



BANK OF ENGLAND

# A loan-level data collection for buy-to-let lending

Technical documentation

V1.5 June 2017

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## Change History

Document Version	Change	Pages	Comment
1.3	Two-digit postcode allowable for newdwellingpostcode	12, 19	Schema has been updated
1.3	Five-digit postcode allowable for postcode	12, 19	Schema has been updated
1.3	PurchasePriceNA, MonthlyRentIncomeNA and NumberOfBedroomNA corrected to read 'not applicable' rather than 'not available'	13	No impact on schema
1.3	'House' has been renamed 'House: type unknown' in typeofdwellling	17	No impact on schema
1.3	Validation BV014 has been removed	20	No impact on schema
1.3	Validation BV015 has been modified	20	No impact on schema
1.4	RevisionNumber Constraint / Description corrected	6	No impact on schema
1.4	Business Validation Rule numbering updated	21	No impact on schema
1.4	TV001: "IntermediaryRefNA" corrected to "IntermediaryNA"	22	No impact on schema
1.4	Diagrams updated	Throughout	No impact on schema
1.4	Clarification to Submission and Resubmission Process: TransStatus	23	No impact on schema
1.4	Validation BV013 updated	21	No impact on schema
1.5	Validation BV013 clarified	21	No impact on schema
1.5	'Submission and Resubmission Process: Resubmissions' section clarified	23	No impact on schema

# Introduction

This document details the XML schema specification for the Buy-to-Let reporting requirements for the Bank of England as well as the business and technical validation rule checks that would be executed outside of the schema.

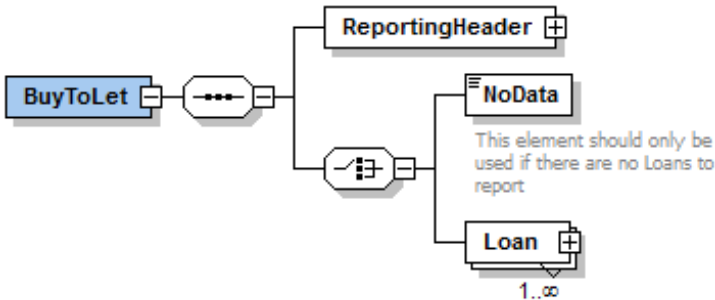
## XML Schema Definition

### <BuyToLet> Root Element

The <BuyToLet> message is sent by the reporting agents to the Bank of England.

The <BuyToLet> message definition is comprised of two main parts as shown by the diagram below

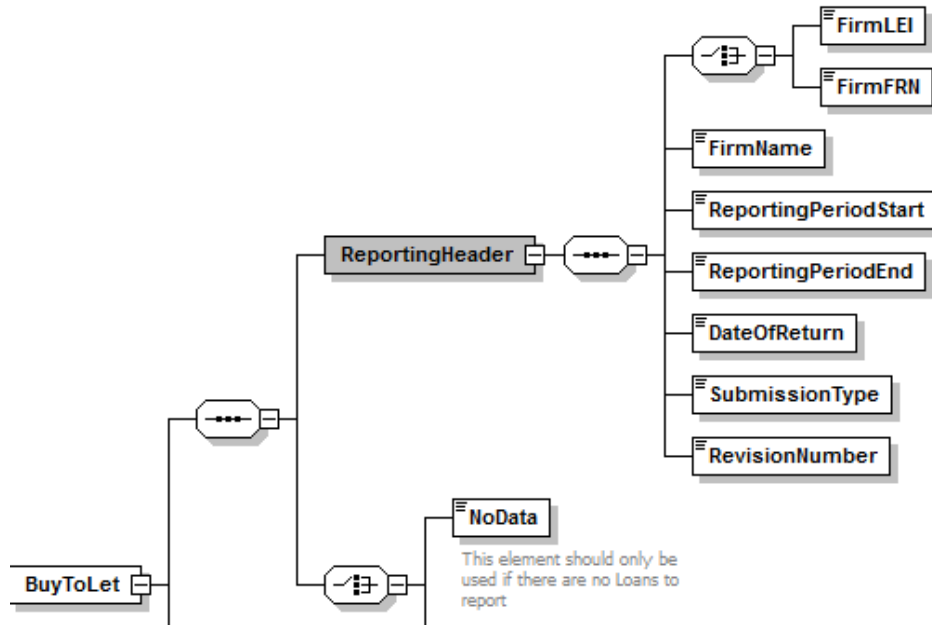
1. Reporting Header – this provides elements specific to the message
2. Loans – this provides the reason why no activity is reported or the required list of buy-to-let loans



Or	Message Element (XML Tag)	Cardinality	Type	Constraint / Description
	BuyToLet	[1..1]		
	ReportingHeader	[1..1]		
	Loan	[1..*]		

## <ReportingHeader> Element

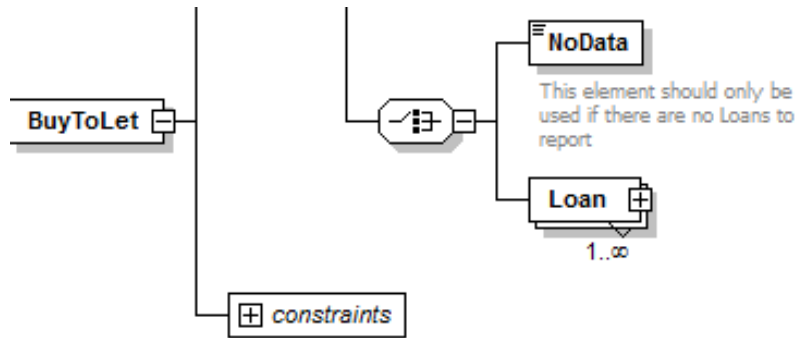
The reporting header defines some basic information provided by the reporting agent that is related to the report. This is show in the diagram below.



Attribute	Or	Message Element (XML Tag)	Cardinality	Type	Constraint / Description
		ReportingHeader	[1...1]		
Submitting Firm Reference	{	FirmLEI	[1...1]	lei	20 character legal entity identifier code of the reporting agent e.g. YUEDD7W89PH0FV8Q2S28
	Or }	FirmFRN	[1...1]	frn	6 or 7 character firm reference number of the reporting agent issued by the

					FCA e.g. 234567 or 2345678  <u>N.B Either the FRN or LEI above can be supplied. It is the strong preference of the Bank that the LEI is used however if not available a FRN should be used.</u>
		FirmName	[1...1]	string	Complete legal entity name of the reporting agent.
		ReportingPeriodStart	[1...1]	<u>isodate</u>	This is the start date of the reporting period. This must be in the format YYYY-MM-DD
		ReportingPeriodEnd	[1...1]	<u>isodate</u>	This is the end date of the reporting period. This must be in the format YYYY-MM-DD
		DateOfReturn	[1...1]	<u>isodatetime</u>	This is the current date and timestamp for the submitted or resubmitted return. Timestamp must be in the format YYYY-MM-DDTHH:MM:SSZ
		SubmissionType	[1...1]	<u>submission</u>	Indicates if the submission is the original submission or a resubmission. This is restricted via an enumerated list of options. <u>Please see the enumeration list here.</u>
		RevisionNumber	[1...1]	integer	This indicates the revision number of the submission. For the original submission the value should be 0 however for resubmissions this value should be incremented for each resubmission of the same data.

**<NoData> or <Loan> Element**



If a reporting agent has no data to report for a given reporting period, they should

Or	Message Element (XML Tag)	Cardinality	Type	Constraint / Description
{	No Data	[1...1]	<u>nodata</u>	<p>If there is no data to report, use this element and set to a value of 'Y' to represent yes. <a href="#">See definition.</a></p> <p>Reporting agents must explicitly declare they are not reporting any data for a given period.</p>
Or }	Loan	[1...*]		<p>If there is data to report, a reporting agent must use the Loan element and populate all mandatory fields as specified in the next section.</p> <p>Each instance of the Loan element must have an attribute of @RowId completed. For each instance of the Loan element, the @RowId must be incremented by 1 and must be unique.</p>

<Loan> Element

Diagram - Part 1

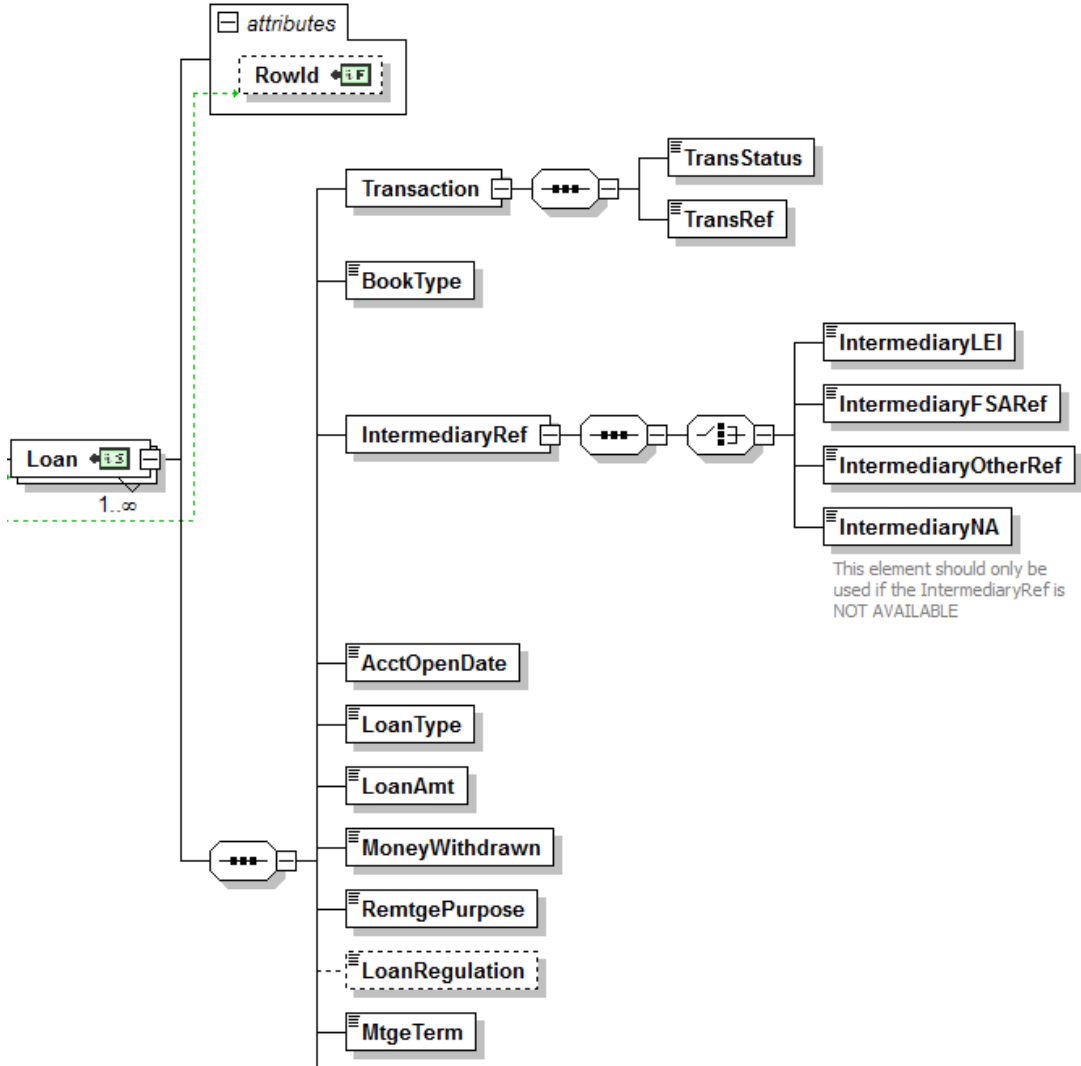




Diagram - Part 2

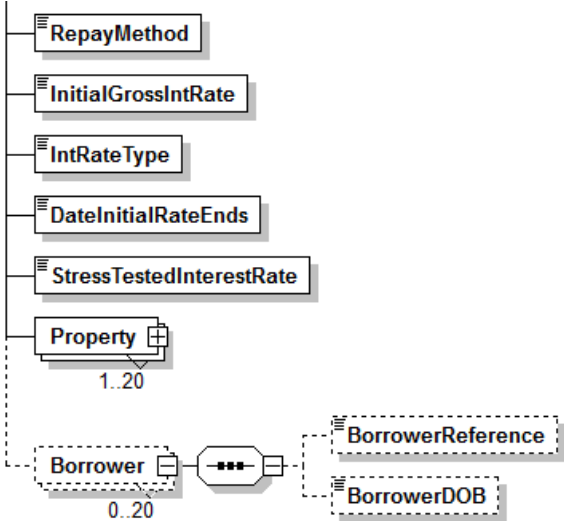
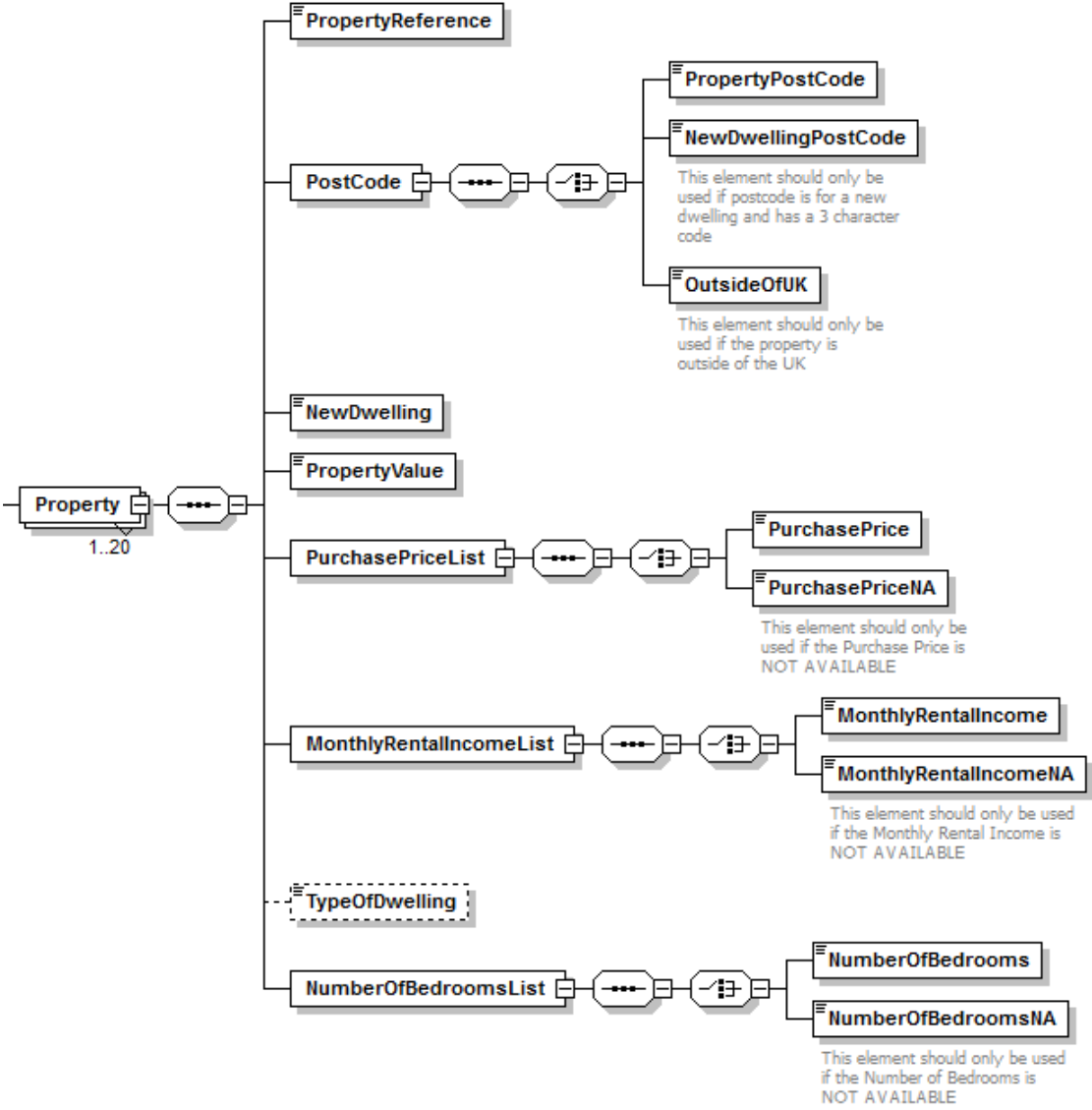


Diagram - Part 3



For each loan the following elements must be reported.

Attribute	Or	Message Element (XML Tag)	Cardinality	Type	Constraint / Description
		Loan	[1...*]		Each instance of the Loan element must have an attribute of @RowId completed.  For each instance of the Loan element, the @RowId must be incremented by 1 and must be unique.
		Transaction	[1...1]		
		TransStatus	[1...1]	<u>txstatus</u>	Indicates whether the loan reported is a new, corrected or a deleted item.  A combination of the transaction status element, transaction reference and reporting period determine how to process this record.  This is restricted via an enumerated list of options. <a href="#">Please see the enumeration list here.</a>
Transaction Reference		TransRef	[1...1]	<u>txref</u>	Maximum 20 character alphanumeric character code
Book Type		BookType	[1...1]	<u>booktype-phase1</u>	Indicates the book type of the loan. For Phase 1 restricted to R which represents the value RETAIL.  This is restricted via an enumerated list of options. <a href="#">Please see the enumeration list here.</a>
Intermediary		IntermediaryRef	[1...1]		

Reference					
	{	IntermediaryLEI	[1...1]	<u>lei</u>	20 character legal entity identifier code of the intermediary if known e.g. YUEDD7W89PH0FV8Q2S28  A LEI should be used where possible.
	Or	IntermediaryFSARef	[1...1]	<u>frn</u>	6 or 7 character firm reference number of the intermediary if known e.g. 234567 or 2345678  If an LEI is not available use a FRN.
	Or	IntermediaryOtherRef	[1...1]	<u>otherid</u>	Internal identifier attributed by the firm and used where a LEI or FRN is not available.
	Or }	IntermediaryNA	[1...1]	<u>boolean</u>	This element is used when the intermediary identifier is not available and should therefore be set to true.
Account Open Date		AcctOpenDate	[1...1]	<u>isodate</u>	Date must be in the format YYYY-MM-DD
Loan Type		LoanType	[1...1]	<u>loantype</u>	Indicates a loan type. This is restricted via an enumerated list of options. <u>Please see the enumeration list here.</u>
Loan Amount		LoanAmt	[1...1]	<u>monetarynonneg</u>	Must be a non-negative monetary value
Extra Money Lent		MoneyWithdrawn	[1...1]	<u>monetarynonneg</u>	Must be a non-negative monetary value
Purpose of Additional Funds		RemtgePurpose	[1...1]	<u>remortgagepurpose</u>	Indicates the purpose of additional funds. This is restricted via an enumerated list of options. <u>Please see the enumeration list here.</u>
Loan Regulation		LoanRegulation	[0...1]	<u>loanregulation</u>	Indicates the loan regulation. This is restricted via an enumerated list of options. <u>Please see the</u>

					<a href="#">enumeration list here</a> . This element is currently optional.
Mortgage Term		MtgeTerm	[1...1]	<a href="#">mortgageterm</a>	Must be a value between 0 and 999 inclusive, where the value represents the number of months.
Repayment Method		RepayMethod	[1...1]	<a href="#">repaymentmethod</a>	Indicates the repayment method. This is restricted via an enumerated list of options. <a href="#">Please see the enumeration list here</a> .
Initial Gross Rate		InitialGrossIntRate	[1...1]	<a href="#">percentagemax20</a>	A percentage value between 0 and 20 to 2 decimal places
Interest Rate Type		IntRateType	[1...1]	<a href="#">interestratetype</a>	Indicates the type of interest rate. This is restricted via an enumerated list of options. <a href="#">Please see the enumeration list here</a> .
Date Initial Rate Ends		DateInitialRateEnds	[1...1]	<a href="#">initialrateends</a>	Date must be in the format YYYY-MM-DD and < 2100-01-01
Stressed Rate (%)		StressTestedInterestRate	[1...1]	<a href="#">percentagemax20</a>	A percentage value between 0 and 20 to 2 decimal places
		Property	[1...20]		For each loan there can be a minimum of 1 property to a maximum number of 20 properties reported.
Property Reference		PropertyReference	[1...1]	<a href="#">txref</a>	Maximum 20 character alphanumeric character code
Property Post Code		Postcode	[1...1]		
	{	PropertyPostCode	[1...1]	<a href="#">postcode</a>	A 5 – 7 character postcode with no spaces
	Or	NewDwellingPostCode	[1...1]	<a href="#">newdwellingpostcode</a>	In the case of a new dwelling, this element must be used and a 2 – 4 character code entered.
	Or}	OutsideOfUK	[1...1]	<a href="#">boolean</a>	If the property is outside of the UK, this element

					must be used and the value must be set to true.
New Dwelling		NewDwelling	[1...1]	<u>newdwelling</u>	Indicates whether the property is a new or existing dwelling. This is restricted via an enumerated list of options. <u>Please see the enumeration list here.</u>
Property Value		PropertyValue	[1...1]	<u>monetarynonneg</u>	Must be a non-negative monetary value
		PurchasePriceList	[1...1]		
Purchase Price	{	PurchasePrice	[1...1]	<u>monetarynonneg</u>	Must be a non-negative monetary value
	<b>Or}</b>	PurchasePriceNA	[1...1]	<u>boolean</u>	This element should only be used if the Purchase Price is NOT APPLICABLE and should be set to true.
		MonthlyRentallIncomeList	[1...1]		
Monthly Rental Income	{	MonthlyRentallIncome	[1...1]	<u>monetarynonneg</u>	Must be a non-negative monetary value
	<b>Or}</b>	MonthlyRentallIncomeNA	[1...1]	<u>boolean</u>	This element should only be used if the Monthly Rental Income is NOT APPLICABLE and should be set to true.
Type of Dwelling		TypeOfDwelling	[0...1]	<u>typeofdwelling</u>	Indicates whether the type of dwelling. This is restricted via an enumerated list of options. <u>Please see the enumeration list here.</u> This element is currently optional.
		NumberOfBedroomsList	[1...1]		
Number of Bedrooms	{	NumberOfBedrooms	[1...1]	<u>numberofbedrooms</u>	Must be a non-negative monetary value between 0 and 20
	<b>Or}</b>	NumberOfBedroomsNA	[1...1]	<u>boolean</u>	This element should only be used if the Number of Bedrooms is NOT APPLICABLE and should be set to true.
		Borrower	[0...20]		For each loan there can be a minimum of 1

					borrower to a maximum number of 20 borrowers reported. This element is currently optional.
Borrower Reference		BorrowerReference	[1...1]	<u>txref</u>	Maximum 20 character alphanumeric character code
Date Of Birth		BorrowerDOB	[1...1]	<u>dateofbirth</u>	Date of birth in YYYY-MM-DD format and after 1900-01-01 inclusive.

## XML Schema Simple Type Definitions - Enumerations

### booktype-phase1

Code	Description
R	Retail

### interestratetype

Code	Description
F	Fixed rate
D	Discounted variable rate
T	Rate tracker
S	Standard variable rate
O	Other

### loanregulation

Code	Description
C	Consumer buy-to-let
O	Other regulated
N	Not regulated

### loantype

Code	Description
HP	House purchase
LB	Let-to-buy
RE	Remortgaging
FA	Further advance
SC	Second charge
CC	Consent-to-let conversions
NK	Not known

### newdwelling

Code	Description
N	New dwelling



E	Existing dwelling
NK	Not known
NA	Not applicable

#### nodata

Code	Description
Y	YES

#### remortgagepurpose

Code	Description
E	Extra funds raised to expand or re-leverage BTL portfolio
I	Extra money lent for improvements to rental property
O	Extra funds lent for other use
NA	Not applicable
NE	No extra money lent
NK	Not known

#### repaymentmethod

Code	Description
C	Capital and interest
I	Interest only
M	Part and part

#### submission

Code	Description
O	Original submission
R	Resubmission

#### txstatus

Code	Description
NEW	New loan
CORR	Corrected loan.  Use this enumeration to explicitly indicate the details of a previously reported load

	were erroneous and require correction. If correcting a previously reported loan, you must provide the transaction reference and the reporting period for the record you are correcting.
DEL	Deleted loan.  Use this enumeration to indicate a previously reported loan should be deleted. If deleting a previously reported loan, you must provide the transaction reference and the reporting period (quarter and year) for the record you are deleting.

### typeofdwelling

Code	Description
B	Bungalow
D	Detached house
S	Semi-detached house
T	Terraced house
H	House: type unknown
F	Converted flat or maisonette
P	Purpose-built flat or maisonette
A	Flat: type unknown
U	Multi-unit freehold blocks (MUFBs)
C	Part-commercial (i.e. a flat above a shop)
M	Multiple properties
O	Other
NK	Not known
NA	Not applicable

## XML Schema Simple Type Definitions – Restrictions

### dateofbirth

Type	Restriction
date	Must be in YYYY-MM-DD format and >=1900-01-01

### frn

Type	Restriction
string	Can be 6 or 7 characters

### initialrateends

Type	Restriction
date	Must be in YYYY-MM-DD format and < 2100-01-01

### isodate

Type	Restriction
date	Must be in YYYY-MM-DD format

### isodatetime

Type	Restriction
dateTime	Must be in YYYY-MM-DDTHH:MM:SSZ format

### lei

Type	Restriction
string	Must be 20 characters

### monetarynonneg

Type	Restriction
decimal	Must not be < 0.00

### mortgageterm

Type	Restriction
integer	Must be between 0 and 999 inclusive

#### **newdewllingpostcode**

Type	Restriction
string	Must be 2 – 4 characters without spaces

#### **numberofbedrooms**

Type	Restriction
integer	Must be a number between 0 and 20

#### **otherid**

Type	Restriction
string	None

#### **percentage**

Type	Restriction
decimal	Must be a value $\geq 0$ and $\leq 100$ to 2 decimal places

#### **percentagemax20**

Type	Restriction
decimal	Must be a value $\geq 0$ and $\leq 20$ to 2 decimal places

#### **postcode**

Type	Restriction
string	Must be 5 – 7 characters long without spaces

#### **txref**

Type	Restriction
string	Must be 1 - 20 alphanumeric characters

## Non Schema - Business Validation Checks

The reports produced must conform to the business validation rule checks listed below:

Business Validation Code	Business Validation Rule
BV001	If <LoanType> = {HP, FA or SC} Then <MoneyWithdrawn> = {0}
BV002	If <LoanType> = {HP} Then <RemtgePurpose> = {NA}
BV003	If (<LoanType> = {RE, LB, or CC} AND <MoneyWithdrawn> = {0} ) Then <RemtgePurpose> = {NE}
BV004	If <LoanType> = {LB, RE, FA, SC or CC} Then <PurchasePriceNA> = {true}
BV005	If <OutsideOfUK> = {true} Then <NewDwelling> = {NA}
BV006	If <OutsideOfUK> = {true} Then <PurchasePriceNA> = {true}
BV007	If <OutsideOfUK> = {true} Then <MonthlyRentalIncomeNA> = {true}
BV008	If <OutsideOfUK> = {true} Then <NumberOfBedroomsNA> = {true}
BV009a (previously BV009)	If <OutsideOfUK> = {true} Then (If <TypeOfDwelling> Exists Then <TypeOfDwelling> = {NA})
BV010	<DateInitialRateEnds> > <AcctOpenDate>
BV011	If <IntRateType> = {S} Then <DateInitialRateEnds> = <AcctOpenDate> + <MtgeTerm>
BV012	If <NewDwelling> = {E} Then <NewDwellingPostCode> MUST NOT Exist
BV013 (rule updated)	If (<LoanType> = {HP} AND <OutsideOfUK> does not exist ) Then <PurchasePrice> > 0 AND <PurchasePriceNA> MUST NOT Exist
BV014 (previously BV016)	<ReportingPeriodStart> < <ReportingPeriodEnd>
BV035a (previously BV015)	If <BorrowerDOB> Exists Then (<BorrowerDOB> > <DateOfReturn>)
BV015 (previously BV017)	<AcctOpenDate> >= <ReportingPeriodStart> AND <AcctOpenDate> <= <ReportingPeriodEnd>

## Non Schema – Technical Validation Checks

The reports produced must conform to the technical validation rule checks listed below:

Technical Validation Code	Technical Validation Rule
TV001 (rule updated)	If <IntermediaryNA> Exists Then <IntermediaryNA> = {true}
TV002	If <PurchasePriceNA> Exists Then < PurchasePriceNA > = {true}
TV003	If <MonthlyRentalIncomeNA> Exists Then < MonthlyRentalIncomeNA > = {true}
TV004	If <NumberOfBedroomsNA> Exists Then < NumberOfBedroomsNA > = {true}
TV005	If <SubmissionType> = {O} Then <RevisionNumber> = {0}
TV006	If <SubmissionType> = {R} Then <RevisionNumber> >= {1}

## Submission and Resubmission Process

- Data must be reported for a given reporting period e.g. where
  - <ReportingPeriodStartDate> is 2017-01-01
  - <ReportingPeriodEndDate> is 2017-03-31
- ORIGINAL submissions for the reporting period as identified by the <SubmissionType> element must only contain new (NEW) loans in the reporting period.
- For an ORIGINAL submission the <RevisionNumber> should be 0.
- RESUBMISSIONS for the reporting period as identified by the <SubmissionType> element can contain:
  - New (NEW) loans added since the original submission as well as new loans reported in a previous submission and unchanged since
  - Corrected (CORR) loans since the original submission i.e. those that need to be corrected for the previous submission for the reporting period.
  - Deleted (DEL) loans since the original submission.
  - Corrections and Deletions will only work if there is consistency and uniqueness between the reporting start and end dates as well the Transaction Reference.
- For each RESUBMISSION the version number should start at 1 and be incremented by 1 per revision.
- RESUBMISSIONS apply at a file level and must contain all data in the previous submission i.e. it will include all previously reported new, still marked as new, loans aside from those now marked as corrections or deletions, which would be indicated as such. Please note:
  - A loan cannot appear twice (or more) in the same file as both new and then corrected in a different record.
  - A loan should not appear twice (or more) in the same file as both new and then deleted in a different record, except when correcting and resubmitting a file that mistakenly contained a duplicated loan. In this case, the corrected file should contain both loans, but one should be marked as 'DEL' in the transaction status.
  - A loan should not appear twice (or more) in the same file as both corrected and then deleted in a different record.
- Data can only be submitted or re-submitted for a given reporting period i.e. data from 2017-01-01 to 2017-03-31 in a single file.
- Multiple reporting periods cannot be reported in a single submission i.e. data from 2017-01-01 to 2017-03-31 cannot be reported with data from 2017-04-01 to 2017-06-30 in single file.
- Partial resubmissions are not accepted. All data must be resubmitted again.
- The number of loans in a resubmission must be greater than or equal to that in the original or previous submission.