

# **Quality Assurance in the HMLR Local Land Charges Register**

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Our ambition is to become the world's leading land registry  
for speed, simplicity and an open approach to data

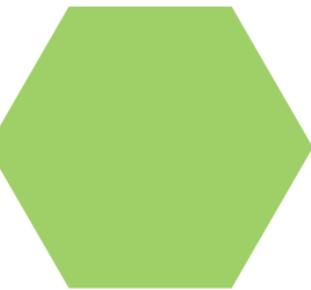
# Quality underpins the LLC Register



326 English Local Authorities



26 Million Charges

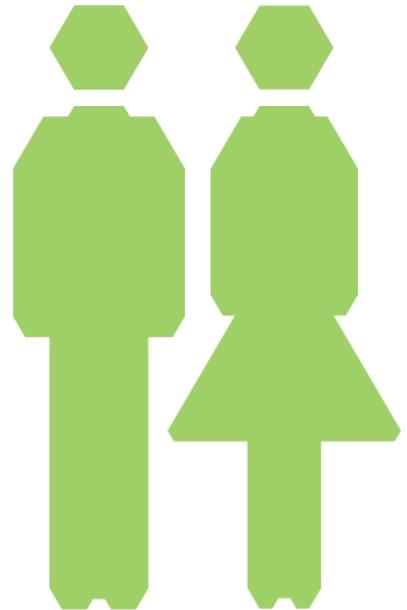


A single LLC register

LLC Digital Service

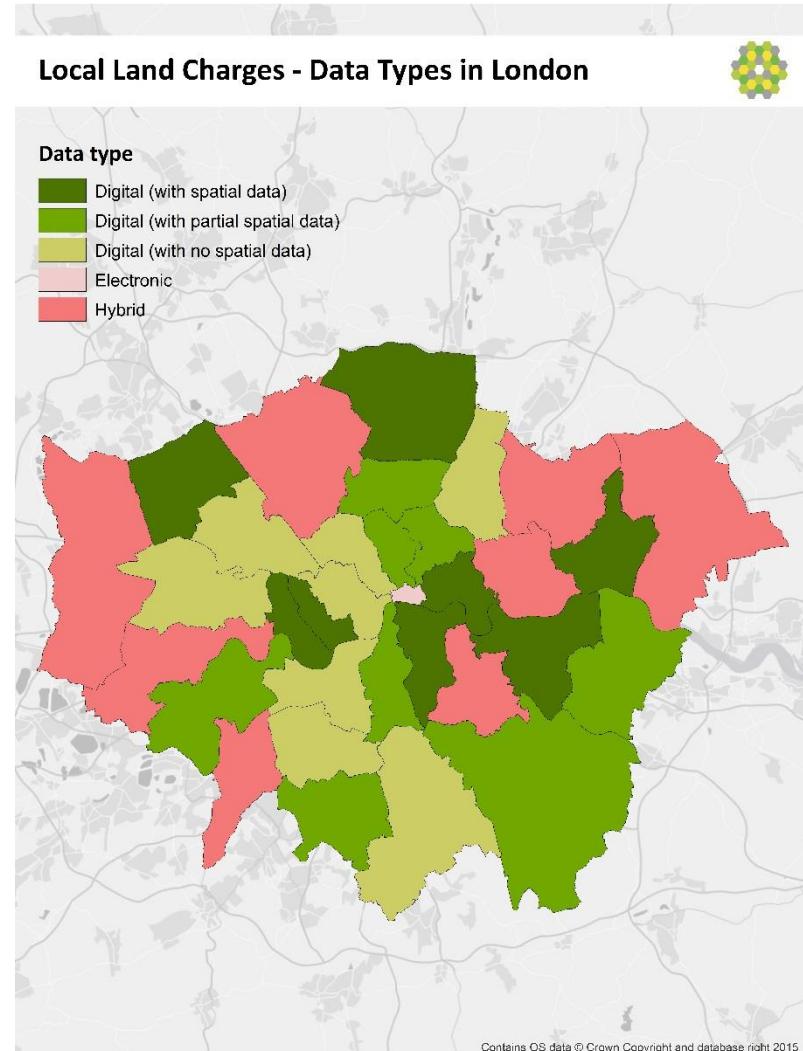
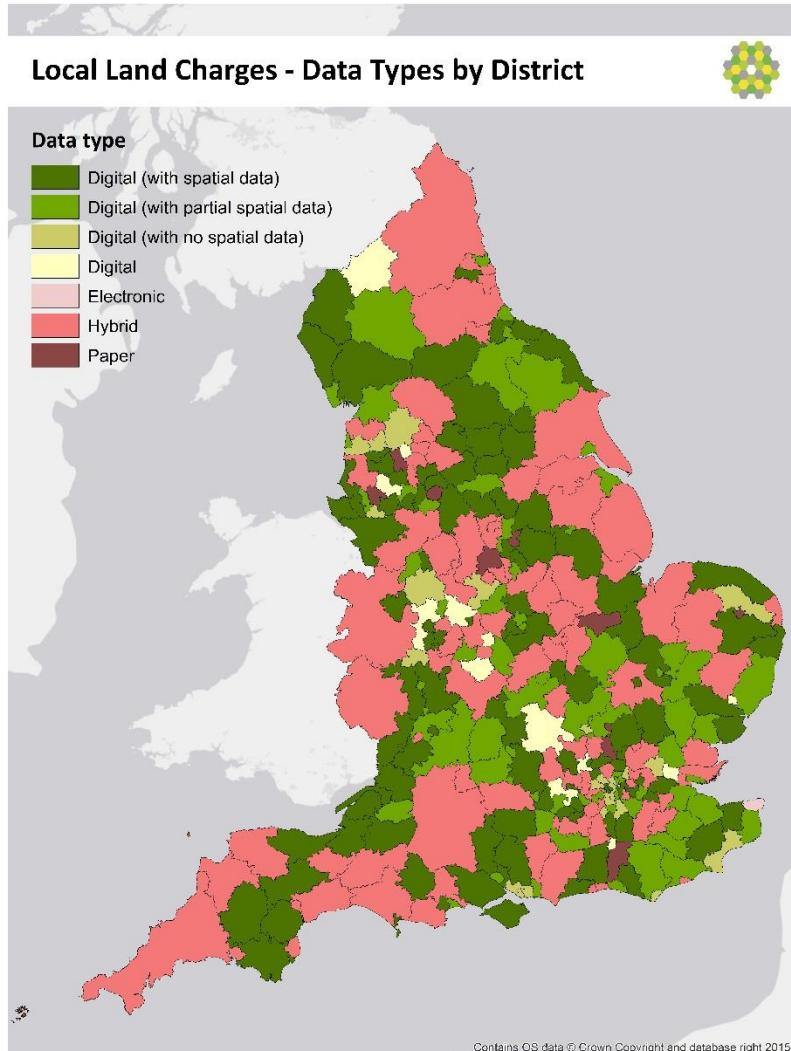


Customers

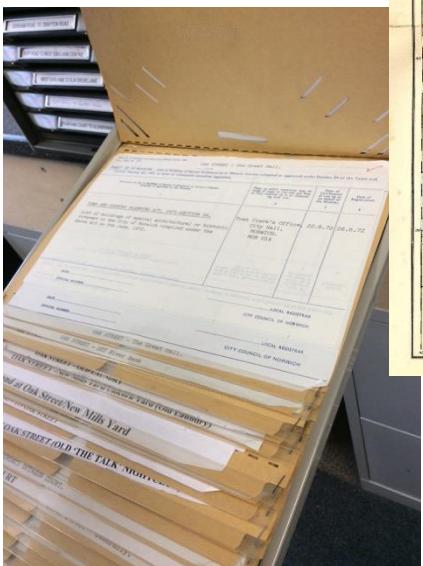
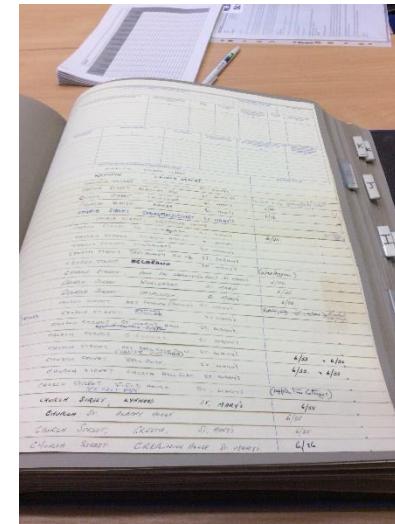
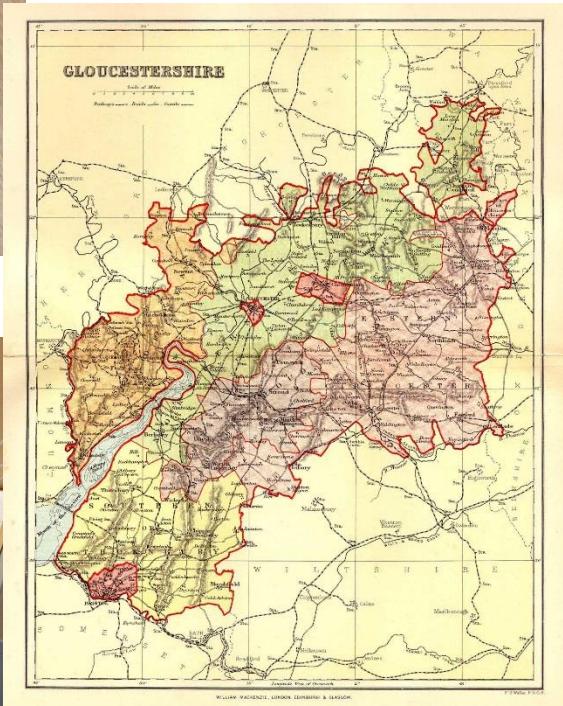


Quality underpins the LLC Register Service – assuring that all data meets the Acceptable Quality Level Threshold

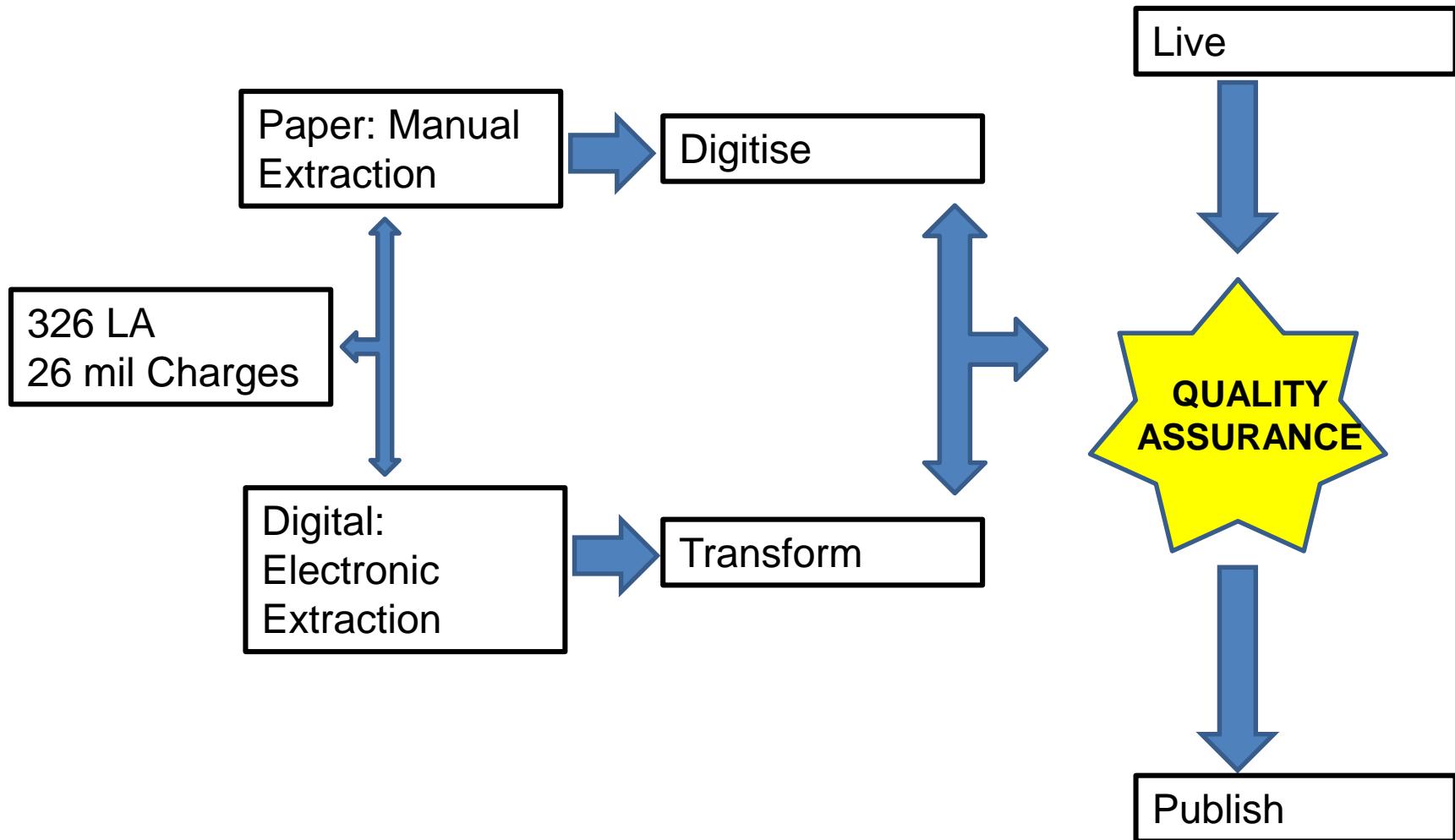
# Quality assurance across all data types



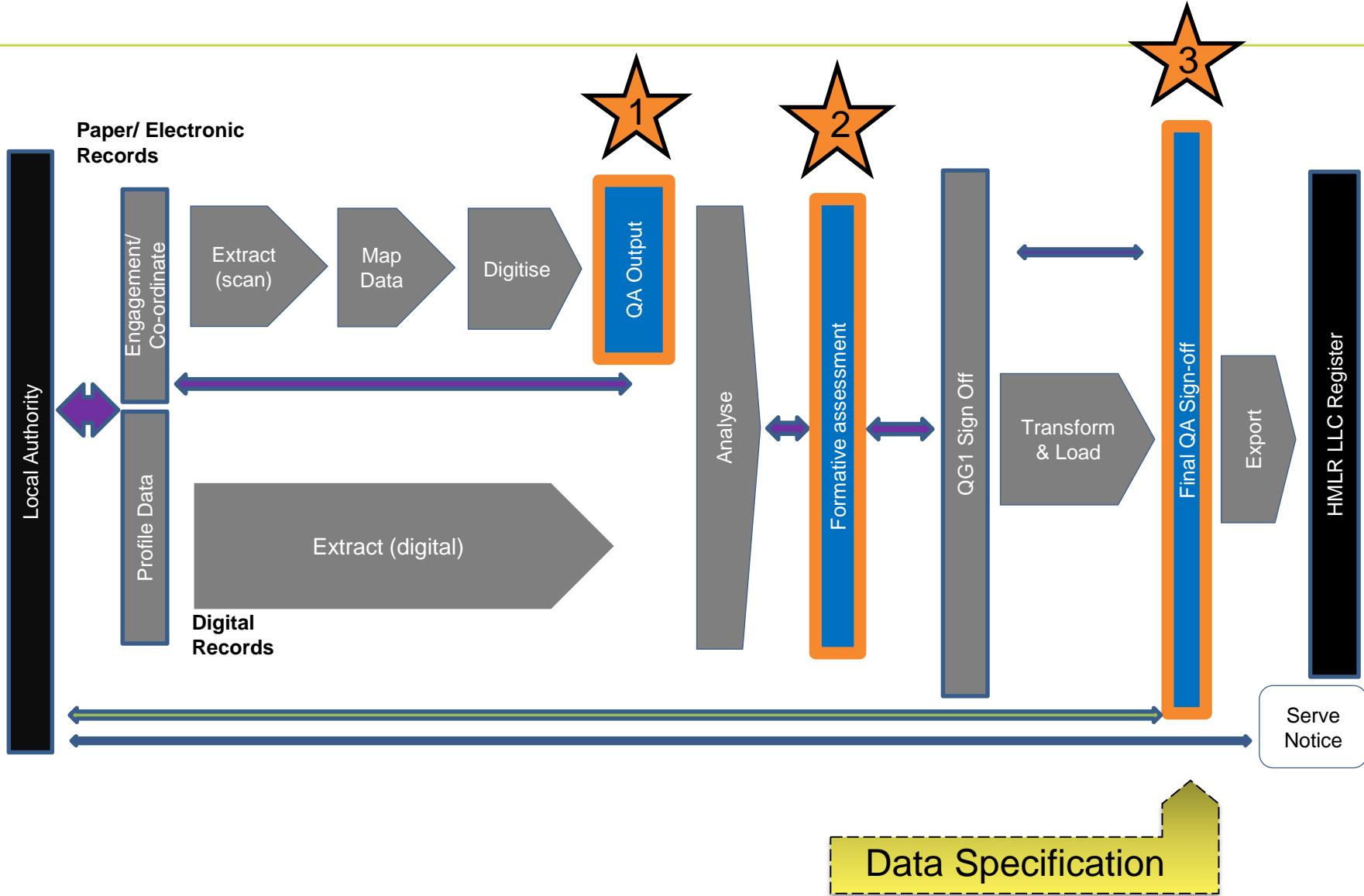
LLC Register Service Data Quality has to cover all data types and all sources (including Originating Authorities)



# End point process?



# LLC Quality Assurance: 3 stage process

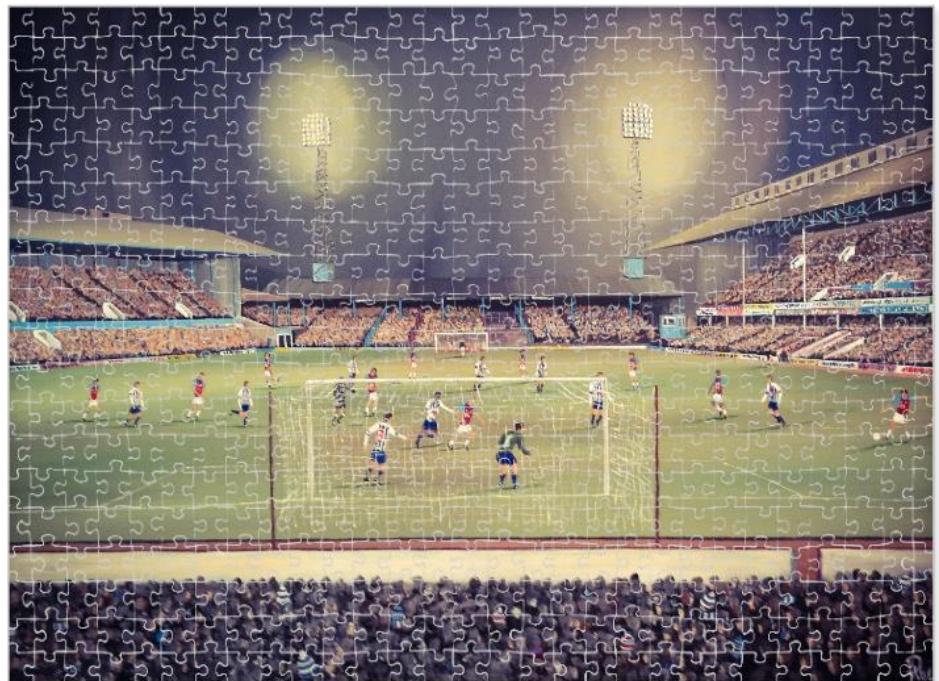


Data Specification

# LLC Data Specification



Describes 'what good looks like'

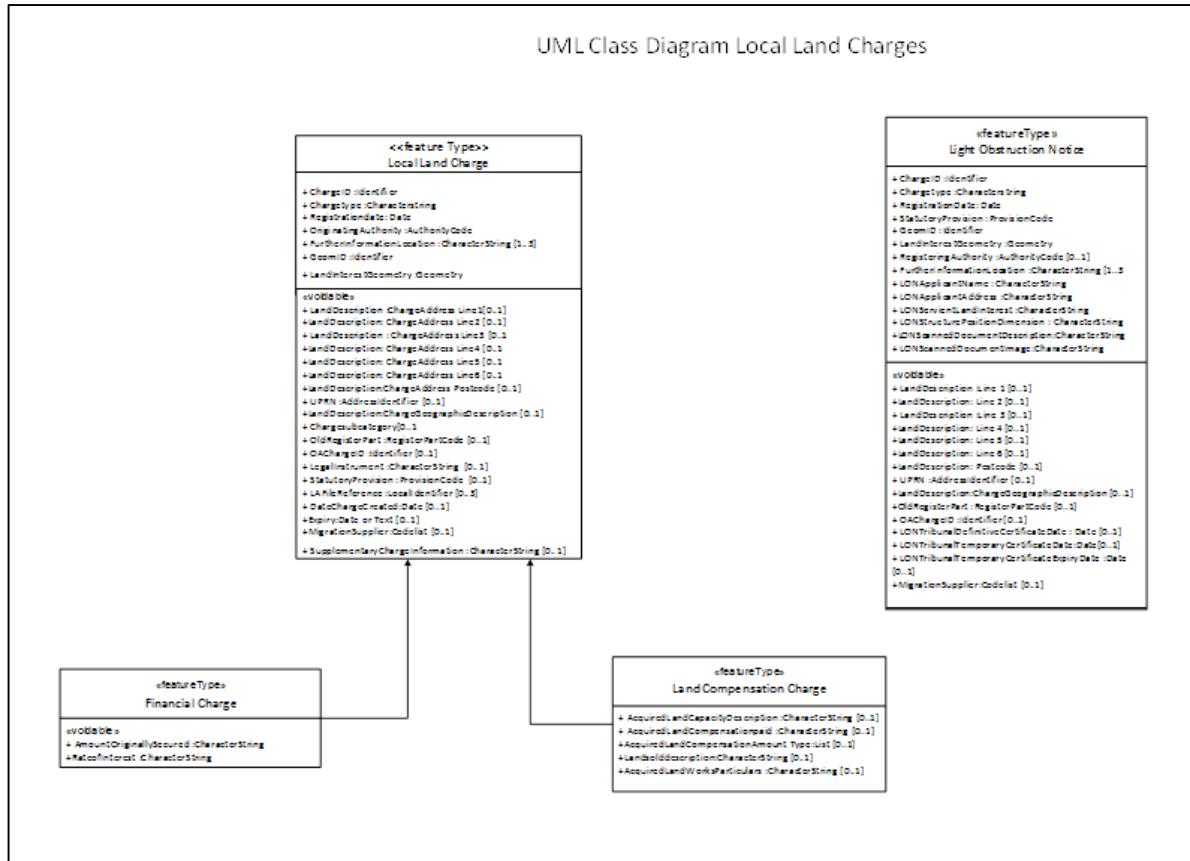


# LLC Data Specification



Most Common Charge Types (not exhaustive)
Conditional Planning Permission
Enforcement Notice
Planning Obligation
Tree Preservation Order
Revocation or Modification Order
Waste Land Notice
General Financial Charge
Specific Financial Charge
S156 Housing Act 1985
Site of Scientific Interest
Smoke Control Order
Ancient Monuments
Highways Act Agreement
Instrument of dedication of land
Local Government & Housing Act
Local Government Act Agreement
s8 Land Compensation Charge
s52 Land Compensation Charge
Listed Building Charge
Light Obstruction Notice
New Town Charge
Civil Aviation
Open Cast Coal
Water Industry Act Agreement
Compulsory Purchase Orders (Housing & Planning Act 2016
Other Charge Type

**UML Diagram**: Describes content, structure & unique data requirements



# LLC Data Specification



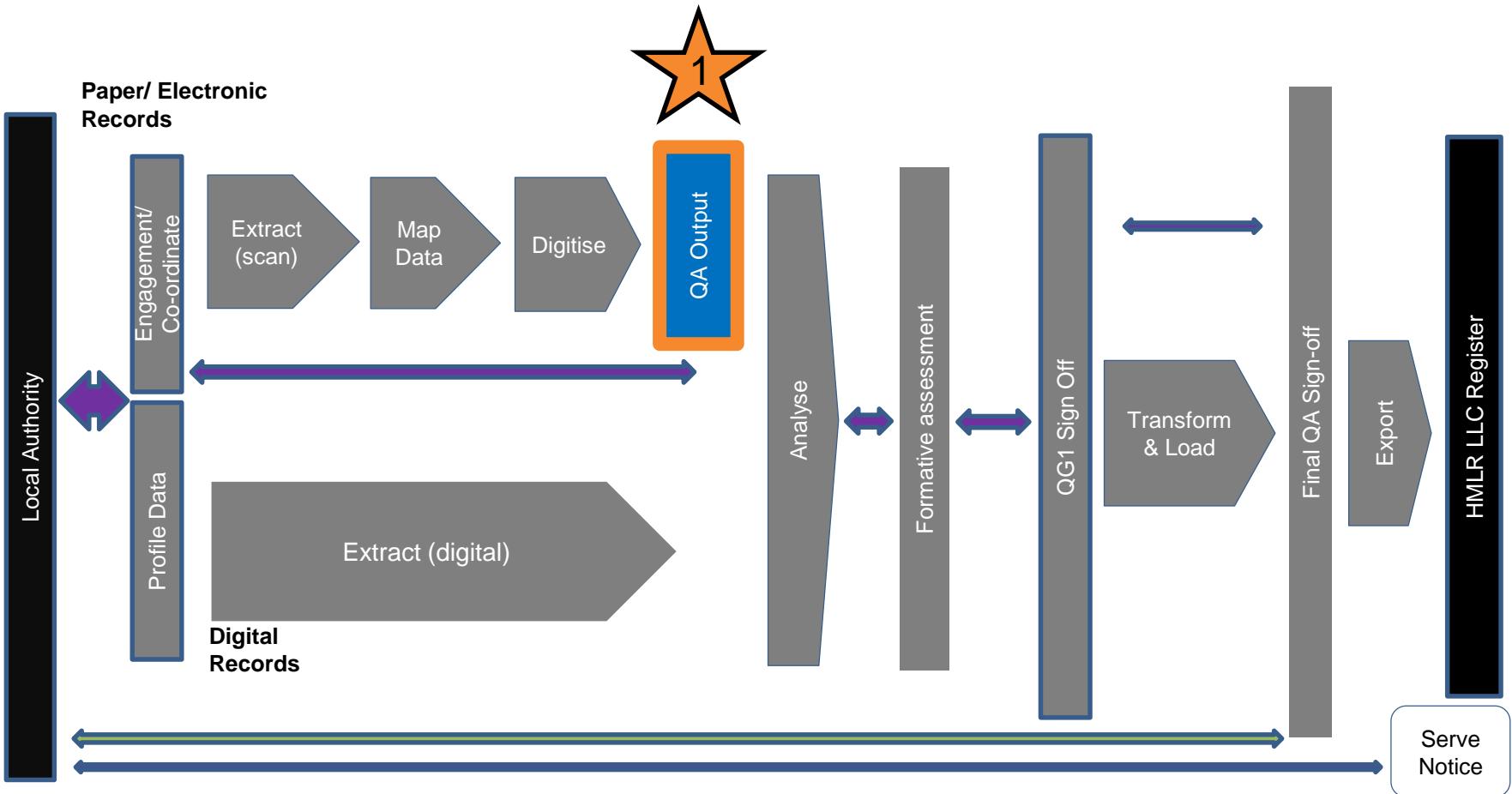
## Data Quality: Themes, criteria & AQL

Each data population has the following AQL requirements against the defined quality measure criteria.



Quality Theme	Quality Criteria	Example Quality Measure	AQL
Completeness	Omission	Does each submitted LLC contain all mandatory attributes	100%
	Commission	Are there any LLC with additional or replicated data attributes	95%
Thematic Accuracy	Classification	Have Charge Types & Charge Sub-categories been allocated correctly	99%
Logical Consistency	Conceptual (adherence to Digitisation Practice Guide (DPG) or other agreed Local Business Rules)	Have all mandatory and conditional items been replicated accurately from the source Have TPO geometries been captured as per 3.3.4 DPG Have originating authorities been captured in single agreed format	95%
	Domain (adherence to wider rules)	Have UPRN & structured address been matched correctly	97%
	Topological Consistency	Have all geometries been captured without loops or self-intersects	95%
Positional Accuracy	Relative position	Is there an acceptable relationship between the land description and the geometry	99%
Temporal	Consistency	Have all dates been captured in the prescribed YYYY/MM/DD format	95%
	Validity	Do expiry dates come after registered date	

# LLC Quality Assurance: When & Where



# Check Point 1: Quality Assure Digitised Output



**Activity:** All paper and/or electronic records are extracted from each LA and digitised into a single format.



## What is checked?

- All relevant text data accurately and completely captured from source.
- Pre-existing digital geometries are accurately associated with the correct text record.
- Geometries that are created are in the correct position and occupy the correct extent.

# Check Point 1: Quality Assure Digitised Output



Table F.2 — Statistical values for testing of number of conforming/non-conforming items  
Significance level 95 %

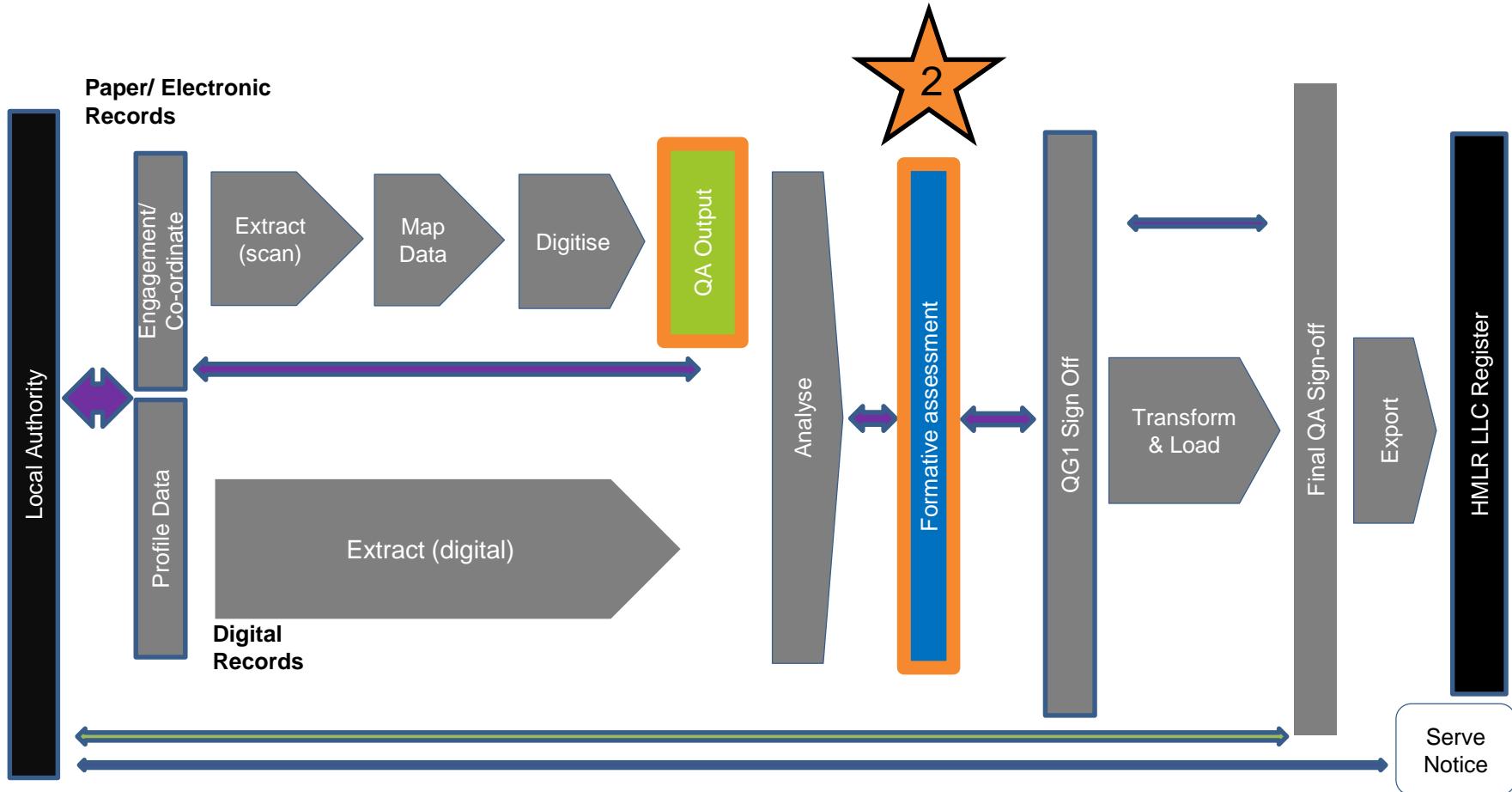
From	To	Population size	$p_0 =$	Rejection limit					
				0,5 %	1,0 %	2,0 %	3,0 %	4,0 %	5,0 %
1	8	All		1	1	1	1	1	1
9	50	8		1	1	1	2	2	2
51	90	13		1	1	2	2	2	3
91	150	20		1	2	2	3	3	4
151	280	32		1	2	3	3	4	4
281	400	50		2	3	3	4	5	6
401	500	60		2	3	4	5	6	7
501	1200	80		3	3	5	6	7	8
1201	3200	125		3	4	6	8	10	11
3201	10000	200		4	6	8	11	14	16
10001	35000	315		5	7	12	16	20	23
35001	150000	500		6	10	16	23	28	34
150001	500000	800		9	14	24	33	42	51
> 500000		1250		12	20	34	49	63	76

## How do we check?

- Sample
- VBA & Regular expression
  - Global checks against text
- FME – workbenches to validate geometry association & topological consistency

**Outcome:** A complete digital record (text and spatial extent) has been captured for each charge, which accurately reflects the source information.

# LLC Quality Assurance: When & Where



## Check Point 2: Formative Assessment



**Activity:** LA submit all LLC records, including those that have been through digitisation, to enable a holistic assessment of all their data.

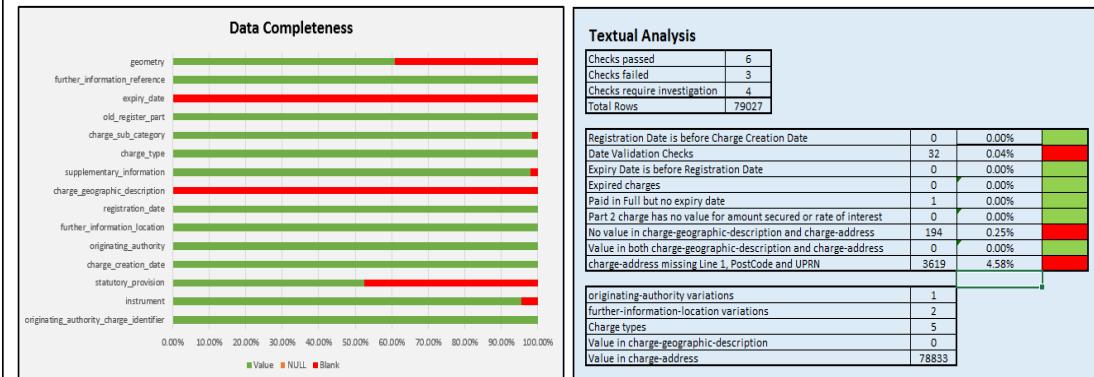


### What is checked?

- Each record has all mandatory items.
- The position of geometries accurately reflects the land/property description.
- The data adheres to overarching rules or requirements.

**Outcome:** Where data is incomplete, inconsistent or inaccurate this 'early warning' assessment enables HMLR to work with the LA to close the gap, often by applying agreed business rules during transformation

# Check Point 2: Formative Assessment



Total Rows 79027							
Quality Theme	Quality Criteria	Check	AQL	Fail Number	% Pass	Status	
Completeness	Commission & Omission	Textual	Mandatory Items Complete	100%	<a href="#">Data Set</a>	N/A	Fail
Completeness	Omission	Textual	All LLC Records allocated single charge type	100%	0	100%	Pass
Completeness	Omission	Textual	Have all submitted LLCs been allocated a point where further information can be obtained about the registered charge This may be postal or electronic address.	100%	0	100%	Pass
Completeness	Omission	GeoSpatial	Have all submitted LLC been associated with a spatial object captured as GeoJSON feature collection	100%	0	100%	Pass
Completeness	Commission	Textual	For all submitted LLC where Charge Type is 'Financial', 'Land compensation' or 'Light obstruction notice' has been used, has sub-charge category been omitted	95%	0	100%	Pass
Completeness	Commission & Omission	Textual	For all submitted LLC where Charge Type of Planning, Listed building, Housing or Other has been used, has a single sub-charge category been captured	100%	443	99%	Fail
Completeness	Omission	Textual	Have all submitted LLC been allocated a registration date	100%	1	100%	Pass
Completeness	Omission	Textual	Where charge type 'Planning', 'Listed building', 'Housing', 'Land Compensation', 'Financial' or 'Other' has been used, has	100%	0	100%	Pass

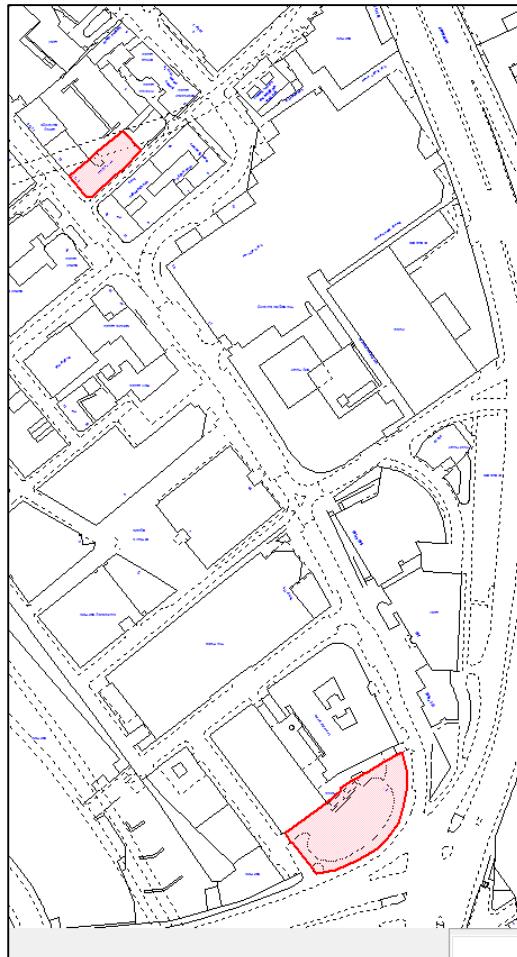
## How do we check?

LLC dashboard has been developed to validate:

- Completeness
- Consistency
- Temporal rules
- Geometric validity
- Thematic accuracy



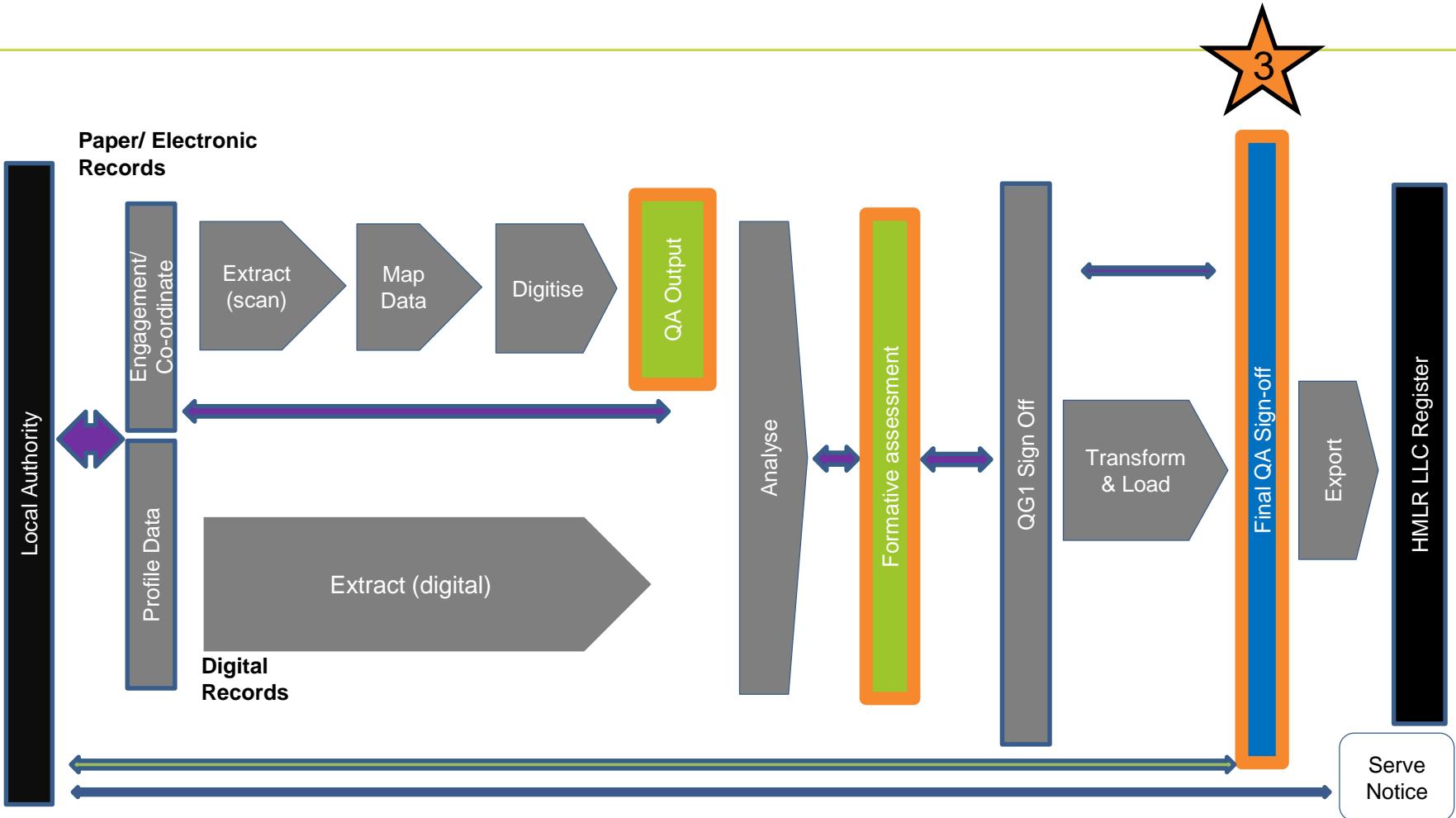
# How do we check geometries?



Where UPRN is not available we sample the following geometric datasets independently to ensure the position of each geometry is accurate:

- Multiple charges registered against identical land descriptions where the geometries do not fall within +/- 50m of each other.
- Charges that include a full postcode and the geometry falls +/-50m outside of the postcode area.
- Listed building charges are cross referenced against Natural England data.
- Statistically valid sample of all charges not considered above.

# LLC Quality Assurance: When & Where



# Check Point 3: Final Quality Sign-off



**Activity:** All LLC records are transformed into a single format and structure prior to being submitted into the HMLR LLC register.



## What is checked?

- All LLC records have been captured and accurately transformed to align with the LLC data specification.
- No errors or irregularities have been entered during transformation.
- The data achieves at least the minimum acceptable quality level against a range of technical criteria.

# Automated in-line checks



Existing Particulars

Conditional Planning  
Enforcement Notice  
Planning Obligation  
Tree Preservation Order  
Registration or Modification Order  
Waste Land Notice  
General Financial Charge  
Specific Financial Charge  
S156 Housing Act 1985  
Site of Scientific Interest  
Smoke Control Order  
Ancient Monuments  
Highways Act Agreement  
Instrument of dedication of land  
Local Government & Housing Act  
Local Government Act  
Agreement  
Law Compensation Charge  
S27 Land Compensation Charge  
Listed Building Charge  
Light Obstruction Notice  
New Town Charge  
Civil Aviation  
Open Cast Coal  
Water Industry Act  
Compulsory Purchase Orders (Housing & Planning Act 2016)  
Other Charge Type

one of the following sub charge categories (SCC) must be used

Change a development
Breach of conditions
Conservation area
Conditional planning consent
Enforcement notice
Article 4
Planning notices
Planning agreement
Tree preservation order (TPO)
Listed building conditional planning consent
No SCC recorded
Listed building
Enforcement notice
Repairs notice
Not SCC recorded
Approval under house in multiple occupation (HMO)
Grant
Interim certificate under HMO
Notice of works or repairs
Re-approval of grant
Re-approval under HMO
S156 Housing Act <sup>*1</sup>
Not SCC recorded
Ancient monuments
Assets of community value
Compulsory Purchase Order
Improve a highway
Smoke control order
Site of special scientific interest (SSSI)

# Check Point 3: Final Quality Sign-off

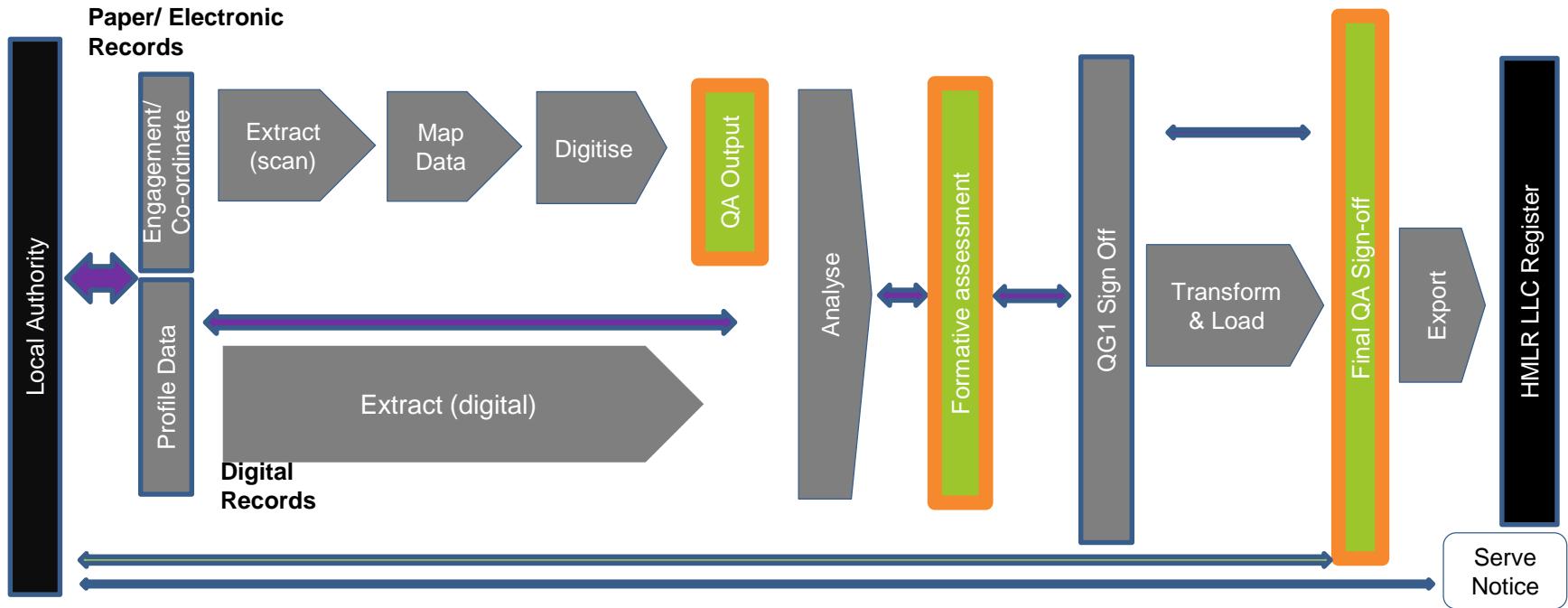


- Validation that all agreed transformation rules have been applied accurately and consistently

Originating Authority Name (as is)	HMLR global business rule defines 'What'	LA agree 'How' via local business rule
Warwick District Council	'each instance of a unique Originating Authority name must be captured as the single standard representation'	Warwick District Council
Warwickshire District Council		Warwick District Council
The Warwick Council		Warwick District Council
WDC		Warwick District Council
Warwick		Warwick District Council
Worwick Council		Warwick District Council
<b>Individual Concerned</b>	Registered against 3 charges (18,000/1); does not breach rule or AQL	
<b>Solicitors</b>	Registered against 2 charges (28,000/1); does not breach rule or AQL	



# Final Sign-off – all quality check points achieved



**Outcome:** Each digital record is complete (text and spatial extent), accurate and has been transformed into a standard format that can be stored, accessed and maintained in the HMLR register.

<https://search-local-land-charges.service.gov.uk/search>

gov.uk/land-registry

@HMLandRegistry

hmlandregistryblog.gov.uk

Insert additional info

Our ambition: To become the world's leading land registry for speed, simplicity and an open approach to data

Our mission: Your land and property rights: guaranteed and protected

We give assurance

We have integrity

We drive innovation

We are professional