining the geospatial type as a polygon feature covering the area of the study and an indicator to state which primary area of the classification the study relates to. These inventory records may have the normal planned and actual emi records attached to them. Assets identified as a result of the study or survey are to be recorded as inventory records within their own classification set such as NCE species, or Landscape regardless of the original intent of the study. Any associated study report should be submitted as an attached document record.

### File header

Filename	ENVIS_STUDY_SURVEY
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAID	HAID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	INV
Subset	SUBSET	Varchar	6	STUDY or SURVEY
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Point, Polyline or Polygon
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
PIN	PIN	Varchar	15	Use <i>lut_pin</i> for these values Project number as held in HA systems
PIN_desc	PINDESC	Varchar	255	Project description. This may be a TPI or LNMS project or a maintenance project.
CLASS	CLASS	Integer	1	Use <i>lut_dataset_class</i> for these values Supply the ID for the following acceptable values 1 = Landscape 2 = NCE 3 = Water 4 = Cultural Heritage 5 = Air Quality 6 = Noise 7 = Material and Waste Flows
Study_Start	STUDYSTART	Integer	8	Date record last modified displayed as YYYYMMDD
Study_End	STUDYEND	Integer	8	Date record last modified displayed as YYYYMMDD
Study_desc	STUDYDESC	Varchar	255	Brief description of the study. e.g. Investigate increased mortality of (protected species) on carriageway, or Investigate performance of combined fencing following increased mortality of several species types
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_STUDY_SURVEY
Record count	Integer	6	Record count of detail lines

## A9 DOCUMENT ATTACHMENT

There are many instances where relevant documents can be attached to a GIS object like a polygon such as Environmental Study, Environmental Report/Statement, Environmental Management Plan, photographs etc. The object to which these documents can be assigned may represent a scheme, a route or an area. This object will be defined as a polygon and any number of documents may be attached to it.

The submission of documents is mandatory if document records are submitted. The relevant PDF documents must be supplied on the media submitted to the HA, if not already supplied.

### A9.1 DOCUMENT RECORD

A 'document' record must be supplied to specify each document. A DOCID will be created by HA for each submitted container record that is satisfactorily processed.

#### File Header

Filename	ENVIS_DOCUMENT
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
DOCID	DOCID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	DOCUMENT
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Doc_Unique_ID	DOCUNIQUE	Varchar	255	Unique ID created by agent to identify the Document. This field is mandatory
Doc_ref	DOCREF	Varchar	255	Filename of document. Document must be in PDF format. This field is mandatory. The filename must be supplied in full e.g document.pdf
Doc_description	DOCDESC	Varchar	255	Brief description of document. This field is mandatory
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_DOCUMENT
Record count	Integer	6	Record count of detail lines

## A9.2 DOCUMENT CONTAINER RECORD

A 'container' record must be supplied to hold attached documents. A CONTID will be created by HA for each submitted container record that is satisfactorily processed.

### File Header

Filename	ENVIS_CONTAINER
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
CONTID	CONTID	Varchar	10	Created by HA
RecordType	RECTYPE	Varchar	10	CONTAINER
Subset	SUBSET	Varchar	7	Area or Project or Route
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
Geospatial_type	GEO_TYPE	Varchar	10	Polygon
Element_Unique_ID	UNIQUE_ID	Varchar	255	Unique ID created by agent to identify Polygon. This field is mandatory if no CONTID has been allocated
Shape_description	SHAPEDESC	Varchar	255	Brief description of shape This field is mandatory e.g WaterVole Survey Report A6
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

### File Footer

Filename	Varchar	50	ENVIS_CONTAINER
Record count	Integer	6	Record count of detail lines

### A9.3 ATTACHING DOCUMENTS TO CONTAINERS

Documents may be attached to an environmental container item to give greater definition to the description of that item. Any document submitted for attachment must be in PDF format. No other standard will be accepted. A standard file specification for attaching documents is defined below.

A Container record must always exist before a document record can be attached to it and submitted to HA. However, in circumstances that would create an unnecessary time delay in submitting an Attached Document record before receiving the HA unique IDs (ATTACH\_ID, DOCID) an agent may elect to submit an Attached Document record by supplying both the Doc\_Unique\_ID and Element\_Unique\_ID used for the Container record.

#### File Header

Filename	ENVIS_ATTACH_CONTAINER
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
Attach_ID	ATTACH_ID	Varchar	10	Created by HA
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
DOCID	DOCID	Varchar	10	DOCID created by HA to identify Document. Else NULL
Doc_Unique_ID	DOCUNIQUE	Varchar	255	Send the Doc_Unique_ID of the document if no DOCID has been received from the HA, Else NULL This field is mandatory if no DOCID has been allocated and assigned
Cont_ID	CONT_ID	Varchar	10	CONTID assigned by HA to a previously submitted ENVIS_CONTAINER record. NULL if no CONTID received from HA
Element_Unique_ID	UNIQUE_ID	Varchar	255	The Element_Unique_ID of the container if no CONTID has been received from the HA Else NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_Last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

#### File Footer

Filename	Varchar	50	ENVIS_ATTACH_CONTAINER
Record count	Integer	6	Record count of detail lines

#### A9.4 ATTACHING DOCUMENTS TO ASSETS

Documents may be attached to an environmental Asset that is related to the container and associated document record. This optional table identifies cross references for reporting purposes.

##### File Header

Filename	ENVIS_ATTACH_INV
Create date	YYYYMMDD_HHMMSS

##### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
Attach_ID	ATTACH_ID	Varchar	10	Created by HA
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
DOC_ID	DOCID	Varchar	10	DOCID created by HA to identify Document. Else NULL
Local_ref	LOCALREF	Varchar	255	Local reference number for record held by agent If ATTACH_ID = NULL then this field MUST be a concatenation of the Agent_ID and Element_Unique_ID used for the ENVIRONMENTAL INVENTORY record.
Doc_Unique_ID	DOCUNIQUE	Varchar	255	Send the Doc_Unique_ID of the document if no DOCID has been received from the HA, Else NULL
HAID	HAID	Varchar	10	HAID assigned by HA to a previously submitted INVENTORY record. NULL if no HAID received from HA
Element_Unique_ID	UNIQUE_ID	Varchar	255	The Element_Unique_ID of the inventory asset if no HAID has been received from the HA Else NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person who modified the record displayed as Last name and initials e.g SMITHA
Date_last_modified	DATE_MOD	Integer	8	Date record last modified displayed as YYYYMMDD

##### File Footer

Filename	Varchar	50	ENVIS_ATTACH_INV
Record count	Integer	6	Record count of detail lines

## **A10 XML STANDARDS**

### **A10.1 HA ENVIRONMENTAL XML STANDARDS**

XML (Extensible Markup Language) and XSD (Extensible Markup Schema Definitions) specifications for transmitting EnvIS data to the HA will be available on demand.

Interim Advice

## A11 ENVIRONMENTAL MANAGEMENT INFORMATION (emi) RECORDS

This section specifies the details for submitting data relating to each of the record types required for the various stages of emi defined in DMRB Vol 10 Section 0 Part 2.

Table 2.1 is repeated here and should be referred to when completing the submission of emi records.

Asset Status	Responsibility	Origin	Outcome	Submission of Environmental Inventory Data Required to Change Asset Status	Submission of Environmental Management Information Data Required to Change Asset Status
Planned	Service Provider	On Hold Abandoned	Existing, On Hold, Abandoned	Yes	No
Existing	Service Provider/HA	Planned	Planned, Removed	Yes (for Assets not previously identified on the trunk road network or those where no emi records are required to be submitted)	Yes (for Planned Assets now implemented)
Removed	Service Provider	Existing		No	Yes
On Hold	HA	Planned	Planned, Abandoned	No	Yes
Abandoned	HA	Planned, On Hold		No	Yes

### A11.1 ENVIRONMENTAL COMMITMENTS RECORDS

These records are required where a commitment has been made, but are otherwise optional. There is no requirement to submit an empty file where no commitments records exist. Commitment records require an initial supply of a planned Environmental inventory record before the commitment record is submitted. An Environmental inventory record should normally exist before an emi commitments record can be submitted to HA. However, in circumstances that would create an unnecessary time delay in submitting an Environmental inventory record before receiving an HA unique ID (HAID) to use in the submission of an emi record an agent may elect to submit an emi record by supplying the Local\_ref as a concatenation of the Agent\_ID and Element\_Unique\_ID used in the Environmental inventory record.

#### File header

Filename	ENVIS_COMM
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HACOMID	HACOMID	Varchar	10	Created by HA
Subset	SUBSET	Varchar	50	Env_Comm
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
PIN	PIN	Varchar	15	Use lut_pin for these values Project number
PIN_desc	PINDESC	Varchar	255	Description of Project as held in HA systems

Field	DBF_Field	Type	Length	Comments and Rules
Phase	STAGE	Integer	1	Use <i>lut_phase</i> for these values Supply the ID for the following acceptable values 1= Planning & Design 2= Construction (including establishment) 3= Maintenance and Operation
Comm_Ref	COMMREF	Varchar	255	ID created by agent to identify a commitment register entry. An ID may relate to many environmental inventory items
CLASS	CLASS	Integer	1	Use <i>lut_dataset_class</i> for these values Supply the ID for the following acceptable values 1 = Landscape 2 = NCE 3 = Water 4 = Cultural Heritage 5 = Air Quality 6 = Noise 7 = Material and Waste Flows
Nature	NATURE	Varchar	255	Description of the project specific commitment
Stakeholder	STAKEHLDR	Varchar	255	Details of interested party with whom commitment was agreed
Perpetuity	PERPETUITY	Boolean	1	1 if TRUE 0 if FALSE
Date_required	DATEREQ	Integer	8	If Perpetuity = 0 then the date due to be delivered expressed as YYYYMMDD Else NULL if Perpetuity = 1
Fulfil_status	FULFILL	Varchar	1	If Perpetuity = 0 1 if fulfilled 0 if not yet fulfilled Else If Perpetuity = 1 then NULL
HAID	HAID	Varchar	10	The HAID created by HA and sent to the agent when a new Environmental inventory record is created by an agent submitting new environmental inventory items May be NULL if agent has not submitted an ENVIRONMENTAL INVENTORY record and received an HA assigned HAID
Local_ref	LOCALREF	Varchar	255	Local reference number for record held by agent If HAID = NULL then this field MUST be a concatenation of the Agent_ID and Element_Unique_ID used for the ENVIRONMENTAL INVENTORY record.
Local_unique	LOCUNIQUE	Varchar	255	NOTE: This field is Mandatory. It must be generated as a unique integer within an organization, and not just the dataset it refers to. It will be used by Service Providers to identify unique emi records when matching returned data from the HA. Without a unique numerical key, the matching process is very difficult.  The format of VARCHAR is to allow for the limitations of DBF format not coping with Large Integers, therefore the export regime must convert your unique key to a string value
References	REFS	Varchar	255	References to other documents providing additional information on the commitment
Last_modified_by	LASTMODBY	Varchar	30	Name of person making last modification
Last_modified_date	DATE_MOD	Integer	8	Expressed as YYYYMMDD – date record last modified.

File Footer

Filename	Varchar	50	ENVIS_COMM
Record count	Integer	6	Record count of detail lines

## A11.2 ENVIRONMENTAL MANAGEMENT INFORMATION (emi) RECORDS

An Environmental inventory record must always exist before an emi record can be submitted to HA. However, in circumstances that would create an unnecessary time delay in submitting an Environmental inventory record before receiving an HA unique ID (HAID) to use in the submission of an emi record an agent may elect to submit an emi record by supplying the Local\_ref as a concatenation of the Agent\_ID and Element\_Unique\_ID used in the Environmental inventory record.

### File header

Filename	ENVIS_EMI
Create date	YYYYMMDD_HHMMSS

### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAEMIID	HAEMIID	Varchar	10	Created by HA for emi record
Subset	SUBSET	Varchar	3	EMI
RecordType	RECTYPE	Integer	2	<i>Use lut_emi_record_type for these values</i> Supply the ID for the following acceptable values 1 = PLANNED 2 = ACTUAL 3 = ABANDONED 4 = ON-HOLD
Class	CLASS	Integer	1	<i>Use lut_dataset_class for these values</i> This field is used to validate the ENVIRONMENTAL INVENTORY ID Supply the ID for the following acceptable values 1 = Landscape 2 = NCE 3 = Water 4 = Cultural Heritage 5 = Air Quality 6 = Noise <i>Note 7 may not be used for this field. Waste &amp; Material emi records are handled separately</i>
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
HAID	HAID	Varchar	10	Unique ID assigned to environmental inventory item by HA to previously supplied Environmental inventory record May be NULL if agent has not submitted an ENVIRONMENTAL INVENTORY record and received an HA assigned HAID
PIN	PIN	Varchar	15	Project number as held in HA systems for which the record relates
PIN_desc	PINDESC	Varchar	255	Description of Project as held in HA systems
Local_ref	LOCALREF	Varchar	255	Local reference number for record held by agent If HAID = NULL then this field MUST be a concatenation of the Agent_ID and Element_Unique_ID used for the ENVIRONMENTAL INVENTORY record.

Field	DBF_Field	Type	Length	Comments and Rules
Local_unique	LOCUNIQUE	Varchar	255	NOTE: This field is Mandatory. It must be generated as a unique integer within an organization, and not just the dataset it refers to. It will be used by Service Providers to identify unique emi records when matching returned data from the HA. Without a unique numerical key, the matching process is very difficult.  The format of VARCHAR is to allow for the limitations of DBF format not coping with Large Integers, therefore the export regime must convert your unique key to a string value
Previous_link	PREVLINK	Varchar	255	NOTE: This field is Mandatory This field is used to enable Service Providers to link back, one step at a time to a previously created emi record. At first use, this field = Local_unique. Thereafter, it is the HAEMIID of the previously created emi record in the chain that has been processed by HA, or the previous Local_unique value of the last created emi record in the chain that has not yet been processed by the HA.  This field will be used by Service Providers to link associated emi records. For example; An emi record might be supplied for a Planned action. This action is subsequently abandoned and an emi abandoned record has to be created but it must link to the appropriate emi Planned record to make sense (there may be more than one Planned action per Asset).
Phase	PHASE	Integer	1	Use <i>lut_phase</i> for these values Supply the ID for the following acceptable values 1= Planning & Design 2= Construction (including establishment) 3= Maintenance & Operation
Action	ACTION	Integer	1	Use <i>lut_emi_action</i> for these values Supply the ID for the following acceptable values 1 = PLANNING & DESIGN 2 = CONSTRUCT/IMPLEMENT 3 = ESTABLISH 4 = EVALUATE 5 = MAINTAIN 6 = INSPECT Study 7 = INSPECT Survey 8 = REMOVAL
Date	DATE_EMI	Integer	8	Displayed as YYYYMMDD If Record Type =1 (PLANNED) the date is the date you planned to do the work If Record Type =2 (ACTUAL) the date is the date you did the work If Record Type 3 (ABANDONED) the date is the date you abandoned the work If Record Type 4 (ON-HOLD) date is the date you put the work on hold
Condition	COND	Integer	1	Use <i>lut_emi_rag</i> for these values Supply the ID for the following acceptable values If RecordType = 2 and Action = 6 or 7 Then 1 = Red 2 = Amber 3 = Green Else NULL

Field	DBF_Field	Type	Length	Comments and Rules
Performance	PERF	Integer	1	Use <i>lut_emi_rag</i> for these values Supply the ID for the following acceptable values If RecordType = 2 and Action = 4 Then 1 = Red 3 = Green Else NULL
Reason_abandoned	REASONAB	Integer	4	Use <i>lut_emi_reason_abandoned</i> for these values Supply the ID for the following acceptable values If RecordType = 3 Then a reason from <i>lut_abandoned</i> Change in Government Policy. Change in HA technical policy / guidance. Funding cut. HA not approving project Land procurement / CPO not approved. No longer required Protected species license not approved. Else NULL
Reason_on_hold	REASONHOLD	Integer	4	Use <i>lut_emi_reason_on_hold</i> for these values Supply the ID for the following acceptable values If RecordType = 4 Then a reason from <i>lut_onhold</i> Change in Contract (re-awarding). Change in Government Policy. Change in HA technical policy / guidance. Design change. Funding delay. Land procurement / CPO process. Lengthy HA approval. Protected species licensing may be required. Protected species surveying required (seasonal issues). Public Inquiry. Service Provider delays. Value engineering process to reduce impacts. Else NULL NOTE: the submission of a type 4 record requires the submission of a new PLANNED record with new date for expected operation.
Last_modified_by	LASTMODBY	Varchar	30	Name of person making last modification
Last_modified_date	DATE_MOD	Integer	8	Expressed as YYYYMMDD – date record last modified.

File Footer

Filename	Varchar	50	ENVIS_EMI
Record count	Integer	6	Record count of detail lines

### A11.3 WASTE FLOWS ENVIRONMENTAL MANAGEMENT INFORMATION (emi) RECORDS

An Environmental inventory record for Waste and Material flows is recorded as a polygon. The emi records that get submitted for waste are attached to the environmental inventory polygon. Material usage is also assigned to the same Environmental inventory polygon. Querying a polygon will result in both material and waste values being reported. Detailed rules for assigning Waste Class and Destination have yet to be incorporated in either of the methods. Refer to Classification guidance for advice on this subject.

#### File header

Filename	ENVIS_EMI_WASTE
Create date	YYYYMMDD_HHMMSS

#### Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAEMIWID	HAEMIWID	Varchar	10	Created by HA for emi record
Subset	SUBSET	Varchar	5	WASTE
RecordType	RECTYPE	Integer	2	Use <i>lut_emi_record_type</i> for these values Supply the ID for the following acceptable values 1 = PLANNED 2 = ACTUAL
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
HAID	HAID	Varchar	10	Unique ID assigned to environmental inventory item by HA to previously supplied Environmental inventory record
PIN	PIN	Varchar	15	Use <i>lut_pin</i> for these values Project number as held in HA systems for which the record relates
PIN_desc	PINDESC	Varchar	255	Description of Project as held in HA systems
Local_ref	LOCALREF	Varchar	255	Local reference number for record held by agent
Local_unique	LOCUNIQUE	Varchar	255	NOTE: This field is Mandatory. It must be generated as a unique integer within an organization, and not just the dataset it refers to. It will be used by Service Providers to identify unique emi records when matching returned data from the HA. Without a unique numerical key, the matching process is very difficult.  The format of VARCHAR is to allow for the limitations of DBF format not coping with Large Integers, therefore the export regime must convert your unique key to a string value
Phase	PHASE	Integer	1	Use <i>lut_phase</i> for these values Supply the ID for the following acceptable values 1= Planning & Design 2= Construction (including establishment) 3 = Maintenance & Operation
EWC	EWC	Integer	4	Use <i>lut_ewc</i> for these values Supply the ID for the following acceptable values A valid EWC code and description from <i>lut_ewc</i>
Description	DESC_WASTE	Varchar	255	Free format description of what generated the waste e.g Planings from A34

Field	DBF_Field	Type	Length	Comments and Rules
SHW	SHW	Integer	4	Use <i>lut_shw_waste</i> for these values Supply the ID for the following acceptable values If the active column = 1 Then A valid SHW description and code from <i>lut_shw_waste</i> Else NULL
Waste_Class	WCLASS	Integer	4	Use <i>lut_ewc_conditional_rules</i> to determine Waste Class rules Supply the ID for the following acceptable values 1= Inert 2= Non-hazardous 3=Hazardous An EWC code with an asterisk in the 7 <sup>th</sup> position from the left is always Hazardous
Amount	AMOUNT	Integer	10	Amount of waste expressed in whole tonnes.
Destination	DEST	Integer	4	Use <i>lut_ewc_conditional_rules</i> to determine destination rules then use <i>lut_waste_dest</i> to select value Supply the ID from one of the following. This list is in preferential hierarchical order 1 = Reused on site 2 = Reused off site 3 = Recycled on site 4 = Recycled off site 5 = No longer applicable wef 1/12/2009 6 = Treatment centre (hazardous waste only) 7 = No longer applicable wef 1/12/2009 8 = Energy from Waste facility 9 = Landfill site 10 = Other form of recovery off site 11 = Other form of recovery on site 12 = Other disposal
Notes	NOTES	Varchar	255	Free text added by the user to characterise the destination more precisely (also demonstrates compliance with legislation)
Cross_reference	CROSSREF	Varchar	255	Acceptable values If Destination = 1, or 3 then the Local_ref of the associated Material record Else NULL
Dest_PIN	DESTPIN	Varchar	15	If Destination = 2 And Destination is an HA site Then PIN number required Else NULL
Destination_note_ID	DESTID	Integer	1	If Destination = 2, or 4, or 7, Then 1 Else If Destination = 5, or 6, or 8, or 9 Then 2 Else NULL
Destination_name	DESTNAME	Varchar	50	If Destination_note_ID = 1 or 2 Name of destination required Else NULL
Dest_Addr_1	DESTADD1	Varchar	50	If Destination_note_ID = 1 or 2 Address line 1 of destination Else NULL

Field	DBF_Field	Type	Length	Comments and Rules
Dest_Addr_2	DESTADD2	Varchar	50	If Destination_note_ID = 1 or 2 Address line 2 of destination Else NULL
Dest_Addr_3	DESTADD3	Varchar	50	If Destination_note_ID = 1 or 2 Address line 3 of destination Else NULL
Dest_Addr_4	DESTADD4	Varchar	50	If Destination_note_ID = 1 or 2 Address line 4 of destination Else NULL
Dest_Postcode	DESTPCODE	Varchar	8	If Destination_note_ID = 1 or 2 Postcode of destination Else NULL
Dest_WML	DESTWML	Varchar	50	If Destination_note_ID = 2 Waste Management Licence Number of destination required Else NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person making last modification
Last_modified_date	DATE_MOD	Integer	8	Expressed as YYYYMMDD – date record last modified.

File Footer

Filename	Varchar	50	ENVIS_EML_WASTE
Record count	Integer	6	Record count of detail lines

### A11.4 MATERIAL FLOWS ENVIRONMENTAL MANAGEMENT INFORMATION (emi) RECORDS

File header

Filename	ENVIS_EMI_MAT
Create date	YYYYMMDD_HHMMSS

Detail record

Field	DBF_Field	Type	Length	Comments and Rules
HAEMIMID	HAEMIMID	Varchar	10	Created by HA for emi record
Subset	SUBSET	Varchar	8	MATERIAL
RecordType	RECTYPE	Integer	2	Supply the ID for the following acceptable values 1 = PLANNED 2 = ACTUAL
Agent_ID	AGENT_ID	Integer	4	4 digit numeric number allocated by HA to identify each agent/DBFO. Maintained in look up table with active indicator and start/end dates
HAID	HAID	Varchar	10	Unique ID assigned to environmental inventory item by HA to previously supplied Environmental inventory record
PIN	PIN	Varchar	15	<i>Use lut_pin for these values</i> Project number as held in HA systems for which the record relates
PIN_desc	PIDESC	Varchar	255	Description of Project as held in HA systems
Local_ref	LOCALREF	Varchar	255	Local reference number for record held by agent
Local_unique	LOCUNIQUE	Varchar	255	NOTE: This field is Mandatory. It must be generated as a unique integer within an organization, and not just the dataset it refers to. It will be used by Service Providers to identify unique emi records when matching returned data from the HA. Without a unique numerical key, the matching process is very difficult.  The format of VARCHAR is to allow for the limitations of DBF format not coping with Large Integers, therefore the export regime must convert your unique key to a string value
Phase	PHASE	Integer	1	<i>Use lut_phase for these values</i> Supply the ID for the following acceptable values 1= Planning & Design 2= Construction (including establishment) 3 = Maintenance & Operation
Material	MATERIAL	Integer	4	<i>Use lut_material for these values</i> Supply the ID for the following acceptable values Aggregates Asphalt Batteries Bricks Bulbs Concrete Earthworks other than aggregates Environmental barriers: other Environmental barriers: timber Fencing: other Fencing: timber Ferrous metal Gritting sand & salt Lanterns Non-ferrous metal Other (specify)

Field	DBF_Field	Type	Length	Comments and Rules
				Paint Plastic Road restraint systems: ferrous metal Road restraint systems: other Timber Topsoil NOTE THE EXCEPTIONS BELOW FOR REUSE Batteries cannot be re-used Bulbs cannot be re-used Road restraint systems: ferrous metal cannot be reused on or off site without thorough testing
Description	DESC_MAT	Varchar	255	Free format description of material used if required. If Material = Other a description MUST be entered
SHW	SHW	Integer	4	Use <i>lut_shw_mat</i> for these values Supply the ID for the following acceptable values If the active column = 1 Then A valid SHW description and code from <i>lut_shw_mat</i> Else NULL
Material_Class	MCLASS	Integer	3	Use <i>lut_material_class</i> for valid values. Rules are embedded. Supply the ID for the following acceptable values This list is in preferential hierarchical order. 1 = Reused 2 = Recycled 3 = Primary
Amount	AMOUNT	Integer	10	Amount of material expressed in whole tonnes.
Origin	ORIGIN	Integer	1	Use <i>lut_origin</i> for these values Supply the ID for the following acceptable values Supply the ID from one of the following. This list is in preferential hierarchical order 1 = On site 2 = Other site 3 = Recycling centre 4 = Supplier Rules apply If Material_Class = 1, Then 1 or 2 Else If Material_Class = 2, Then 1, 2, 3, or 4 If Material_Class = 3, Then 4
Notes	NOTES	Varchar	255	Free format text to allow additional notes regarding material sources subject to rules
Cross_reference	CROSSREF	Varchar	255	Acceptable values If Origin = 1, the Local_ref of the associated Waste record Else NULL
Origin_PIN	ORIGINPIN	Varchar	15	If Origin = 2 And Origin is an HA site Then PIN number required Else NULL
Origin_note_ID	ORIGID	Integer	1	If Origin = 2, or 3, or 4, Then 1

Field	DBF_Field	Type	Length	Comments and Rules
				Else NULL
Origin_name	ORIGNAME	Varchar	50	If Origin_note_ID = 1 Name of origin required Else NULL
Origin_Addr_1	ORIGADD1	Varchar	50	If Origin_note_ID = 1 Address line 1 of Origin Else NULL
Origin_Addr_2	ORIGADD2	Varchar	50	If Origin_note_ID = 1 Address line 2 of Origin Else NULL
Origin_Addr_3	ORIGADD3	Varchar	50	If Origin_note_ID = 1 Address line 3 of Origin Else NULL
Origin_Addr_4	ORIGADD4	Varchar	50	If Origin_note_ID = 1 Address line 4 of Origin Else NULL
Origin_Postcode	ORIGPCODE	Varchar	8	If Origin_note_ID = 1 Postcode of Origin Else NULL
Last_modified_by	LASTMODBY	Varchar	30	Name of person making last modification
Last_modified_date	DATE_MOD	Integer	8	Expressed as YYYYMMDD – date record last modified.

File Footer

Filename	Varchar	50	ENVIS_EMI_MAT
Record count	Integer	6	Record count of detail lines

## **ANNEX B INVENTORY & emi SCENARIOS INTRODUCTION**

This annex provides example of scenarios and typical look and feel of data that might be captured and sent to the Highways Agency.

The data in the example Inventory and emi records is not what it would be in a true transmission, but rather illustrates the examples in the choices a supplier might make in filling in a form to capture the data. For example an asset status field may be supplied as 1 in the real data file but in these examples it would show Planned as that is what a user would have chosen.

Note: The examples that follow show data as it might exist on first submission to the HA taking advantage of the rules for submitting data without first having the Inventory record processed to obtain an HAID. If an Inventory record had been processed first then the HAID would be displayed as a 10 character numeric value like thus '1000002345' and an HAEMIID might look like '9000000234'. However, for illustration purposes, some of the examples show cases where an Inventory item has been processed and the HAID being used in the emi records. These are illustrative only.

The file headers and footers have been left off to aid clarity. Please refer to the relevant file specification when following an example.

## **B1            EXAMPLE 1 – PLANNED ASSET**

The following scenario provides an example of a planned (new) Asset that was implemented as part of a project. The requirement for the Asset had resulted from a commitment made within the Environmental Statement. This example outlines the type and sequence of inventory and emi records that the Designer submitted, at each relevant milestone.

### **MILESTONE 1 (ENVIRONMENTAL ASSESSMENT/STATEMENT PUBLICATION)**

The Designer requested existing EnvIS data relating to the assessment area of the project. This data assisted in providing baseline data to be used in the environmental assessment of the project.

Assessment work carried out during the planning and design stage indicated that the new road will create visual intrusion to a nearby sensitive receptor. As a result a commitment was made to provide visual screening (woodland).

The information collected during this milestone was submitted to the HA as follows:

The Designer submitted EnvIS inventory data detailing:

- Asset Classification – *Woodland*
- Asset Status – *Planned*
- Geographic Location
- HA Objective – *Reduce the adverse effects of trunk road traffic on the countryside*
- Environmental Objective – *Visual Screening, Landscape Integration and Nature Conservation and Ecology*

(Once the Asset had been created and saved)

The Designer submitted emi records relating to:

- Planned action of plan and design.
- Environmental commitment relating to the Asset.

<b>HAID</b>	0	<b>INVENTORY RECORD</b>
Record type	INV	
Subset	Land_Veg	
Agent ID	2	
Element unique ID	3565	
Geospatial type	Polygon	
Vegetation type	Native	
Native Veg type	Woodland	
Ornamental Veg type	N/A	
Offsite planting	False	
Asset status	Planned	
HA Obj 1	Reduce the adverse effects of trunk road traffic on the countryside	
HA Obj 2		
HA Obj 3		
Env Obj 1	Visual Screening	
Env Obj 2	Landscape integration	
Env Obj 3	Nature Conservation and ecology	
Last modified by	WALKERJ	
Date last modified	20060711	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID		
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000101	
Previous_link	000000101	
Phase	<b>Planning and Design</b>	
Action	PLANNING & DESIGN	
Date	20061231	
Condition		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20060711	

<b>HACOMIID</b>	0	<b>COMMITMENT emi RECORD</b>
Subset	Env Comm	
Agent ID	2	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Phase	<b>Planning and Design</b>	
Comm ref	Hopton By Pass Visual Screening	
CLASS	Landscape	
Nature	Provide visual screening in form of woodland to screen new road layout from church hall	
Stakeholder	Reverend Timothy Farthing	
Perpetuity	True	
Date required		
Fulfil status		
HAID		
Local ref	23565	
Local unique	000000102	
Reference	Hopton By Pass Environmental Statement	
Last Modified by	WALKERJ	
Date last modified	20060711	

Interim Advice

## **MILESTONE 2 (DETAILED DESIGN DRAWINGS)**

At this milestone the Designer collected and submitted EnvIS data associated with the planning and design of the project as follows:

The Designer submitted emi records relating to:

- Actual action of plan and design (given that the detailed design of the project is complete).
- Planned action of construct/implement.
- Planned action of establish.
- Planned action of inspect survey (to be undertaken during the construction phase)
- Planned action(s) of evaluate (1, 5, 15 years)

<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI ACTUAL Landscape 2 1000017890 MM81417 Hopton By Pass 23565 000000103 000000103 <b>Planning and Design</b> PLANNING & DESIGN 20061231  WALKERJ 20070115	emi RECORD
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<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI PLANNED Landscape 2 1000017890 MM81417 Hopton By Pass 23565 000000104 000000104 <b>Construction (including establishment)</b> CONSTRUCT/IMPLEMENT 20081231  WALKERJ 20070115	emi RECORD
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<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000017890	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000105	
Previous_link	000000105	
Phase	<b>Construction (including establishment)</b>	
Action	ESTABLISH	
Date	20090731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20070115	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000017890	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000106	
Previous_link	000000106	
Phase	<b>Construction (including establishment)</b>	
Action	INSPECT Survey	
Date	20091030	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20070115	

<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last Modified by Date last modified	0 EMI PLANNED Landscape 2 1000017890 MM81417 Hopton By Pass 23565 000000107 000000108 <b>Construction (including establishment)</b> EVALUATE 20091231  WALKERJ 20070115	emi RECORD
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<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI PLANNED Landscape 2 1000017890 MM81417 Hopton By Pass 23565 000000108 000000108 <b>Construction (including establishment)</b> EVALUATE 20141231  WALKERJ 20070115	emi RECORD
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<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000017890	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000109	
Previous_link	000000109	
Phase	<b>Maintenance &amp; Operation</b>	
Action	EVALUATE	
Date	20241231	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20070115	

Interim Advice

### **MILESTONE 3 (AS BUILT DRAWINGS)**

At this milestone the Designer collected and submitted EnvIS data associated with the construction of the project as follows:

The Designer submitted emi records relating to:

- Actual action of Construction (including establishment) (the submission of this record indicates that the Asset has been constructed/implemented. At the point of the valid submission of this record, the Asset status will be changed by the HA from planned to existing).
- Actual action of establish.
- Actual action of inspect survey.
- Actual action(s) of evaluate (relating to 1 and/or 5 years).
- Planned action(s) of maintain (to be undertaken by the Network Management Agent).
- Planned action(s) of inspect survey (to be undertaken by the Network Management Agent).

It is important to note that in this example only 1 planned action of maintain and inspect survey has been submitted at milestone 3. This example is for illustrative purposes only and the Designer would be required to submit a number forward planned maintain and inspect survey records to be undertaken by the Network Management Agent.

This example also assumes that for the ACTUAL emi records, PLANNED emi records had already been submitted to the HA for processing and were allocated HAEMIIDs.

<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI ACTUAL Landscape 2 1000000891 MM81417 Hopton By Pass 23565 000000110 9000012345 <b>Construction (including establishment)</b> CONSTRUCT/IMPLEMENT 20081231  WALKERJ 20090115	emi RECORD
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<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI ACTUAL Landscape 2 1000000891 MM81417 Hopton By Pass 23565 000000111 9000000784 <b>Construction (including establishment)</b> Establish 20090731  WALKERJ 20090815	emi RECORD
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<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	ACTUAL	
Class	Landscape	
Agent ID	2	
HAID	1000000891	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000112	
Previous_link	9000005642	
Phase	<b>Construction (including establishment)</b>	
Action	INSPECT Survey	
Date	20091030	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20091105	

Interim Advice

<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI ACTUAL Landscape 2 1000000891 MM81417 Hopton By Pass 23565 000000113 9000006543 <b>Construction (including establishment)</b> EVALUATE 20091231  WALKERJ 20100115	emi RECORD
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<b>HAEMIID</b> Subset Record type Class Agent ID HAID PIN PIN Desc Local ref Local unique Previous_link Phase Action Date Condition Performance Reason abandoned Reason on hold Last modified by Date last modified	0 EMI ACTUAL Landscape 2 1000000891 MM81417 Hopton By Pass 23565 000000114 9000006544 <b>Maintenance &amp; Operation</b> MAINTAIN 20150731  WALKERJ 20091231	emi RECORD
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<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000000891	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unique	000000115	
Previous_link	000000115	
Phase	<b>Maintenance &amp; Operation</b>	
Action	INSPECT Survey	
Date	20160731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20091231	

Interim Advice

## **B2 EXAMPLE 2 – EXISTING ASSET**

The following scenario provides an example of where an existing Asset, not previously recorded on EnvIS, had been identified as a result of a survey or study. The example outlines the type and sequence of inventory and emi records that the Designer submitted, at each relevant milestone. Whilst this example relates to the construction/improvement of a new road the same principle would apply if an existing Asset was identified by a Network Management Agent. It should also be noted that the 'discovery' of an Asset can occur during Planning and Design, Construction and/or Maintenance and Operation.

### **MILESTONE 1 (ENVIRONMENTAL ASSESSMENT/STATEMENT PUBLICATION)**

The Designer requested existing EnvIS data relating to the assessment area of the project. This data assisted in providing baseline data to be used in the environmental assessment of the project.

As a result of assessment work carried out during the planning and design stage an Asset (Red Kite) was identified as being present within the assessment area but had not been previously recorded on EnvIS.

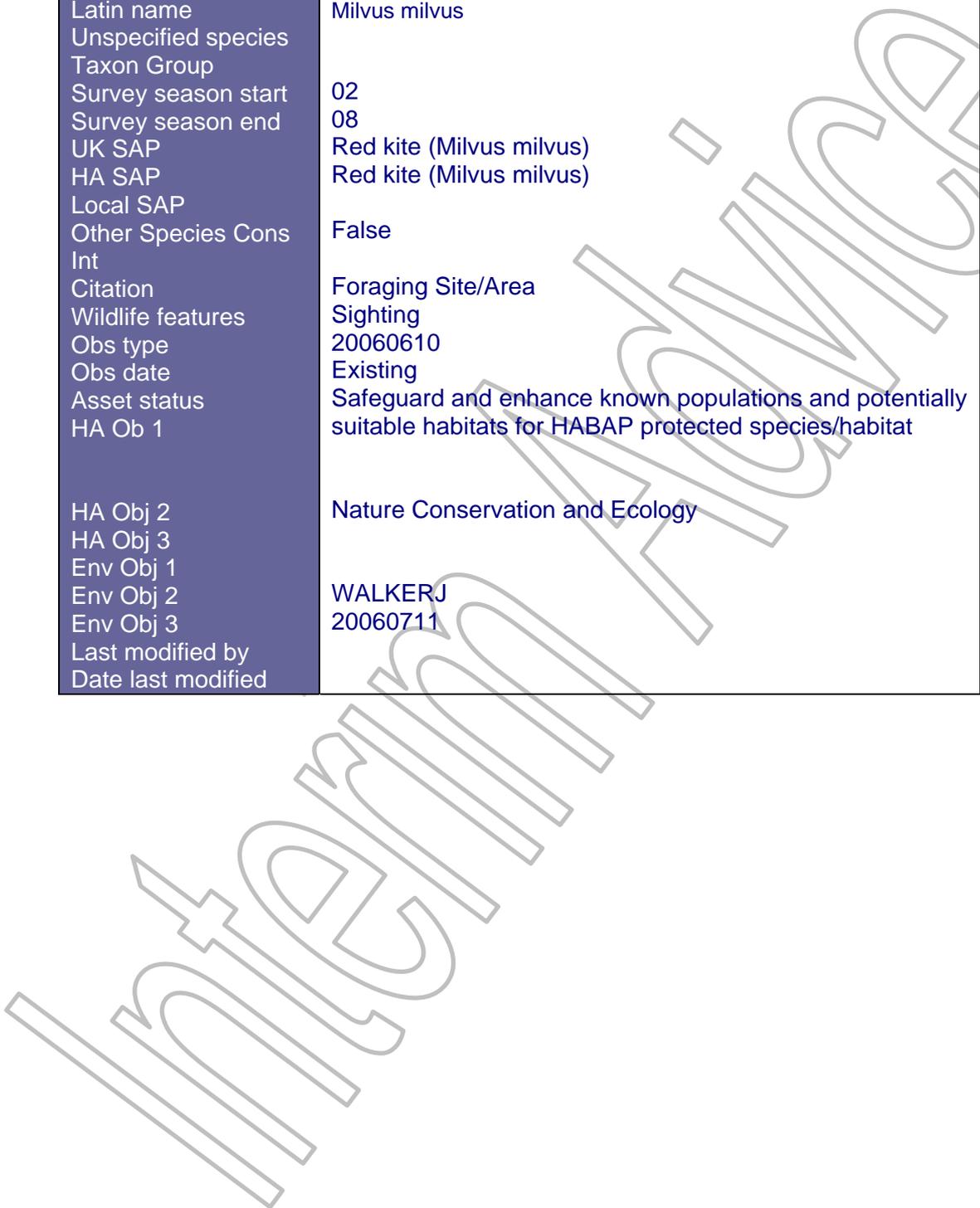
As a result of this 'discovery' the Designer submitted EnvIS data to the HA as follows:

The Designer submitted EnvIS inventory data detailing:

- Asset Classification – *Red Kite*
- Asset Status – *Existing*
- Geographic Location

Where feasible the Designer also provided HA and/or environmental objective(s).

<b>Haid</b>	0	<b>INVENTORY RECORD</b>
Record Type	INV	
Subset	NCE_Species	
Agent ID	2	
Element UniqueID	4676	
Geospatial type	Polygon	
Taxoversion key	NHMSYS0000530482	
Latin name	Milvus milvus	
Unspecified species		
Taxon Group		
Survey season start	02	
Survey season end	08	
UK SAP	Red kite (Milvus milvus)	
HA SAP	Red kite (Milvus milvus)	
Local SAP		
Other Species Cons Int	False	
Citation	Foraging Site/Area	
Wildlife features	Sighting	
Obs type	20060610	
Obs date	Existing	
Asset status	Safeguard and enhance known populations and potentially suitable habitats for HABAP protected species/habitat	
HA Ob 1		
HA Ob 2	Nature Conservation and Ecology	
HA Ob 3		
Env Obj 1		
Env Obj 2	WALKERJ	
Env Obj 3	20060711	
Last modified by		
Date last modified		



## **MILESTONE 2 (DETAILED DESIGN DRAWINGS)**

As the Asset has been identified in milestone 1, there was no requirement for the Designer to submit any additional records in this milestone. It is important to note that if the 'discovery' had taken place in milestone 2 then it would be at this stage that the EnvIS inventory data would have been submitted.

It is important to note that as the Asset was existing there was no requirement at either milestone 1 or 2 to submit any emi records detailing planned actions of plan and design, construct/implement, establish and evaluate.

### MILESTONE 3 (AS BUILT DRAWINGS)

At this milestone the Designer collected and submitted EnvIS data associated with the construction of the project as follows:

The Designer submitted emi records relating to:

- Planned actions(s) of inspect survey (to be undertaken by the Network Management Agent).

In this example no planned maintain actions were required to be submitted relating to this Asset as this will be dealt with through the maintenance of a related Asset (i.e. woodland).

It is important to note that in this example only 1 planned action of maintain and inspect survey has been submitted at milestone 3. This example is for illustrative purposes only and the Designer would be required to submit a number forward planned maintain and inspect survey records to be undertaken by the Network Management Agent.

HAEMIID	0	emi RECORD
Subset	EMI	
Record type	PLANNED	
Class	NCE Species	
Agent ID	2	
HAID		
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	23565	
Local unque	000000116	
Previous_link	000000116	
Phase	<b>Maintenance &amp; Operation</b>	
Action	INSPECT Survey	
Date	20110731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20060711	

**B3 EXAMPLE 3 – REMOVED ASSET**

The following scenario provides an example of an Asset that has been identified for removal. The example outlines the type and sequence of emi records that the Designer submitted, at each relevant milestone. Whilst this example relates to the construction/improvement of a new road the same principle would apply if removal of an Asset was to be undertaken by a Network Management Agent.

**MILESTONE 1 (ENVIRONMENTAL ASSESSMENT/STATEMENT PUBLICATION)**

The Designer requested existing EnvIS data relating to the assessment area of the project. This data assisted in providing baseline data to be used in the environmental assessment of the project.

As a result of assessment work carried out during the planning and design stage an existing Asset (open grassland), as indicated below, was identified to be removed due to the alignment of the new road.

As the Asset identified for removal was existing (i.e. recorded on EnvIS) the Designer was not required to submit any EnvIS data to the HA at milestone 1.

<b>HAID</b> Record Type Subset Agent ID Element Unique ID Geospatial type Grassland type Asset status HA Ob 1  HA Obj 2 HA Obj 3 Env Obj 1 Env Obj 2 Env Obj 3 Last modified by Date last modified	1000056893 INV Land_Grass 2 5757 Polygon Open Grassland Existing Respect the landscape character and quality of an area when designing new roads or improving existing roads 0 0 Landscape integration Visual amenity  WALKERJ 20060711	INVENTORY RECORD
--	--	------------------

**MILESTONE 2 (DETAILED DESIGN DRAWINGS)**

At this milestone the Designer collected and submitted EnvIS data associated with the planning and design of the project as follows:

The Designer submitted emi records relating for:

- Planned action of removal.

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000056893	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	5757	
Local unque	000000117	
Previous_link	000000117	
Phase	<b>Planning &amp; Design</b>	
Action	REMOVAL	
Date	20070601	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20060711	

### MILESTONE 3 (AS BUILT DRAWINGS)

At this milestone the Designer collected and submitted EnvIS data associated with the construction of the project as follows:

The Designer submitted emi records relating to:

- Actual action of removal (the submission of this record indicates that the Asset has been removed. At the point of the valid submission of this record, the Asset status will be changed, by the HA, from existing to removed).

It is important to note that if the section (but not all) of the Asset was to be removed, data relating to the management actions of removal and, plan and design and construct / implement would need to be submitted to indicate that both:

- the entire Asset was being removed; and
- a new Asset was being created (and corresponding environmental inventory data submitted) for that part of the Asset that is to remain. In this case Example 1 would be followed.

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	ACTUAL	
Class	Landscape	
Agent ID	2	
HAID	1000056893	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	5757	
Local unique	000000118	
Previous_link	000000118	
Phase	<b>Construction (including establishment)</b>	
Action	REMOVAL	
Date	20070601	
Condition	20070601	
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20070601	

## **B4 EXAMPLE 4 – ON HOLD / ABANDONED ASSET**

The following scenario provides an example of an Asset that has been put on hold and then subsequently abandoned. The example outlines the type and sequence of inventory and emi records that the Designer would submit, at each relevant milestone. It should be noted that an on hold or abandoned status of an Asset can only occur during either the Planning and Design or Construction milestone of a project.

### **MILESTONE 1 (ENVIRONMENTAL ASSESSMENT/STATEMENT PUBLICATION)**

As a result of assessment work carried out during the planning and design stage a planned Asset (noise barrier) was identified as a requirement of the project to mitigate against an increase in noise caused by road operation.

The information collected during this milestone was submitted to the HA as follows:

The Designer submitted inventory data detailing:

- Asset Classification – *Barrier*
- Asset Status – *Planned*
- Geographic Location
- HA Objective – *Reduce noise nuisance caused by road operation (vehicular movement)*
- Environmental Objective – *Auditory Amenity and Visual Amenity.*

(Once the Asset had been created and saved) The Designer submitted an emi record relating to:

- Planned action of plan and design.

<b>HAID</b>	0	<b>INVENTORY RECORD</b>
Record Type	INV	
Subset	Noise_Screening	
Agent ID	2	
Element Unique ID	7979	
Geospatial type	Polyline	
Screen type	Barrier	
Length	100	
Height	<b>2.2</b>	
Width	0.2	
Barrier type	Absorptive	
Materiel	Timber	
Asset status	Planned	
HA Ob 1	Reduce noise nuisance caused by road operation (vehicular movement)	
HA Obj 2		
HA Obj 3		
Env Obj 1	Auditory amenity	
Env Obj 2	Visual amenity	
Env Obj 3	0	
Last modified by	WALKERJ	
Date last modified	20060711	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID		
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	27979	
Local unique	000000119	
Previous_link	000000119	
Phase	<b>Planning &amp; Design</b>	
Action	PLANNING & DESIGN	
Date	20070731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20070711	

## **MILESTONE 2 (DETAILED DESIGN DRAWINGS)**

At this milestone the Designer collected and submitted EnvIS data associated with the planning and design of the project as follows:

The Designer submitted an emi record relating to:

- Actual action of plan and design (given that the detailed design of this project was complete).
- Planned action of construct/implement.

At some stage post submission of the planned construct/implement record the alignment of the road was amended. As a result of this amendment the Asset was required to be repositioned and was firstly put on hold and then abandoned. In order, the Designer submitted emi records relating to:

- On hold action of construct/implement (with the appropriate reason attached).
- Abandoned action of construct/implement (with the appropriate reason attached.)

On receipt of these valid records the HA updated the asset status of the Asset to reflect both the physical nature of the Asset and the stage that it had reached in its lifecycle.

It is important to note that as the Asset was to be repositioned, the Designer was required to submit new EnvIS data relating to the planned Asset as detailed in Example 1.

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	ACTUAL	
Class	Landscape	
Agent ID	2	
HAID	1000123456	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	27979	
Local unique	000000120	
Previous_link	000000120	
Phase	<b>Planning &amp; Design</b>	
Action	PLANNING & DESIGN	
Date	20070930	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20071015	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID	1000123456	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	27979	
Local unique	000000121	
Previous_link	000000121	
Phase	<b>Construction (including establishment)</b>	
Action	CONSTRUCT/IMPLEMENT	
Date	20070731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20071015	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	ON-HOLD	
Class	Landscape	
Agent ID	2	
HAID	1000123456	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	27979	
Local unique	000000122	
Previous_link	000000121	
Phase	<b>Planning &amp; Design</b>	
Action	CONSTRUCT/IMPLEMENT	
Date	20071215	
Condition		
Performance		
Reason abandoned		
Reason on hold	Design Change	
Last modified by	WALKERJ	
Date last modified	20071215	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	ABANDONED	
Class	Landscape	
Agent ID	2	
HAID	1000123456	
PIN	MM81417	
PIN Desc	Hopton By Pass	
Local ref	27979	
Local unique	000000123	
Previous_link	000000122	
Phase	<b>Construction (including establishment)</b>	
Action	CONSTRUCT/IMPLEMENT	
Date	20080615	
Condition		
Performance		
Reason abandoned		
Reason on hold	No Longer Required	
Last modified by	WALKERJ	
Date last modified	20080615	

### **MILESTONE 3 (AS BUILT DRAWINGS)**

As the planned construction of the Asset was abandoned no EnvIS data was collected and submitted in this milestone.

Interim Advice

## **B5 EXAMPLE 5 – ASSET WITH MULTIPLE OBJECTIVES**

The following scenario provides an example of where an Asset is contributing to multiple HA and environmental objectives.

In this example an existing Asset (combined hedgerow and wall) has been designed and constructed with the primary objective of integrating the road with the environment and the secondary objective of reducing noise nuisance. In this example a third environmental objective of Nature Conservation and Ecology has additionally been recorded. Planned emi records relating to maintain and inspect survey have been submitted to highlight the periodic actions that would be required to be undertaken to ensure that the Asset is meeting its stated objectives.

<b>HAID</b>	0	<b>INVENTORY RECORD</b>
Record type	INV	
Subset	Land_Hedges	
Agent ID	2	
Element unique ID	6868	
Geospatial type	Polyline	
Vegetation type	Native	
Native Veg type	Combined Hedgerow and Wall	
Ornamental Veg type	N/A	
Asset status	Existing	
HA Obj 1	Respect the landscape character and quality of an area when designing new roads or improving existing roads	
HA Obj 2	Reduce noise nuisance caused by road operation (vehicular movement)	
HA Obj 3		
Env Obj 1	Landscape integration	
Env Obj 2	Auditory amenity	
Env Obj 3	Nature Conservation and Ecology	
Last modified by	WALKERJ	
Date last modified	20060711	

<b>HAEMIID</b>	0	<b>emi RECORD</b>
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID		
PIN	L205035	
PIN Desc	Current Maintenance	
Local ref	23565	
Local unique	000000124	
Previous_link	000000124	
Phase	<b>Maintenance &amp; Operation</b>	
Action	MAINTAIN	
Date	20070731	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20060711	

HAEMIID	0	emi RECORD
Subset	EMI	
Record type	PLANNED	
Class	Landscape	
Agent ID	2	
HAID		
PIN	L205035	
PIN Desc	Current Maintenance	
Local ref	23565	
Local_unique	000000125	
Previous_link	000000125	
Phase	<b>Maintenance &amp; Operation</b>	
Action	INSPECT Survey	
Date	20070930	
Condition		
Performance		
Reason abandoned		
Reason on hold		
Last modified by	WALKERJ	
Date last modified	20060711	

Interim Agreements

## B6 EXAMPLE 6 – OUTCOMES BASED ON ACTUAL EVALUATE ACTION

The following two scenarios outline the different subsequent management actions that will be submitted by the Service Provider based on the outcome of an actual action of evaluate.

### Scenario 1

This provides an example where the outcome of an actual action of evaluate has revealed that an Asset *is not* meeting its intended HA and/or environmental objectives and has been assigned a performance rating of red. It is feasible that this outcome could be determined at any one of the evaluate milestones (i.e. 1, 5, or 15 years) and is therefore relevant to both Designers and Network Management Agents. In this scenario redesigning the Asset has been deemed the most appropriate action and the sequence and type of EnvIS data as described in Example 1 would be submitted. In brief, this is as follows:

EnvIS inventory data is submitted, by the Designer, with the Asset status of planned (the characteristics of an existing Asset are to be modified). Once the Asset has been created and saved planned actions of plan and design, construct/implement and establish will be submitted. In addition to these actions, planned actions of evaluate (1, 5, and 15 years), maintain and inspect (to be undertaken by the Network Management Agent) are required to be submitted. As each action is completed the Service Provider will submit an actual record detailing the action to the HA.

It is important to note that as the Asset was to be replanted, the Designer would be required to submit emi records relating to the removal of the existing Asset.

**SCENARIO 1 – ACTUAL EVALUATE ACTION HAS IDENTIFIED CORRECTIVE ACTION IS REQUIRED**

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Performance	Date	Commentary
ACTUAL	EVALUATE	Red	20060731	Corrective action identified

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive		Planned

Record Type	EMI Action	Performance	Date	Commentary
PLANNED	PLAN & DESIGN		20061231	Decision to redesign
PLANNED	CONSTRUCTION/ IMPLEMENT		20070630	
PLANNED	ESTABLISH		20071230	
PLANNED	INSPECT Survey		20080330	Determine if corrective action effective
PLANNED	EVALUATE		20080630	
PLANNED	EVALUATE		20130630	
PLANNED	EVALUATE		20230630	
PLANNED	MAINTAIN		DATE	Undertaken ongoing periodic basis
PLANNED	INSPECT Survey		DATE	

## SCENARIO 2

This provides an example where the outcome of an actual action of evaluate has revealed that an Asset *is* meeting its intended HA and/or environmental objectives) and has been assigned a performance rating of green. This scenario assumes that this is the first time that action of evaluate has been undertaken and therefore further evaluate records (5 and 15 years) are provided. Planned actions of maintain and inspect are included to demonstrate that there is ongoing management actions relating to this Asset.

### SCENARIO 2 – ACTUAL EVALUATE ACTION HAS IDENTIFIED NO CORRECTIVE ACTION IS REQUIRED

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Performance	Date	Commentary
ACTUAL	EVALUATE	Green	20060731	No corrective action identified
PLANNED	MAINTAIN		DATE	Undertaken on ongoing periodic basis
PLANNED	INSPECT Survey		DATE	
PLANNED	EVALUATE		20110731	
PLANNED	MAINTAIN		DATE	Undertaken on ongoing periodic basis
PLANNED	INSPECT Survey		DATE	
PLANNED	EVALUATE		20210731	

## **B7 EXAMPLE 7 – OUTCOMES BASED ON ACTUAL INSPECT ACTION LEADING TO CONDITION RATING**

The following five scenarios outline the different subsequent management actions that would be submitted by the Network Management Agent based on the outcome of an actual inspect (survey) or actual inspect (study) action where a condition rating is recorded. These examples represent a simplified chronology of submission of management actions as inventory and emi records. Whilst this example relates to actions undertaken by the Network Management Agent the same principle would apply where a Designer was undertaking inspect (survey) actions.

### **SCENARIO 1**

This provides an example where the outcomes of an actual action of inspect (survey), undertaken by the Network Management Agent, has revealed that the condition of an existing Asset has been assessed as red. This condition rating indicates that the Asset is in poor condition and not meeting its HA and/or environmental objective(s). As work other than routine maintenance is considered to be required an inspect (study) action is undertaken to build on the results of the inspect (survey) and determine further actions to be taken. The results of the inspect (study) have determined that reconstructing the Asset has been deemed the most appropriate action and the sequence and type of EnvIS data as described in Example 1 would be submitted. In brief, this is as follows:

EnvIS inventory data is submitted, by the Designer, with the Asset status of planned. Once the Asset has been created and saved planned actions of plan and design, construct/implement, establish, inspect (survey), and evaluate (as this is a planned Asset years 1, 5, and 15 are submitted) will be submitted. In addition to these actions planned actions of maintain and inspect (survey), to be undertaken by the Network Management Agent, are submitted. As each action is completed the Designer will submit an actual record detailing the action to the HA.

It is important to note that as the Asset was reconstructed, the Designer would be required to submit emi records relating to the removal of the existing Asset.

**SCENARIO 1– ACTUAL INSPECT (SURVEY) ACTION HAS IDENTIFIED RED CONDITION RATING AND PLAN AND DESIGN AND CONSTRUCT/IMPLEMENT ACTION IS REQUIRED**

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Condition	Date
ACTUAL	INSPECT Survey	Red	20060731
PLANNED	INSPECT Study		20060931
ACTUAL	INSPECT Study	Red	20060931

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Planned

Record Type	EMI Action	Condition	Date
PLANNED	PLAN & DESIGN		20060731
PLANNED	CONSTRUCT/ IMPLEMENT		20070630
PLANNED	ESTABLISH		20071230
PLANNED	INSPECT Survey		20070501
PLANNED	EVALUATE		20080630
PLANNED	EVALUATE		20130630
PLANNED	EVALUATE		20230630
PLANNED	MAINTAIN		DATE
PLANNED	INSPECT SURVEY		DATE

## SCENARIO 2

This provides an example where the outcomes of an actual action of inspect (survey), undertaken by the Network Management Agent, has revealed that the condition of an existing Asset has been assessed as red. This condition rating indicates that the Asset is in poor condition and not meeting its HA and/or environmental objective(s). In this scenario urgent maintenance has been deemed the most appropriate action, therefore no inspect (study) action is required. The Network Management Agent is required to submit a planned action of maintain. In addition, a planned action of inspect (survey) has been submitted to determine whether or not the corrective action has been effective (i.e. condition rating of green). As each action is completed the Network Management Agent will submit an actual record detailing the action to the HA.

### SCENARIO 2– ACTUAL INSPECT ACTION HAS IDENTIFIED RED CONDITION RATING AND MAINTAIN ACTION IS REQUIRED

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Condition	Date
ACTUAL	INSPECT Survey	Red	20060731
PLANNED	MAINTAIN		20060815
PLANNED	INSPECT Survey		20070731

### SCENARIO 3

This provides an example where the outcomes of an actual action of inspect (survey) has revealed that the condition of an existing Asset has been assessed as amber. In this scenario non urgent maintenance has been deemed the most appropriate action. The Network Management Agent is required to submit a planned action of maintain followed by a planned action of inspect (survey), against the existing Asset, to address the situation. The planned action of inspect (survey) will determine whether or not the corrective action has been effective (i.e. condition rating of green). As each action is completed the Network Management Agent will submit an actual record detailing the action to the HA.

### SCENARIO 3 – ACTUAL INSPECT ACTION HAS IDENTIFIED AMBER CONDITION RATING AND MAINTAIN ACTION IS REQUIRED

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Condition	Date
ACTUAL	INSPECT Survey	Amber	20060731
PLANNED	MAINTAIN		20061131
PLANNED	INSPECT Survey		20070731

#### SCENARIO 4

This provides an example where the outcomes of an actual action of inspect (survey) has revealed that the condition of an existing Asset has been assessed as amber. This condition rating indicates that non urgent corrective action is required and the most appropriate action to address the problem is to bring forward the next planned action of inspect (e.g. 6 months instead of 12 months). Following the actual action of inspect (survey) the condition rating recorded would determine the most appropriate action. If the condition was still assessed as amber or had deteriorated to red then corrective action would be required as either that described in Scenarios 1 or 2. If the condition rating was assessed as green then periodic actions of maintain and inspect (survey) would be submitted as in Scenario 5. As each action is completed the Network Management Agent will submit an actual record detailing the action to the HA.

#### SCENARIO 4 – ACTUAL INSPECT ACTION HAS IDENTIFIED AMBER CONDITION RATING AND INSPECT ACTION IS REQUIRED

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Condition	Date
ACTUAL	INSPECT Survey	Amber	20060731
PLANNED	INSPECT Survey		20070131

### SCENARIO 5

This provides an example of where the outcome of an actual action of inspect (survey) has revealed that the condition of an existing Asset has been assessed as green. This condition rating indicates that the Asset is meeting its intended HA and/or environmental objectives and corrective action is not required. Routine planned actions of maintain and inspect (survey) are submitted for the lifecycle of the Asset. As each action is completed the Network Management Agent will submit an actual record detailing the action to the HA.

### SCENARIO 5 – ACTUAL INSPECT ACTION HAS IDENTIFIED GREEN CONDITION RATING AND INSPECT ACTION IS REQUIRED

Record Type	Subset	Screen Type	Barrier Type	Material	Asset Status
INV	NOISE	Barrier	Absorptive	Timber	Existing

Record Type	EMI Action	Condition	Date
ACTUAL	INSPECT Survey	Green	20060731
PLANNED	MAINTAIN		20070530
PLANNED	INSPECT Survey		20070731
PLANNED	MAINTAIN		DATE
PLANNED	INSPECT Survey		DATE

It is important to note that an inspect (study) action alone (i.e. not following on from inspect (survey)) can also lead to the identification of further actions, following all scenarios outlined above.

**B8 EXAMPLE 8 – OUTCOMES BASED ON ACTUAL INSPECT ACTION TO IDENTIFY PRESENCE OF AN ASSET**

The following scenarios outline the different subsequent management actions that would be submitted by the Service Provider following an actual inspect (study or survey) action which has been undertaken to determine the presence of an Asset (species) on the HA network. This example represents a simplified chronology of submission of management actions as inventory and emi records. It should be noted that this example relates to both Network Management Agent and Designers.

In this example, analysis of EnvS data has indicated that there has been an increase in the level of badger road kill within a specific area. As a result, an inspection (study or survey) has been commissioned to determine both the presence of badgers and the ability of any provided mitigation to meet stated HA and environmental objectives. The inspection could result in a number of conclusions that would determine what actions, if any, would be undertaken by the Service Provider.

In scenarios 1 and 2 there are currently no record of badgers at this location in EnvS. The planned and actual action of inspect (study or survey) cannot be submitted by the Service Provider to the HA, until an Asset has been “set up” in the system. Therefore, the Service Provider must first submit inventory data relating to the generic Asset classification of ‘inspect study/survey’ relating to the project or network Area. The planned and subsequent actual action of inspect (study or survey) is then attached to this Asset.

Record Type	Subset	Class
INV	INSPECT Survey/Study	NCE

Record Type	EMI Action	Condition	Date
PLANNED	INSPECT Study or Survey		20060731
ACTUAL	INSPECT Study or Survey		20060815

In scenarios 3 and 4 there is currently a record of badgers at this location in EnvS. The planned and subsequent actual action of inspect (study or survey) is attached to this Asset.

### SCENARIO 1

This provides an example where the outcome of an actual inspect (study or survey) has determined the presence of a social group of badgers within the surrounding area of the trunk road network. The location of the social group has not been previously recorded on EnvIS. The study has further concluded that no mitigation exists and this is the reason for the increase in the level of road kill. As a result of the inspection, there are two separate actions to be undertaken by the Service Provider.

Firstly, the presence of the badgers must be recorded on EnvIS as existing. Once the Asset has been created and saved planned future actions of inspect (survey), to monitor condition, will be submitted.

Record Type	Subset	Latin Name	HA SAP	UK SAP	Local SAP	Obs Type	Obs Date	Asset Status
INV	NCE Species	Meles Meles	Meles Meles	Meles Meles	Meles Meles	Sighting	20060610	Existing

Record Type	EMI Action	Condition	Date
PLANNED	INSPECT Survey		DATE
ACTUAL	INSPECT Survey		DATE

Secondly, construction of an Asset (Badger Tunnel) is deemed the most appropriate action and the sequence and type of EnvIS data as described in **Example 1** would be submitted.

### SCENARIO 2

This provides an example where the outcome of an actual inspect (study or survey) has determined the presence of a social group of badgers within the surrounding area of the trunk road network. The location of the social group is already recorded on EnvIS with an asset status of existing. The study has further concluded that whilst mitigation exists (badger tunnel), and is recorded on EnvIS, its condition is poor which has resulted in an increase in the level of road kill. In this case the sequence and type of EnvIS data, as described in **Example 7**, would be submitted depending upon the condition rating assigned.

### SCENARIO 3

This provides an example where the outcome of an actual inspect (study or survey) has determined the presence of a social group of badgers within the surrounding area of the trunk road network. The location of the social group is already recorded on EnvIS with an asset status of existing. The study has further concluded that mitigation exists, is recorded on EnvIS, and its condition is good. No additional action is required above periodic maintenance and inspection.

### SCENARIO 4

This provides an example where the outcome of an actual inspect (study or survey) has determined that no badgers exist within the surrounding area of the trunk road network and no additional action is required.

## C1 ANNEX C LOOK UP TABLE LISTING

The following matrix indicates which tables are used for each dataset.

Lut	Record_using_lut	Comment
lut_aqma_status	ENVIS_AQMA_STATUS	
lut_barrier_material	ENVIS_NOISE_SCREENING	
lut_barrier_type	ENVIS_NOISE_SCREENING	
lut_category	ENVIS_WATER_RECEP_FLOOD	
lut_class	ENVIS_CULT_HERIT	
lut_classification	ENVIS_WATER_RECEP_FLOOD	
lut_dataset_class	All inventory	
lut_depot_discharge_items	ENVIS_WATER_SOURCE_DISCHARGE	
lut_depot_discharge_status	ENVIS_WATER_SOURCE_DISCHARGE	
lut_drainage_type_1	ENVIS_WATER_SOURCE_CONTINUOUS	
lut_drainage_type_2	ENVIS_WATER_SOURCE_CONTINUOUS	
lut_earthwork	ENVIS_LAND_EARTHWORKS	
lut_ec_fisheries_designation	ENVIS_WATER_RECEP_SURF	
lut_emi_action	ENVIS_EMI	
lut_emi_rag	ENVIS_EMI	
lut_emi_reason_abandoned	ENVIS_EMI	
lut_emi_reason_on_hold	ENVIS_EMI	
lut_emi_record_type	ENVIS_EMI	
lut_emi_record_type	ENVIS_EMI_WASTE	
lut_env_obj	All inventory	
lut_event_type	ENVIS_CULT_HERIT	
lut_ewc	ENVIS_EMI_WASTE	
lut_ewc_class_dest	N/A	Not required.
lut_ewc_conditional_rules	ENVIS_EMI_WASTE	
lut_feature_char	ENVIS_LAND_HARD_FEATURE	
lut_feature_class	ENVIS_CULT_HERIT	
lut_feature_type	ENVIS_LAND_HARD_FEATURE	
lut_flood_likelihood	ENVIS_WATER_RECEP_FLOOD	
lut_flow_controls	ENVIS_WATER_SOURCE_POINT	

Lut	Record_using_lut	Comment
lut_gqa_aesthetics	ENVIS_WATER_RECEP_SURF	
lut_gqa_biological	ENVIS_WATER_RECEP_SURF	
lut_gqa_chemistry	ENVIS_WATER_RECEP_SURF	
lut_gqa_nutrients_nitrates	ENVIS_WATER_RECEP_SURF	
lut_gqa_nutrients_phosphates	ENVIS_WATER_RECEP_SURF	
lut_grassland_type	ENVIS_LAND- GRASS	
lut_groundwater_type	ENVIS_WATER_RECEP_GROUND	
lut_ha_obj	All inventory	
lut_habap	ENVIS_NCE_HABITAT	
lut_highway_drainage_function	ENVIS_WATER_SOURCE_POINT	
lut_highway_drainage_function	ENVIS_WATER_SOURCE_CONTINUOUS	
lut_highway_drainage_function	ENVIS_WATER_SOURCE_REGIONAL	
lut_highway_drainage_function	ENVIS_WATER_SOURCE_DISCHARGE	
lut_highway_drainage_function	ENVIS_WATER_SOURCE_TP_DISCHARGE	
lut_highway_drainage_type	ENVIS_WATER_SOURCE_POINT	
lut_highway_drainage_type	ENVIS_WATER_SOURCE_CONTINUOUS	
lut_highway_drainage_type	ENVIS_WATER_SOURCE_REGIONAL	
lut_highway_drainage_type	ENVIS_WATER_SOURCE_DISCHARGE	
lut_highway_drainage_type	ENVIS_WATER_SOURCE_TP_DISCHARGE	
lut_listed_grade	ENVIS_CULT_HERIT	
lut_material	ENVIS_EMI_MAT	
lut_material_class	ENVIS_EMI_MAT	
lut_monument_form	ENVIS_CULT_HERIT	
lut_native_vegetation_type	ENVIS_LAND_VEGETATION	
lut_native_vegetation_type	ENVIS_LAND_HEDGES	
lut_obstype	ENVIS_NCE_SPECIES	
lut_oecd_scheme_classification	ENVIS_WATER_RECEP_SURF	
lut_origin	ENVIS_EMI_MAT	
lut_ornamental_veg_type	ENVIS_LAND_VEGETATION	
lut_ornamental_veg_type	ENVIS_LAND_HEDGES	
lut_period	ENVIS_CULT_HERIT	

Lut	Record_using_lut	Comment
lut_phase	ENVIS_COMM	
lut_phase	ENVIS_EMI	
lut_phase	ENVIS_EMI_WASTE	
lut_phase	ENVIS_EMI_MAT	
lut_phase_1	ENVIS_NCE_HABITAT	
lut_pin	ENVIS_WMF	
lut_pin	ENVIS_STUDY	
lut_pin	ENVIS_COMM	
lut_pin	ENVIS_EMI_WASTE	
lut_pin	ENVIS_EMI_MAT	
lut_point_drainage_type	ENVIS_WATER_SOURCE_POINT	
lut_protection_grade	ENVIS_CULT_HERIT	
lut_record_status	ENVIS_AIR_QUAL_SOURCE	
lut_regional_drainage_type	ENVIS_WATER_SOURCE_REGIONAL	
lut_river_ecosystem_classification	ENVIS_WATER_RECEP_SURF	
lut_road_layout	ENVIS_AIR_QUAL_SOURCE	
lut_road_type	ENVIS_AIR_QUAL_SOURCE	
lut_rss_type	ENVIS_NOISE_RSS	
lut_screen_type	ENVIS_NOISE_SCREENING	
lut_shw_waste	ENVIS_EMI_WASTE	
lut_shw_mat	ENVIS_EMI_MAT	
lut_spz	ENVIS_WATER_RECEP_GROUND	
lut_spz_type	ENVIS_WATER_RECEP_GROUND	
lut_sr_type	ENVIS_NOISE_SR	
lut_status	All inventory	
lut_structure	ENVIS_NCE_WILDLIFE_STRUCTURES	
lut_subsurf_type	ENVIS_WATER_SOURCE_CONTINUOUS	
lut_sub-surface_and_surface_items	N/A	Replaced by lut_drainage_type_1 and 2
lut_sub-surface_items	N/A	Replaced by lut_drainage_type_1 and 2
lut_surface_channel_items	N/A	Replaced by lut_drainage_type_1 and 2
lut_surface_items	N/A	Replaced by lut_drainage_type_1 and 2

Lut	Record_using_lut	Comment
lut_svc	ENVIS_WATER_RECEP_GROUND	
lut_taxa	ENVIS_NCE_SPECIES	
lut_tidal_water_classification	ENVIS_WATER_RECEP_SURF	
lut_tpo_type	ENVIS_LAND_VEGETATION	
lut_vegetation_type	ENVIS_LAND_VEGETATION	
lut_vegetation_type	ENVIS_LAND_HEDGES	
lut_waste_dest	ENVIS_EMI_WASTE	
lut_water_feature	ENVIS_WATER_RECEP_SURF	
lut_water_resource	ENVIS_WATER_RECEP_SURF	
lut_water_resource	ENVIS_WATER_RECEP_GROUND	
lut_water_resource	ENVIS_WATER_RECEP_FLOOD	
lut_water_type	ENVIS_WATER_RECEP_SURF	
lut_waterbody	ENVIS_LAND_WATER	
lut_weeds_pests	Reference	Issued for reference purposes only. Can be cross-referenced to lut_taxa to identify pests and weeds.
lut_wfeature	ENVIS_NCE_SPECIES	
lut_wildlife_structure_type	ENVIS_NCE_WILDLIFE_STRUCTURES	
thesaurus	ENVIS_CULT_HERIT	
thesaurus_classification_groups	ENVIS_CULT_HERIT	