THE ELECTRONIC STAFF RECORD PROGRAMME

NATIONAL HEALTH SERVICE

ESR-NHS0105 : **GENERIC OUTBOUND INTERFACE DATA SET – EXPENSES**

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Approvals:

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1. DOCUMENT CONTROL

1.1. CHANGE RECORD

Date	Author	Version	Change Reference
18/11/2011	H Woodroffe	0.1	First Draft
30/11/2011	H Woodroffe	0.2	Updated after internal review
20/11/2011	S Mittal	0.3	Updated to include the updates from the latest version of NHS0086
30/12/2011	H Woodroffe	0.4	Updated after internal review
13/01/2012	H Woodroffe	0.5	Updated after internal review
26/01/2012	H Woodroffe	0.6	Updated after internal review
24/02/2012	H Woodroffe	0.7	Updated after internal review
07/03/2012	H Woodroffe	1.0	Updated to issue.
21/08/2012	P Quercioli	1.1	Updated section 6.6 added fields 28 & 36
28/08/2012	P Quercioli	1.2	Updated CVS file format description - Split ABA/TRA records in two sections
13.09.2012	P Quercioli	1.3	Added Section 5.3 – removed Section 6.10
17.10.12	P Quercioli	1.4 draft	Issued for sense check review
15.02.2013	M Rigby	1.5	Specification corrections and inclusion of extra fields
13.08.2013	M Rigby	1.6	Inc Employee Status Flag & System Person type

1.2. REVIEWERS

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1.3. DISTRIBUTION

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2. CONTENTS

3. INTRODUCTION

This document is intended to provide details of the proposed Generic Outbound Interface intended for use by Expense system providers to the NHS.

The format of the Interface has been designed to closely match the standard format of the data store maintained by the NHS Interface Team.

This specification will only reference the Outbound Interface Processes. The Generic Attendance Inbound interface process will not be affected by this development.

The new interface will be available on a daily basis if required, but any frequency that is daily or greater than daily can be accommodated.

4. DATA FLOW

The NHS Interface Hub will act as a postmaster for interface files flowing between ESR and a Trust ftp account.

- ESR will offload details of new or changed data items which are delivered to the NHS Interface Hub overnight.
- The NHS Hub Data Store is updated with the changes from ESR.
- Once the NHS Hub Data Store has been updated, the processing to create the interface files for individual NHS Organisations or suppliers commences.
- The handling of the overnight files arriving on the NHS Interface Hub, the updating of the NHS Hub Data Store and the subsequent generation of the outbound interfaces from the store is fully automated.
- The Outbound interface will normally run in changes mode, offloading details of any changes to the Trust data in ESR since the last execution of the interface.
- An inbound interface mechanism will be provided that will allow the Trust to request a full data set.
- Outbound Interface files will be placed in an ftp account for collection by the Trust's ftp system or the Expense system itself.

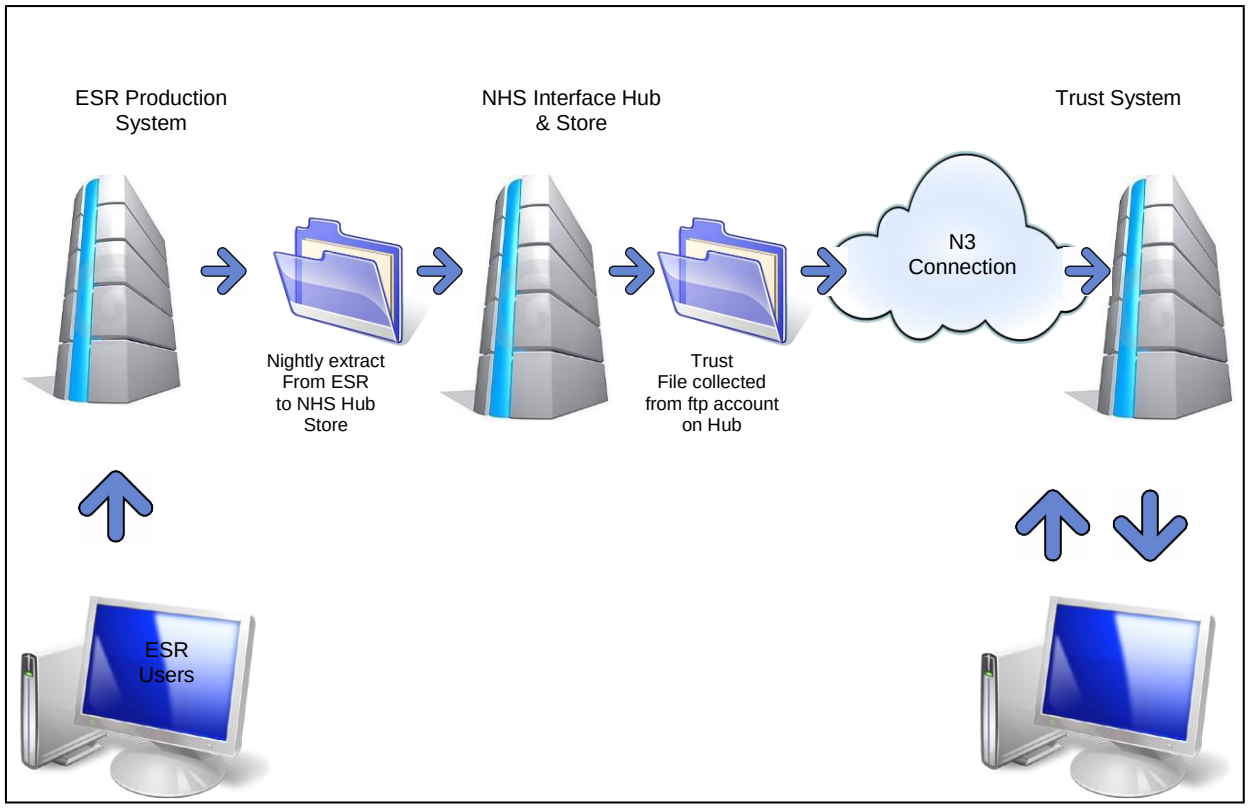

Figure 1 – Overview of the data flow in the GO interface.

4.1. FILE PROCESSING AND DELIVERY TIMINGS

The following table gives an indication of the automated nightly processing schedule that will produce the required file.

As the team is currently building the first bespoke offloads, the timings are only indicative.

Expected Timeline	Process
02:00 – 04:00	The ESR Production System offloads the daily changes to the NHS Interface Hub.
04:00 – 07:00	The NHS Interface Hub processes the daily changes file from ESR, updating the master “store” on the NHS Hub
07:00 – 08:00	The NHS Interface Hub produces the interface files for local sites.
08:00	The local interface files for sites are available for collection from the relevant ftp account on the NHS Hub.

5. NEW ESR OUTBOUND EXPENSE INTERFACE

This section provides details of the new outbound interface.

The format of this file is presented below. All the fields will appear on the target file, but only the fields that are indicated with a “Y” in the required field will ever be populated in the file.

For each record type on the outbound interface file, the first field identifies a record type. The record type is made up of 2 characters to represent the record type (i.e. PR = Person Record), and either an ‘A’ to represent either Add or Update, or a ’D’ to represent a Deletion. For type ‘A’ records, it is the responsibility of the supplier system to identify if this is a new record which currently does not exist in the Expense system or an update to an existing record for an employee.

The file will be presented in a delimited format. The database maintained from the ESR data uses a tilde (~) as a separator and this will be the recommended solution on the outbound interface. This negates the need to use quoted fields where valid data appears in ESR with alternative separators i.e. commas.

5.1. FILE NAMING CONVENTIONS

Trust outbound files will be named using the following conventions:

GO_VPD_EXP_GOF_20110826_00001234.DAT

Where:

GO	Denotes that the file is a Generic Outbound file
VPD	Trust Virtual Private Database number
EXP	Sub-file type (e.g. EXP - Expenses)
GO	GO Outbound format/version (or if you like sub-file type)
F/C	Extract Type Code (F – Full, C – Changes)
20110826	File Extract Date (e.g. YYYYMMDD)
00001234	Unique ID (usually a sequentially incremented number)
DAT	Constant 'DAT' extension denoting data file

5.2. GENERAL FILE FORMATTING PRINCIPLES

The section describes general formatting requirements that should enable consistency in the processing for all files.

- All files will be in ASCII format.
- The ASCII line feed character (Hex '0A') will terminate all records.
- Any files with the suffix "_txfr" are files that the NHS Interface Hub is in the process of creating.
- To ensure the integrity of files during transfer each file will include a header record, and a trailer record containing a record count.
- The header record must be the first record of a file; the trailer record must be the last.
- Data Items within a line will be delimited by a single tilde "~" character (Hex 7E/ASCII 126). If a tilde character is contained within a data item, then it will be removed and replaced with a space (Hex 20) in order to maintain the field length.
- Null value fields are sent as either two tilde characters side by side [~~] or nothing following the last tilde separator in the case of the last field in a record.
- Numeric values may optionally have a preceding negative sign ('-').
- All dates must be valid dates and are restricted to the following fixed length format YYYYMMDD
  Where, YYYY represents the 4-digit year, MM represents the 2-digit month, and DD represents the 2-digit day: E.g. 20040714 (14th July 2004) or 20040409 (9th April 2004).
- All timestamp values (date plus time) are sent in the fixed length format YYYYMMDD HH24MISS
  Where, YYYYMMDD are as specified in the date format above, HH24 represents the 2-digit hour of a 24-hour clock, MI represents the 2-digit minute, and SS represents the 2-digit second. A single blank space separates the date portion of the timestamp from the time portion. E.g. 20040626 221652 (10:16:52: PM on 26th June 2004)

- In the record definition tables throughout this section, the following convention is applied for field lengths & data types:
    - ?(n), where 'n' is the (maximum) number of bytes occupied by the field and '?' is the field type indicator. The usage is as follows,
    - X(n) – variable length character field, of up to n characters
    - F(n) – fixed length character field, containing n characters as specified
    - N(n[,m]) – variable numeric field, of up to n digits, where n is the max number of digits and m is the optional number of digits after an optional decimal point
    - L(n[,m]) –fixed length numeric field, padded with leading zeros, where n is the total of digits and m may be optionally specified as the number of digits after a decimal point
- Mandatory data items are shown marked with a plus sign ('+') in the "Data Format" column of the tables below. Where a value is shown within single quotes (') it should be supplied exactly as indicated e.g. the header record type is 'HDR'.

Additional, item specific validation rules are indicated as necessary in the "Comments" column.

5.3. DAILY FILE EXTRACT

The daily file gives a current 'snapshot' view of a set of records which includes deletion records, change records, with a start date that is not in the future. Any new records with dates in the future will only be extracted when the date becomes current.

The below assignment record example shows what data would come through on the daily file extract, when a change is made to the record.

On 15th April 2012 the original assignment data held in ESR looks like this:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
12345678	Active Assignment	01-APR-2011	01-MAR-2012
12345678	Maternity	02-MAR-2012	17-APR-2012
12345678	Active Assignment	21-APR-2012	-

On 16th April 2012 the assignment record has been changed in ESR; a correction to the end date of the Maternity has been made and now looks like this:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
12345678	Active Assignment	01-APR-2011	01-MAR-2012
12345678	Maternity	02-MAR-2012	17-APR-2012
12345678	Active Assignment	18-APR-2012	-

Below shows what the 'snapshot' daily file would contain for the above change to the Maternity date of the assignment record if a full file is produced on 15th April, followed by change files.

On 15th April 2012 the full file would only contain the record that is currently active:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
12345678	Maternity	02-MAR-2012	20-APR-2012

On 16th April 2012 the daily 'snapshot' change file would contain the same as above; the current active record:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
12345678	Maternity	02-MAR-2012	17-APR-2012

On 17th April 2012 the 'snapshot' change file would not contain any records:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
NO RECORDS			

On 18th April 2012, having reached the date of the active assignment the 'snapshot' change file would show only the latest record according to date because this is now the current record:

Assignment no.	Assignment Status	Effective Start Date	Effective End Date
12345678	Active Assignment	18-MAR-2012	-

5.4. LIST OF VALUES

A number of data items on the NHS Interface Hub Store are held as "codes" rather than "meanings". An example of this is the employee title. The following table provides an example of the codes and meanings for the Employee Title field.

List Name	Code (Person Record – Title)	Meaning
TITLE	MISS	Miss
TITLE	MR.	Mr.
TITLE	MRS.	Mrs.
TITLE	MS.	Ms.
TITLE	NURSE	Nurse
TITLE	PROF	Professor

For each field that is held as a code there is an associated List of Values (LOV) on the store which has records that provide the translation from codes to meanings.

The extract will provide all such data items as meanings rather than codes.

At the time that the outbound file is produced, the NHS Interface Hub will translate all values held as codes to the current ESR meanings, e.g. the trust system will receive an Employee Title of “Professor” rather than the code “PROF”.

5.5. SELECTION CRITERIA

The following section provides the options available to the NHS Organisation for selecting the employees who should be included on the Expenses interface file.

Option A
The extract process is set by default to select all the employees for the NHS Organisation and include them on the Expenses interface file.

Option B
The NHS Organisation can set the interface flags within ESR at the payroll, position or assignment level to identify the employees who should be included on the Expenses interface file. For this interface the value of this flag will be identified prior to the implementation process.

6. INTERFACE FILE RECORD TYPES AND NAMES

The following section provides a list of record types that are used by this interface along with the individual data items for each record type.

The record types will be ordered within the outbound extract file as indicated in the table below. The records for a person will always be grouped as a set. For example, the records in the file will be ordered as follows:-

HDR

LCA – one record for each changed Location. (Zero LCA records if no Locations have changed)
ORA – one record for each changed Organisation (Zero LCA records if no Organisations have changed)
POA – one record for each changed Position (Zero LCA records if no Positions have changed)
PRA (1st person with a change)

ASA – 0 or more records
PHA - 0 or more records
ADA - 0 or more records
VHA - 0 or more records
COA - 0 or more records

PRA (2nd person with a change)

ASA – 0 or more records
PHA - 0 or more records
ADA - 0 or more records
VHA - 0 or more records
COA - 0 or more records

TRL

Record Type	Record Name	Initial Data Population & Reconciliation
HDR	File Header Record	
LCA	Locations Record	ALL active locations
ORA	Organisation Hierarchy Record	Current records
POA	Position Record	Current and future records
PRA	Person Record	Current and active records within the “Processing Window”
ASA	Assignment Record	Current and active records within the “Processing Window”
PHA	Phone Record	Current and active records
ADA	Address Record	Current and active records
VHA	Vehicles Record	Current and future records
TRL	Trailer Record	

6.1. HEADER

There will be one and only one Header record per file. It will be the first record in the file.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	F(3) +	Y	Type of record Fixed value of 'HDR'
2	File Name	X(40)+	Y	The name of this file
3	Creation Date	F(15) +	Y	File creation Timestamp e.g. Format YYYYMMDD HH24MISS
4	Trust Identifier	X(4) +	Y	The unique identifier for an NHS Employer organization, also referred to as the VPD Code
5	Previous Run Date	F(15)	Y	Previous Run Date corresponding to the lower range of the Run Period e.g. Format YYYYMMDD HH24MISS
6	Run Date	F(15) +	Y	Current Run Date corresponding to the upper range of the Run Period e.g. Format YYYYMMDD HH24MISS
7	Interface Version	X(2) *	Y	The version of the interface that produced this file e.g. 02

6.2. LOCATION RECORD

Location records are non date-tracked records and exist as reference data. Assignment and other entities may link to Locations. A Location change record is held whenever an update of any sort occurs. Records are sorted in ascending order of Location ID.

Note: the layout below is only valid for UK Address styles.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)	Y	Fixed value 'LCA' =Add/Update, or 'LCD'=Delete
2	Location ID (Deletion Key)	N(15)+	Y	Unique ESR internal Location Identifier that uniquely defines this record type
3	Location Code	X(60)	Y	e.g. 123 KT Queensway - Billingham
4	Location Description	X(240)	Y	e.g. Billingham Health Centre
5	Inactive Date	Date	Y	Location Valid Date To e.g. YYYYMMDD

6	Assignment Address 1st line	X(240)	Y	The first line of the location address e.g. Billingham Health Centre
7	Assignment Address 2nd line	X(240)	Y	The second line of the location address e.g. Piper Knowle House
8	Assignment Address 3rd line	X(240)	Y	The third line of the location address e.g. Queensway
9	Town	X(30)	Y	The town or city of the location address e.g. Billingham
10	County	X(70)	Y	The county of the location address e.g. CLE
11	Postcode	X(30)	Y	The postal code of the location address e.g. TS23 2LA
12	Country	X(60)	Y	The country of the location address e.g. GB
13	Telephone	X(60)	Y	e.g. 01993 822800
14	Fax	X(60)	Y	e.g. 01993 822801
15	Payslip Delivery Point	X(3)	Y	e.g. ‘Y’=Yes & ‘N’=No
16	Site Code	X(2)	Y	e.g. KT
17	Welsh Location Translation	X(60)	Y	
18	Welsh Address Line 1	X(60)	Y	
19	Welsh Address Line 2	X(60)	Y	
20	Welsh Address Line 3	X(60)	Y	
21	Welsh Town Translation	X(60)	Y	
22	Last Update Date	TSMP+	Y	The last time this record was updated e.g. Format YYYYMMDD HH24MISS

6.3. ORGANISATION RECORD

Organisation records are non date-tracked records and exist as reference data. Assignment and other entities may link to Organisations.

An Organisation change record is sent whenever an update of any sort occurs. Records are sorted in ascending order of Organisation ID.

No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value 'ORA' =Add/Update, or 'ORD'=Delete
2	Organisation ID (Deletion Key)	N(10)+	Y	Unique ESR internal Organisation Identifier that uniquely defines this record type. e.g. 495070
3	Org Name	X(240)	Y	e.g. 123 Med Stf Resp Thoracic 590600
4	Org Type	X(30)/ X(80)	Y	e.g. NHS_C
5	Effective From Date	Date+	Y	Organisation Valid Date From e.g. Format YYYYMMDD
6	Effective To Date	Date	Y	Organisation Valid Date To e.g. Format YYYYMMDD
7	Hierarchy Version ID	N(15)+	Y	e.g. 86700
8	Hierarchy Version Date From	Date	Y	e.g. Format YYYYMMDD
9	Hierarchy Version Date To	Date	Y	e.g. Format YYYYMMDD
10	Default Cost Centre	X(15)	Y	e.g. 361170509
11	Parent Org ID	N(10)+	Y	Derived from Organisations Hierarchy e.g. 562889
12	NACS Code	X(30)	Y	e.g. RBA
13	Location ID	N(10)	Y	e.g. 443441
14	Last Update Date	TSMP+	Y	The last time this record was updated e.g. Format YYYYMMDD HH24MISS
15	Cost Centre Description	X(240)	Y	e.g. Med Staff Resp. Thoracic

6.4. POSITION RECORD

Position details are date-tracked records. Position records exist as reference data, and Assignment and other entities may link to Positions.

A Position change record is generated whenever an update of any sort occurs. If a Position Record is changed, that record and any future date-tracked position records that follow it are also generated. However, a Position record will not be generated if linked data in an external entity (such as a Job, Payscale, Grade Step) is changed independently. For example, if the Payscale held against the position is changed in ESR, a changes record is generated on the next execution of the interface. However, if an attribute of the Payscale is changed, the Position change record will not be generated. i.e. if the name of payscale “XR05” is changed from “Band 5” to “AfC Band 5”, there will be no change records generated for any positions with Payscale “XR05”.

A Position record is uniquely identified by the combination of Position ID, Effective Start Date, and Effective End Date.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value ‘POA’ =Add/Update, or ‘POD’=Delete
2	Position ID (Deletion Key)	N(10)+	Y	Unique ESR internal Position Identifier e.g. 730861
3	Effective From Date	Date	Y	Effective Start Date for the instance of the record e.g. Format YYYYMMDD
4	Effective To Date	Date	Y	Effective End Date for the instance of the record e.g. Format YYYYMMDD
5	Position Number	N(10)+	Y	The unique Position Number (Position Segment 1) e.g. 2244749
6	Position Name (LOV)	X(240)+	Y	The Full Position Name e.g. 6817668|Locum Consultant Physician - Acute Medicine|001|Acute Medicine|130
7	Budgeted FTE	N(13,5)	Y	e.g. 1
8	Subjective Code (LOV)	X(15)	Y	e.g. 123825200

Item No.	Data Item	Data Format	Populated	Comments
9	Job Staff Group (LOV)	X(40)	Y	e.g. Administrative and Clerical
10	Job Role (LOV)	X(60)	Y	e.g. Clerical Worker
11	Occupation Code (LOV)	X(5)	Y	e.g. G2D
12	Payscale	X(10)	Y	NHS Grade Flexfield e.g. XN02
13	Grade Step	X(30)	Y	This needs to be fixed as above in assignment record. Concatenation of the Employee's Pay Scale (Grade segment2) and the point on the Grade Spinal Point delimited by a pipe ('|') character. The Grade Step will be derived as of the Run Date parameter or the Assignment End Date, whichever is earlier. Changes to this data item will be reported whenever the Position Record is sent, including changes to the underlying structure of the Pay Scale and Spinal Points. e.g. XN02|16
14	ISA regulated Post (LOV)	X(15)	Y	This has not been defined as yet but is scheduled to be introduced at ESR Release 7.2. e.g. Not Applicable
15	Organisation ID	N(10)	Y	ID of Org that the position is attached to e.g. 54422
16	Hiring Status (LOV)	X(80)	Y	e.g. Active
17	Position Type (LOV)	X(80)	Y	e.g. None

Item No.	Data Item	Data Format	Populated	Comments
18	Eligible for OH Processing (LOV)	X(30)	Y	e.g. 'Y'=Yes & 'N'=No
19	EPP Flag (LOV)	X(30)	Y	e.g. 'Y'=Yes & 'N'=No
20	Deanery Post Number	X(30)	Y	Position EIT e.g. SWN/RBA11/093/SPR/001
21	Managing Deanery Body (LOV)	X(10)	Y	e.g. WAL
22	Workplace Org Code (LOV)	X(10)	Y	e.g. RH5
23	Last Update Date	TSMP+	Y	The last time this record was updated e.g. Format YYYYMMDD HH24MISS
24	Subjective Code Description (LOV)	X(240)	Y	e.g. 123 Associate Specialist

6.5. PERSON RECORD

Only person records with a status of “Employee” or “Applicant” will be selected. A Person record is uniquely identified by the combination of Person ID, Effective Start Date and Effective End Date.

The records will be presented as date-tracked records in ascending order of Person ID, Effective Start Date and Effective End Date.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value ‘PRA’ =Add/Update, or ‘PRD’=Delete
2	Person ID (Deletion Key)	N(10)+	Y	Unique ESR internal Person Identifier
3	Effective Start Date	Date+	Y	Effective Start Date for the instance of the record
4	Effective End Date	Date+	Y	Effective End Date for the instance of the record
5	Employee Number	X(30)	Y	The ESR unique Employee Number For an applicant this will be the applicant number.
6	Title	X(30)	Y	Code: Person’s Title e.g. ‘Mr.’, ‘Mrs.’, etc (Lookup Type = TITLE)
7	Last Name	X(150)+	Y	Last Name of the Person
8	First Name	X(150)	Y	First Name of the Person
9	Middle Names	X(60)	Y	Middle Name(s) of the Person
10	Maiden Name	X(150)	Y	The Maiden Name as held in the Additional Person Details DFF.
11	Preferred Name	X(80)	Y	Preferred Name PPF – Known AS
12	Previous Last Name	X(150)	N	Previous last name
13	Gender	X(30)	N	Code: Person legal gender, e.g. ‘M’=Male, ‘F’=Female, ‘U’=Unknown (Lookup Type = SEX)
14	Date of Birth	Date	Y	The employee’s Date of Birth
15	National Insurance Number	X(30)	Y	The UK National Insurance Number.
16	NHS Unique ID	X(15)	Y	Unique NHS ID for Employees
17	Hire Date	Date	Y	Hire/Re-Hire Start Date. Null if person is still an Applicant (per_periods_of_service - date_start)
18	Actual Termination Date	Date	Y	The last day of employment of the person for the current period of service. Set only if person is terminated.
19	Termination Reason (LOV)	X(30)	N	Code: Termination Reason (Lookup Type = LEAV_REAS)
20	Employee Status Flag	X(3)	Y	Flag to indicate if employee is

Item No.	Data Item	Data Format	Populated	Comments
				Applicant/Employee or Ex-Employee 'E'=Employee 'A'=Applicant 'X'=Ex-Applicant or Ex-Employee
21	WTR Opt Out	X(3)	N	Code: Additional Personal Details: WTR Opt Out (attribute23) Value Set = Yes_No
22	WTR Opt Out Date	Date	N	
23	Ethnic Origin (LOV)	X(30)	N	Code: Ethnic Origin (Lookup Type = ETH_TYPE)
24	Marital Status	X(30)	N	Code: Marital Status (Lookup Type =MAR_STATUS)
25	Country of Birth	X(30)	N	Code: Country of Birth Code: Custom Lookup = FND_TERRITORIES
26	Previous Employer	X(240)	N	Previous Employer Name Select the first record returned Previous Employer in descending ordered of End Date, Start Date (per_previous_employers - employer_name)
27	Previous Employer Type (LOV)	(X30)	N	Code: Previous Employer Type (per_previous_employers - employer_type) (Lookup Type = PREV_EMP_TYPE)
28	CSD 3 Months	Date	N	CSD 3 Months
29	CSD 12 Months	Date	N	CSD 12 Months (attribute4)
30	NHS CRS UUID	X(12)	N	The UUID of the person stored for the for CfH UIM / Registration purposes
31	Spare 1		N	Null
32	Spare 2		N	Null
33	Spare 3		N	Null
34	System Person Type	X(30)	Y	Internal System Person Type e.g. EMP, EX_EMP, OTHER, etc
35	User Person Type	X(80)	Y	Person Type as seen by the End User Employee, Applicant, Volunteer, Contactor, etc
36	Office e-mail address	X(240)	Y	
37	NHS Start Date	Date	N	NHS Entry Date for Person DFF
38	Spare 4	X(15)	N	Null
39	Last Update Date	Date	Y	The last time this record was updated

Item No.	Data Item	Data Format	Populated	Comments
40	Disability Flag*	X(1)	N	Set if a person has one or more Active disabilities in ESR. Disability Flag is determined by the following processing (completed in the following sequence) 'Y' - One or more Active disabilities found and Category is not set to either "No" or "Not Declared" 'N' - One or more Active disabilities found with Category set to "No" Null - One or more Active disabilities found with Category set to "Not Declared" Null - No Active disabilities found
41	Legacy Payroll Number	X(150)	N	Legacy Payroll Number is used by some Organisations as a reference field which enables them to "key" remote systems to an ESR employee.
42	Nationality (LOV)	X(30)	N	Code: Nationality (Lookup Type = NATIONALITY)
43	Spare		N	Null
44	Spare		N	Null

6.6. ASSIGNMENT RECORD

Assignment details will be presented as date-tracked records by the GO Interface.

An Assignment record is uniquely identified by the combination of Assignment ID, Effective Start Date and Effective End Date.

Records are sorted in ascending order of Person ID, Assignment ID, Effective Start Date and Effective End Date.

The assignment record contains data items from several distinct database entities, some of which are date-tracked independently e.g. Payrolls.

Assignments are only selected where the 'User Assignment Status' (ASA10) is one of:-

- 'Acting Up',
- 'Active Assignment'
- 'Assignment Costing Deletion'
- 'Career Break',
- 'Inactive Not Worked',
- 'Internal Secondment',
- 'Maternity',
- 'Out on External Secondment – Paid'
- 'Suspend Assignment'
- 'Suspend No Pay',
- 'Suspend With Pay'
- 'Terminate Process Assignment'

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value 'ASA' =Add/Update, or 'ASD'=Delete
2	Person ID	N(10)+	Y	Unique ESR internal Person Identifier
3	Assignment ID (Deletion Key)	N(10)+	Y	Unique ESR internal Assignment Identifier
4	Effective Start Date	Date+	Y	Effective Start Date for the instance of the record
5	Effective End Date	Date+	Y	Effective End Date for the instance of the record
6	Earliest Assignment Start Date	Date	Y	Earliest Assignment Start Date Always populated in REC, REF, and CHG mode.
7	Assignment Type	X(1)	Y	'A'=Applicant / 'E'=Employee
8	Assignment Number	X(20)	Y	The ESR unique Assignment Number
9	System Assignment Status	X(30)	N	Internal Assignment Status e.g. ACTIVE_APL, ACTIVE_ASSIGN, SUSP_ASSIGN, etc
10	User Assignment Status	X(80)	N	Assignment Status as seen by the End User e.g. Offer Accepted, Active

Item No.	Data Item	Data Format	Populated	Comments
				Assignment, Suspend No Pay, Terminate Assignment, etc
11	Employee Status Flag	X(1)	N	Flag to indicate if Assignment relates to an Application/Employment or Ex-Employment 'E'=Employee 'A'=Applicant 'X'=Ex-Application or Ex-Employment
12	Payroll Name	X(80)	Y	Name of assignment payroll, e.g. '631 Monthly'
13	Payroll Period Type	X(30)	Y	Code: Assignment Payroll Period Type e.g. Bi-Week, Calendar Month, Week, etc (Lookup Type = PROC_PERIOD_TYPE)
14	Assignment Location ID	N(10)	Y	The ID of the location to which the Assignment is attached.
15	Supervisor Flag	X(1)	Y	This Assignment belongs to a supervisor 'Y'=Yes, 'N'=No
16	Supervisor Person ID	N(10)	Y	The Person ID of the supervisor for this assignment
17	Supervisor Assignment ID	N(10)	Y	The Assignment ID of the supervisor for this assignment
18	Supervisor Assignment Number	X(20)	Y	The Assignment Number of the supervisor for this assignment
19	Department Manager Person ID	N(10)	Y	Department Manager Override DFF (ass_attribute29)
20	Employee Category (LOV)	X(30)	N	Code: Assignment Employment Category as displayed on Assignment screen (Lookup Type = EMPLOYEE_CATG)
21	Assignment Category (LOV)	X(30)	N	Code: Assignment category (Lookup Type = EMP_CAT)
22	Primary Assignment	X(30)	Y	Code: Denotes whether assignment is a primary assignment Value Set = Yes_No
23	Normal Hours / Sessions	N(22,3)	N	Normal working hours for assignment - zero if null. (normal_hours)
24	Frequency (LOV)	X(30)	N	Code: Frequency of Normal Hours/Sessions for assignment, derived from assignment Frequency (frequency) Lookup Type = FREQUENCY

Item No.	Data Item	Data Format	Populated	Comments
25	Grade Contract Hours	N(22,3)	N	Full time hours for assignment grade, derived from Additional Assignment Details: Override Std Grade Hours (if present) or Contract table values (i.e. Annual Hours/Period Divisor) where Exact = assignment Extra Details of Service: Contract Type.
26	FTE	N(22,3)	N	Grade Contract Hours / Normal Hours for the Grade
27	Flexible Working Pattern (LOV)	X(30)	N	Assignment work pattern, derived from Additional Assignment Details: Flexible Working Pattern (if present), Values are 'Annualised Hours' 'Other Flexible Working' 'Term Time' 'Vacation Working'
28	Organisation ID	N(10)	Y	ID of Assignment Organisation Unit
29	Position ID	N(10)	Y	ID of Assignment Position
30	Position Name	X(240)	Y	The Full Name of assignment Position. It consists of a Position Number, Position Title, Occupation Code, Area of Work, and Second Specialty concatenated together and separated by a pipe '|' character. e.g. '102414|Nursing Band 3|N9A|General Acute|' Segment3 Value Set = NHS_Occupation_Code Segment4 Value Set = NHS_Area_of_Work Segment5 Value Set =NHS_Occupation_Code
31	Grade	X(240)	N	The Full Name of assignment Grade, It consists of a VPD Identifier, Payscale, and Payscale Description concatenated together and separated by a pipe '|' character. e.g. 'NHS|XR02|Review Body Band 2'
32	Grade Step		N	As per the Payscale Point in the Generic GL Interface. Derived from 'People>Assignment>Others>Grade Step' form, 'Grade – Payscale segment' field. Concatenation of the Employee's Pay Scale and current Point
33	Start Date in Grade	Date	N	Grade Step Placement – From Date

Item No.	Data Item	Data Format	Populated	Comments
34	Annual Salary Value		N	As per the Annual Salary on the Generic GL Interface. Derived from 'People>Assignment>Others>Grade Step' form,
35	Job Name (LOV)	X(120)	Y	The Full Name of the job as displayed on the assignment screen. It consists of a Main Staff Group and a Job Role concatenated together and separated by a pipe '|' character. e.g. 'Nursing and Midwifery Registered|Staff Nurse' ** This could be the code if we were sent the full LOV Segment1 Value Set = NHS_Main_Staff_Group* Segment2 Value Set = NHS_Role
36	People Group (LOV)	X(240)	Y	The Full Name of the People Group (People Group Flexfield) as displayed on the assignment screen. It consists of Paypoint Location Code, Expense User Type, Time and Attendance System, and Data Entry Group e.g. 'Default Home|Standard User|UPT||' Segment2 Value Set = NHS_Expense_User_Types Segment4 Value Set = NHS_Data_Entry_Group
37	T&A Flag	X(240)	Y	This will be the concatenation of the Interface EIT values set at Payroll (Organisation EIT), Position and Assignment levels for the assignment. The values at each level will be comma separated and the '|' symbol will be used to separate the values at different levels. The values will always be in the order Payroll, Position then Assignment. e.g. 'GTA|BNK,GT1,NET|GT1,GT2' Where • 'GTA' is set at Organisation level for the assignment's payroll • 'BNK,GT1,NET' are set against the assignment's position • And 'GT1,GT2' are set on the assignment's EIT
38	Assignment Night Worker Attribute	X(3)	N	Assignment Night Worker attribute, Values are 'Yes', 'No' or 'Null'

Item No.	Data Item	Data Format	Populated	Comments
39	Projected Hire Date	Date	Y	The Projected Hire Date for a applicant for a specific application Always null for an employee assignment.
40	Vacancy ID	N(15)	N	The vacancy the application has been made against – this will only be populated for an application.
41	Contract End Date	Date	N	For fixed term contracts, the end date! From the Fixed Term Contract End Date from Assignment DFF
42	Increment Date	Date	N	Assignment Increment Date (ass_attribute1)
43	Maximum Part Time Flag (LOV)	X(30)	N	Values are 'Yes' or 'No'
44	AFC Flag	X(1)	N	First character of Grade – Segment2 = 'X'
45	Last Update Date	Date	Y	The last time this record was updated.
46	Last Working Day	Date+	Y	Taken from the value entered on it period of service DFF on the End Employment form.
47	e-KSF Spinal Point	X(30)	N	The name of the Spinal Point e.g. '10', '20' … '1600' In e-KSF these correspond to Pay Points 1 to 56 ESR will translate ESR Spinal Point values to e-KSF Pay Point equivalents. Note: changes to the e-KSF Pay Point mappings will require a full refresh of assignment records (i.e. interface execution with Run Mode = 'REF' - Refresh Mode).
48	Manager Flag	X(30)	N	Taken from the Manager button on the Miscellaneous Tab of the Assignment Screen. 'Y'=Yes, 'N'=No
49	Assignment End Date	Date	Y	
50	Spare		N	Null

6.7. PHONE RECORD

Phone records are non date-tracked records and are linked to Persons. The GO Interface will send all ESR phone records regardless of type.

A phone change record is held whenever an update of any sort occurs. A particular Phone ID can occur only once per file. Records are sorted in ascending order of Person ID.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value 'PHA' =Add/Update, or 'PHD'=Delete
2	Person ID	N(10)+	Y	Unique ESR internal Person Identifier
3	Phone ID (Deletion Key)	N(10)+	Y	Unique ESR internal Phone Identifier that uniquely defines this record type.
4	Phone Type	X(30)+	Y	
5	Phone Number	X(60)+	Y	
6	Effective Start Date	Date+	Y	Phone Valid Date From
7	Effective End Date	Date	Y	Phone Valid Date To
8	Last Update Date	Date	Y	The last time this record was updated

6.8. ADDRESS RECORD

Address records are non date-tracked records and are linked to Persons. The GO Interface will send all ESR address records regardless of type. Only one address of a particular type can be active at any one time.

An address change record is held whenever an update of any sort occurs. A particular Address ID can occur only once per file. Records are sorted in ascending order of Person ID.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value 'ADA' =Add/Update, or 'ADD'=Delete
2	Person ID	N(10)+	Y	Unique ESR internal Person Identifier
3	Address ID (Deletion Key)	N(10)+	Y	Unique ESR internal Address Identifier that uniquely defines this record type.
4	Address Type	X(30)	Y	Code Lookup Type = ADDRESS_TYPE
5	Address Style	X(30)+	Y	Code: This defines the address style, for example UK, Canadian, Polish, etc. The Style can influence the meaning and usage of some fields such as county which is held on ESR as Region_1. For example, this could mean something else for a Canadian address.

6	Primary Flag	X(30)+	Y	Code: Value Set = Yes_No
7	Address 1st line	X(240)	Y	The first line of the address
8	Address 2nd line	X(240)	Y	The second line of the address
9	Address 3rd line	X(240)	Y	The third line of the address
10	Address Town	X(30)	Y	The town or city of the addresses
11	Address County	X(70)	Y	County Code if Address Style = 'GB' Lookup Type = GB_COUNTY Otherwise this is a free text data item
12	Address Postcode	X(30)	Y	
13	Address Country	X(60)	Y	Address Code
14	Effective Start Date	Date+	Y	Address Valid Date From
15	Effective End Date	Date	Y	Address Valid Date To
16	Last Update Date	Date	Y	The last time this record was updated.

6.9. VEHICLES

These Vehicle records are a combination of Vehicle Repository and Vehicle Allocations.

Vehicle details are date-tracked records but will be presented by the GO Interface as a simplified entity.

All types of vehicle will be held. All records that are touched will be held for those persons included in the interface.

When a change is detected it is held along with all subsequent date-tracked changes.

Records are sorted in ascending order of Assignment ID, Vehicle Allocation ID, and Effective Start Date.

No.	Data Item	Data Format	Populated	Comments
1	Record Type	F(3) +	Y	Type of record fixed value of VHA' =Add/Update, or 'VHD'=Delete
2	Person ID	N(10)+	Y	Unique ESR internal Person Identifier
3	Assignment ID	N(10)+	Y	Unique ESR internal Assignment Identifier
4	Vehicle Allocation ID (Deletion Key)	N(10)+	Y	Unique ESR internal Vehicle Identifier that uniquely defines this record type.
5	Effective Start Date	Date+	Y	Effective Start Date for the instance of the record
6	Effective End Date	Date+	Y	Effective End Date for the instance of the record

7	Registration Number	X(30)	Y	(pqp_vehicle_repository_f - registration_number)
8	Make	X(30)	Y	(pqp_vehicle_repository_f - make)
9	Model	X(30)	Y	(pqp_vehicle_repository_f - model)
10	Ownership	X(30)	Y	(pqp_vehicle_repository_f - vehicle_ownership)
11	Initial Registration Date	Date	Y	(pqp_vehicle_repository_f - initial_registration)
12	Date / Time Stamp	TSMP+	Y	The last time this record was updated.
13	Engine CC	N(5) or N(2,2)	Y	(pqp_vehicle_repository_f - engine_capacity_in_cc)
14	User Rates Table	X(80)	Y	(pay_user_tables - user_table_name)
15	Fuel Type (LOV)	X(30)	Y	Code: Fuel Type (pqp_vehicle_repository_f - fuel_type) Lookup Type = PQP_FUEL_TYPE

6.10. ASSIGNMENT COSTING RECORD

Costing records are date-tracked records and are linked to Assignments but will be presented by the Expenses Interface as a simplified entity.

All Costing records that are touched will be sent for those persons included in the interface.

When a change is detected it is sent along with all subsequent date-tracked changes.

Records are sorted in ascending order of Person ID, Assignment ID, Costing Allocation ID and Effective Start Date.

No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value ‘COA’ =Add/Update, or ‘COD’=Delete
2	Person ID	N(10)+	Y	Unique ESR internal Person Identifier
3	Assignment ID	N(10)+	Y	Unique ESR internal Assignment Identifier
4	Costing Allocation ID (Deletion Key)	N(10)+	Y	Unique ESR internal Costing Allocation Identifier that uniquely defines this record type.
5	Effective Start Date	Date+	Y	Effective Start Date for the instance of the record

6	Effective End Date	Date+	Y	Effective End Date for the instance of the record
7	Entity Code	X(3)	Y	Code: Value Set = NHS Trust Identifier (pay_cost_allocation_keyflex – segment1)
8	Charitable Indicator	X(1)	Y	Code: Value Set = NHS_Charitable_Marker (pay_cost_allocation_keyflex – segment2)
9	Cost Centre	X(15)	Y	Code: Value Set = NHS_Cost_Centres (pay_cost_allocation_keyflex – se gment3)
10	Subjective	X(15)	Y	Code: Value Set = NHS_Subjective_Codes (pay_cost_allocation_keyflex – segment4)
11	Analysis 1	X(15)	Y	Code: Value Set = NHS_Sub_Analysis_Codes (pay_cost_allocation_keyflex – segment5)
12	Analysis 2	X(15)	Y	Code: Value Set = NHS_Sub_Analysis_Codes2 (pay_cost_allocation_keyflex – segment6)
13	Element Number	N(7)	N	Code: Value Set = NHS_Element_Number (pay_cost_allocation_keyflex – segment6)
14	Spare Segment	X(60)	N	(pay_cost_allocation_keyflex – segment7)
15	Percentage Split	N(5,2)+	Y	Number between 0.00 and 999.00
16	Last Update Date	Date	Y	The last time this record was updated.

6.11. FILE TRAILER

There must be one and only one Trailer record per file. It must be the last record in the file.

Item No.	Data Item	Data Format	Populated	Comments
1	Record Type	X(3)+	Y	Fixed value ‘TRL’
2	NUMRECORDS	N(10)+	Y	Number of records in the file including the header and trailer records. Value Range 2 to 4294967295 (i.e. 4,294,967,295)

6.12. FILE CONTENT

Each interface file will present a full set of records for an employee when any relevant field on any record for that employee has changed in ESR.

For example, if an employee's e-mail address changes in ESR, the next execution of the interface will produce a full set of records for that employee, Person, Assignment, Contact details etc, even though only the e-mail address on the contact record has actually changed.

A changes file will contain changes since the last execution of the interface.

6.13. DELETIONS

Deletions refer to records that have been purged entirely from the ESR database. Deletions occur infrequently but must be catered for.

Each output Add/Update Record Type will have a corresponding deletion Record Type identified by the last character being a 'D'. For example, Assignment Details

Record Type	Meaning
'ASA'	New or Updated Assignment Record
'ASD'	Deleted Assignment

A deletion record will include the minimum amount of data necessary to uniquely identify the record. This is typically the data item identified as the record's primary key, unless specified otherwise.

Each Record Type layout in section 6 indicates which data field represents its "Deletion Key".

A deletion record will always appear in a generic format: Record Type ~ Deletion Key. For example:

PRD~1006
ASD~9834
ASD~23443

Deletion records will always appear before any relevant Add/Update records of the same type. For example:

PRD~1006
PRA~1009

6.14. FILE TRANSFER PROCESS AND ALERTS

The interface process will make the files available in an ftp account on the NHS Interface Hub. The Expenses supplier or NHS Organisation will be required to collect the files from the '/Out' subdirectory of the ftp account and delete them once they have been collected.

The NHS Interface Team will retain a copy of each file which is produced and will maintain and archive copy of all files. Should any previously supplied files be required to be recovered on to the ftp for collection, a service request through the ESR Remedy Service Desk should be logged by the NHS Organisation that the data refers to requesting the retrieval of the files.

The NHS Interface Hub processes will monitor each of the ftp accounts. Where the files have not been collected for an agreed number of days, an e-mail alert will be issued to both the NHS Interface Support Team and a nominated e-mail address at the Expense system supplier.

6.15. SYSTEMS AND PROCESS

The Expense system supplier is anticipated to deal with the new outbound (ESR to 3rd Party Supplier) interface as follows:-

- The 3rd party system supplier should check the ftp account, outbound directory for files to collect on a daily basis.
- It should ignore any files with the suffix "_txfr" as these are files that the NHS Interface Hub is in the process of creating.
- Each filename has a "serial" number and filenames should be processed in ascending numeric order. The 3rd party system should ensure that there are no breaks in the sequence of serial numbers from one load to the next.
- Once a file has been successfully collected and loaded into the Expenses system, it should be deleted from the ftp account. This NHS Interface Hub will monitor files residing in the ftp account and generate an alert when files are not being deleted after an agreed number of days.

7. EXAMPLE OUTBOUND FILE

```
HDR~GO_123_EXP_20111004_00189794.DAT~20111003 044800~20111004 045101~20111004 023659~20111003 000001~20111004
000000~1~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
LCA~552921~070 z Maternity LWH~Maternity Lland Hospital~~Maternity~Lland HGpe Hospital~~~~~GB~~~Y~~~~~~~20110803
161310~~~~~~~~~~~~~~~~~~~~~~~~~~
ORA~128111~070 6 Domestic (BRO)~NHS_TM~19510101~~11340~19510101~~070E642~548444~~96804~20061019
233601~070E642~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
POA~64~20101001~47121231~1005~1005|Asst Technical Officer|T4H|Clinical Physiology|~~NHS5547~Additional Clinical
Services~Technician~T4H~TT02~TT02|0~Not Applicable~232~Frozen~NONE~~~~~~20100929 135146~Assistant Technical
Officer~~~~~~~~~~~~~~~~~~~~~~~~
PRA~1234567~20110629~20111110~10602402~MISS~Bloggs~Laura~Claire~~~~~19880612~JH342567C~651099~~20110531~~A~~~~~~~~~~~~~~~EX_E
MP_APL~Ex-employee and Applicant~LAURA.BLOGGS@NHS.NET~~~20111110 112826~~~~~~~~~~
ASA~1234567~936458~20110601~47121231~20060727~E~10602402~~~~070 Monthly~Calendar
Month~96867~Y~1117262~12345678~12345678~98745~~~Y~~~~~~328245~4741068~6971867|AHPs Maternity Therapy Assistant
Bank|S9C|Bank|~~~~~Additional Clinical Services|Helper/Assistant~Default Home|Standard
User||~GTA~~~~~~~~20110506~20110510~~~31014712
PHA~1234567~15691675~H1~1743762397~20110704~20111109~20111109 160911~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
ADA~1234567~9028057~HOME~GB~Y~The Old Engine House~Wind Park~Wind Hill~Shrewsbury~SHR~SY1 2AH~GB~20110704~20110704~20111109
160911~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
VHA~1117297~936458~224236~20060801~47121231~RV51UWL~FORD~KA~P~20041001~20061021
103140~1300~NHS_MILEAGE_CASUAL~P~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
COA~3559126~3002660~3031899~20090401~201111231~123~N~43112345~431AC03~4311~4213~~~~1.11~20111231~~~~~~~~~~~~~~~~~~~~~~~~~~~~
~~~~
TRL~10~
```

8. INBOUND INTERFACE FILE

As described above, the outbound interface will normally run in changes mode, offloading details of any changes to data in ESR since the last execution of the interface.

It is expected that occasionally a full data set may be required. An automated mechanism will be provided to allow a request for the full data set.

To request a full file, the Expense supplier of the NHS organisation should place a “full file request” interface file in the ‘/In’ subdirectory of the ftp account for the VPD. The NHS Interface Hub will automatically produce the full file on the requested date. The changes file for that date will also be produced as per the norm.

Where a full data file is requested, the full file will normally be created by the next processing slot for the interface. To ensure a file is available for the start of the next working day, the request file should be placed on the NHS Interface Hub by 23:59 on the current day.

8.1. GO INBOUND (FULL FILE REQUEST) INTERFACE FILE NAMING CONVENTION

The Full File Request must be named using the following convention:

GO_*vvv_bbb_ttR_ccyymmdd_uuuuuuuu*.DAT

Where:

GO	Constant ‘GO’ to denote an GO Interface File
vvv	Three digit NHS Organisation VPD Number
bbb	Three character 3rd party sub-system identifier • “EXP” meaning Expenses
tt	Two character Extract type code e.g. GO
R	Constant ‘R’ to denote a ‘Full File Request’ file
ccyymmdd	Interface Run Date corresponding to the date the file was created
uuuuuuuu	Unique Interface Run Sequence Number, incremented for each file
DAT	Constant ‘DAT’ extension denoting data file

For example:-

GO_123_EXP_GOR_20101126_00001234.DAT

8.2. SNAPSHOT REFRESH REQUEST FILE LAYOUT

There must be one and only one Header record per file. It must be the first and only record in the file.

Item No.	Data Item	Data Format	Comments
1	Record Type	F(3) +	Type of record Fixed value of 'HDR'
2	File Name	X(40)+	The name of this file
3	Requested Run Date	F(15) +	Timestamp at which the Requested Extract is required to be run. Format YYYYMMDD HH24MISS. This must be in range T (where T = current date & time) to T+40 days. The extract will be run as soon as possible after the specified timestamp.

9. CONTACTS

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