Conveyancing Information Executive

White Paper:

Property Passports: the role of Unique Property Reference Numbers (UPRNs) in improving the property transaction process.

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Executive Summary

All local authorities in the United Kingdom have a statutory obligation to manage and maintain their address register to British Standard BS7666. That means every unit of land and property is allocated a Unique Property Reference Number (UPRN) and geographic coordinates, ensuring there is one true record for each address. There is currently c. 39.2 million UPRNs on file for properties across Great Britain (GB). Each local authority in Great Britain regularly submits their address register or Local Land and Property Gazetteer (including the UPRN) to central hubs. GeoPlace, the joint venture between the Local Government Association (LGA) and Ordnance Survey, currently maintains the National Address Gazetteer and National Street Gazetteers within Great Britain. These gazetteers, in combination with other data sources, are made available to the private and public sector via the suite of AddressBase® products.

The concept of having a unique, non-transferable, universal and 'eternal' reference for property has a lot of power in enabling a myriad of datasets to be overlaid and uniformly allocated to a property. It is a significant improvement from relying on address data, which is inconsistent and hard to link at scale. This is partly why the public sector has been encouraged to adopt UPRNs as the 'backbone' for their data systems, powered by the Ordnance Survey's Public Sector GeoSpatial Agreement (PSGA).

Support for UPRNs as the backbone for the property addressing and spatial location, transaction and risk management markets also bridges to the private sector. Across Great Britain's property transaction market, UPRNs present an unrivalled opportunity to arrest the trend of transactional delays and compress the entire process down from its current average of 24 weeks from acceptance of offer to transaction.

How this golden thread is embedded into the wider process and overlaid with the myriad of additional datasets required to support a successful property transaction is the key challenge. The complexity is articulated best by the enduring barriers to the widespread adoption of UPRN's as the unifying thread throughout a property transaction.

To maximise their potential, we must agree on a suitable definition and the use case boundaries necessary to ‘power GB property transactions’ while also defining the data companies critical to delivering data to drive their success. Only when we have clarity and alignment in these two areas, can we devise a mechanism for the standardised use of UPRN data and the datasets critical to its wider accuracy and value, most notably AddressBase® Premium. This will unify the companies critical to embedding property passports, a tool which should revolutionise and power the property transaction process.

The Conveyancing Information Executive brings together the collective expertise of some of the largest geo-data and property-data companies across Great Britain. We are uniquely placed to break down these complex challenges to help improve the property transaction experience through the better use of UPRNs.

By making the property transaction process more efficient and transparent, this change will drive us towards a more fluid property market with greater volumes of transactions. More transactions will deliver greater immediate commercial benefit through Stamp Duty Land Tax (SDLT), and wider economic benefit given the intrinsic link between the housing market and macro level consumer spending[1].

[1] https://www.bankofengland.co.uk/knowledgebank/how-does-the-housing-market-affect-the-economy

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1.0 History of UPRNs

Unique Property Reference Numbers were first used by Local Authorities over two decades ago to identify addressable locations uniquely within their authority areas and their Local Land and Property Register. These locations may be a house, flat, business premises or locations which may not have a postal address, such as bus shelters or an electricity substation. The UPRN remains with the property throughout its lifecycle, from planning through to demolition. They are not new, and they largely have not changed, neither has their potential commercial value. Therein lies a barrier to their widespread adoption and success to date. The entity of a UPRN and the unique and uniform identifier for every property in Great Britain has been embedded in the AddressBase® suite of products for many years. Understandably the value of this dataset was reflected in the commercial terms associated with its business use over the following two decades. As a result, uptake, integration and added value creation around UPRNs have been sporadic throughout the industry, further extending the delta to its uniform application.

Only once the foundation of the property transaction and risk management markets are uniformly underpinned by this database of individual properties, can industry level benefit be demonstrated and then accelerated. Put in simple terms, meaningful progress for the property transaction sector will generally be all or nothing. Until every stakeholder, data contributor and decision maker are using information based on an underlying UPRN, the prospect of a successful ‘property passport’ or ‘property logbook’ is a proverbial pipe dream.

This is largely why HM Government has driven through the Ordnance Survey's Public Sector GeoSpatial Agreement (PSGA) which makes use of this dataset royalty free, with calls for all public sector organisations to embed their databases atop of AddressBase® (and UPRNs). Furthermore, in April 2020, the Open Standards Board, which was set up by the Public Expenditure Committee, confirmed that it had mandated UPRNs as the standard way of referencing and sharing information about properties across government.

These changes should drive the public sector towards a unified deployment of UPRNs as the thread linking all the additional myriad of property datasets together. For example, whilst HM Land Registry has had UPRNs available to link to basic Title Information for some time, the adoption of UPRNs to underpin all databases e.g., restrictive covenants are not universal. The PSGA now provides all public sector stakeholders the framework and target of aligning their network of data to a single underlying feature.

A similar unifying force is necessary in the private sector, whether powered by commercial usage considerations or natural market forces and collective will of stakeholders. This will power UPRNs towards becoming the baseline for all property data across the industry.

See section 4.0 for more details on stakeholder adoption considerations.

2.0 Geo-Coding Considerations

The greatest derived value from UPRN's is undoubtedly delivered when they are employed alongside other complementary datasets.

The Open UPRN identifier database has the advantage of great simplicity, consisting of purely the UPRN and geographical coordinates. This database represents a clear step by the Ordnance Survey towards powering the digital transition we are entering in the property transaction industry, and one which should be applauded.

Ordnance Survey has always supported a mix of Open and Commercial models for purposes of its premium product distinction. This does mean there can be some challenges left to navigate for those users that wish to derive even greater value and more enriched datasets if they do not have the ability to licence additional premium services such as OS AddressBase® and HMLR Ownership.

Some examples:

1) There is not a 1 to 1 relationship with other 'property' related databases e.g., HMLR. One title/property may have numerous UPRNs. Additionally, the relationship between parent/child UPRN is not explicit in the open data. For example, when a building is turned into flats, a 'parent' UPRN for the building may be created, and 'child' UPRNs for the individual flats. This is the case in 74.31% of cases (29.13m records), with the remaining 25.69% (10.07m records) sharing their location with at least one other UPRN.

2) Addressing authorities include significant and valuable information alongside the UPRN within their Local Land and Property gazetteers. Many of these attributes are published within the AddressBase® suite of products depending on the level of product chosen, including the addresses provided in a Royal Mail PAF format, postcode, the addresses supplied in the BS 7666 addressing format as used by Local Authorities, a classification code to register the type of use or function of the property, a logical status

(e.g., ‘Approved’ or ‘Provisional’) and often the Basic Land and Property Unit (BLPU) state. BLPU state describes the physical nature of the property or land object and may be ‘under construction’, ‘in use’, ‘unoccupied’, ‘no longer existing’, ‘planning permission granted’ or ‘Unknown / Not Applicable’. Further information appended to the UPRN includes the historical, alias, and provisional addresses and change of use e.g., from single to multiple occupancy. Capturing this address, physical state and associated changes is key information towards any ‘property logbook’ approach for the property transaction sector.

These examples show the operational complexity associated with embedding UPRNs as the underlying and unifying force in the property transaction market, when relying only on the Open UPRN identifier database. Despite the opening up of many of the country’s UPRNs in April 2021, it is understood that for some organisations, maximum value from all UK property records will require a level of commercial investment.

Underlying accuracy is an important consideration, and it should be noted that the open UPRN identifier database does not contain the positional accuracy attributes of the given UPRN co-ordinates. This precedes any subsequent challenge around its overlap with other supplementary datasets, such as HMLR Ownership to determine more accurate geo-locational processing.

An example of the limitations caused by these challenges is demonstrated with The Lettings Industry Council (TLIC), who want to create an MOT-style record for every rented property to allow renters to check their landlord’s property history for things such as essential repairs, energy efficiency and a host of other property data which should help identify ‘rogue’ landlords, among other things, and lead to better protection for tenants. However, without the provision of at least the more detailed information linking the UPRN to addresses, this incredibly valuable scheme could become beset by operational challenges.

What this operational complexity demonstrates is the critical importance of a unified and consultative approach to shaping the digital transformation of the property transaction industry, and the critical role the Ordnance Survey will play in this process. The first major and

meaningful step towards a ‘property passport’ has been taken with the release of the Open UPRN database, and key industry stakeholders must now engage collectively in order to progress this agenda further.

3.0 Risk Profiling Considerations

A fundamental part of the property transaction process is the legal due diligence underpinning the transaction. Clearly, a residential property purchase is the largest investment decision any individual will make, and the associated risk management is critical. The quality of this risk management is dictated to a degree by some fundamental distinctions in the process. The most notable of these is the geo-locational accuracy of any UPRN, its associated address information and property boundary. In isolation a UPRN is an identifying point located at the central location of a given property. However, for this UPRN to be embedded as the unifying baseline for all property transaction information we need to overlay other locational databases, such as HMLR Ownership polygons or the BLPU polygon which a Local Authority may have associated with the UPRN record. This point or polygon consideration is best illustrated through the consideration of environmental risk data.

Accuracy is paramount when considering the unifying effect of basing all property level data on a UPRN. When considering geo-spatial accuracy, a property polygon is a material requirement to inform and enrich the UPRN record. Therefore, aligning UPRN locational data to HMLR Ownership polygons is critical in ensuring the most accurate baseline to power the transaction sector. Without boundary information the only representative way to inform environmental risk management would be to buffer a shape out from the UPRN point, and review risk information against this buffered shape. Within this process are endless subjective considerations (such as how large a buffer is appropriate), all of which reduce the value of the resulting risk information and decision making.

An example of how important this consideration is, relates to riparian ownership considerations of riverside properties, and residential properties with large external footprints. The former example is pertinent when considering the obligations property owners have which abut a riverside, for maintenance and management of the river. Where the environmental risk information based on the central point of the property, any risk (either from flood risk or riparian ownership considerations) would not be picked up, as the source of this would be the river 50 metres at the bottom of the garden.

Equally, a residential property with a large external footprint would require a polygon-based approach for accurate risk management from sources such as landfill sites.

A residential property could be 50 metres distant from a landfill site which presents a very real land contamination risk to the owner, however this would not be presented as material if the report or unifying database were based on the UPRN property point many metres away.

Perhaps more importantly, environmental risk is a dynamic and changing landscape. The key areas of information all have varying levels of 'changeability', for example:

1) **Planning Risk Data.** The statutory determination period for a 'standard' planning application is 8 weeks. Between Oct-Dec 2019 district level planning authorities received over 100,000 planning applications.
2) **Flood Risk Data.** Flood risk models are frequently being updated to refine risk outcomes, and the onset of climate change is powering the changing nature of this risk. Many data sources are updated as often as quarterly (i.e., every 3 months).
3) **Mining & Ground Stability Data.** Much of the base data powering mining risk (geological conditions and historic land use) is static. However, other facets of mining risk analysis are more dynamic. These include updates to the schedule of registered insurance claims relating to subsidence, and weather induced mining risks such as some forms of coastal erosion.
4) **Energy & Infrastructure Data.** By their nature, large scale energy and infrastructure projects take time to complete (e.g., HS2) and so the risk profile associated with them is less dynamic than other environmental risk areas. However, smaller scale wind, solar and sun energy installations occur more frequently and require regular searches of planning databases for records.
5) **Contaminated Land Data.** The risk from contaminated land is largely rooted in the historical land use of a property, therefore its propensity for future change is relatively low if the property in question is already in residential use.

Clearly these are dynamic risks, which require frequent refreshing. So, the ability to archive and refresh data and information is critical to the successful application of UPRNs as the unifying force in the property transaction sector.

4.0 Stakeholder Considerations

Bringing together all industry stakeholders and participants is a challenging feat, especially when navigating the bridge between public and private sectors. However, UPRNs provide a unique opportunity to frame and drive forward this alignment.

On a practical level, a willing industry participant of the drive towards UPRN adoption could continue to hold their address information within their existing formats, but crucially, by adding a single field containing the UPRN, make it possible to link matching records in different databases within their business and beyond. This approach is exponentially more cost-effective, practical, and timely than an underlying database reconfiguration. It suggests engagement is within arm's reach.

Further evidence of the practical appeal for adopting UPRNs across the property transaction sector is the acknowledgement that that UPRN sits at the heart of how data can be effectively published, retrieved, reused, and linked. After all properties and their associated data is always going to be dynamic. UPRNs are increasingly recognised as a tool supportive of data change and transformation. Many technologies can be used to share the UPRN, including spreadsheets, databases, XML/GML schema and linked data. Groups already using the UPRN include local and central government bodies, the emergency services, insurance providers, and utility companies. This transferability across many existing data management mediums further reduces the barriers to adoption.

Another critical operational consideration for all stakeholders is data quality management. As the collective voice for the largest environmental and property data companies in Great Britain, we are acutely aware of the importance of data quality. Crucially, the integration of UPRNs as the unifying identifier of a property vastly reduces the likelihood of error during data exchanges and communications. This is critical when considering the goal here is unifying the approach to data presentation across many stakeholders and companies. When organisations add the UPRN to their existing property data, they can link matching records in different databases together. This means fewer errors in data exchange and communication, but far greater efficiency in all kinds of operations and industry data sharing.

The adoption of UPRN must be universal rather than piecemeal if it is to have any meaningful impact on the production of useful property-level data. A primary question to consider is what are the punishments for non-compliance by public data providers? Recent examples attest to the challenge here, with projects such as Brownfield Registers, which initially had very explicit and strict rules laid down regarding mandatory data structure, metadata, spatial outputs, and publishing requirements set out in July 2017. Yet the outputs produced by local authorities to fulfil their Brownfield Registers were anything but standardised and a long way short of the required specification in almost all cases. Perhaps in recognition of this, the rules for publishing the data were amended and republished in a weakened form in October 2019, requiring much more basic spatial information and metadata, removing entirely, among other things, the need to publish INSPIRE compliant polygons and instead leaving only the requirement to publish a csv file with centre point coordinates. This was perhaps indicative of the lack of consistent geospatial data skills across the sector and an outdated view of the complexity of polygon-based data.

The Geospatial Commission have in their report, *Enhancing the UK's Geospatial Ecosystem (November 2020)* proposed the following relevant activities:

a) *Establishment of a Skills Forum to bring together industry, academia, and the public sector to tackle specific challenges in a coordinated way; and*
b) *Commissioning discovery work to inform the development of geospatial apprenticeships for the public and private sectors by 2021.*

These steps may go some way to address the issues over time. However CIE would like to explore other options to support the universal adoption and benefits of UPRNs across the conveyancing sector through its members, together with wider ambitions for greater recognition of the UPRN within the public sector and beyond.

5.0 Transactional Considerations

The most material challenge to navigate in the pursuit of embedding UPRNs as the cornerstone of the property transaction process, is creating a framework to record and access the past, present and future information supporting the process. The data storing and archiving processes of associated companies will need to be unified for the 'property passport' to remain current. In every data vertical this is a critical requirement.

For example, from an ownership perspective clearly only the current owner and their data is relevant in the strictest sense of the transaction. However, there will be cases such as past changes in ownership associated with 'carve outs' where part of the garden was sold, but not the property itself. This raises the very real prospect of development risk adjacent to a property, which may not have been established. Alternatively, a property that transacted in 1990 may have been subject to very high flood risk, but the changing built environment and implementation of Sustainable Drainage Systems (SuDS), or flood defences over time may have reduced that risk to the low level it is currently in. Visibility of the change from high to low risk could trigger some pertinent questions about the design, suitability and effectiveness of the SuDS or defences installed in the immediate vicinity of the Site during the 2000s.

These practical examples serve as the manifesto for a living, breathing and evolving data storage framework underpinned by UPRNs. Clearly only the most recent data should be on call and presented within a 'Property Passport' to power a successful transaction. However, the accessibility and interaction with all the underlying historic data records is critical to power us towards the best version of this future state. In the same way that blockchain technology underpins and cements this string of information, similar thinking must be utilised in the design of any UK 'property passport' underpinned by UPRNs.

6.0 Conclusions and Next Steps

The Conveyancing Information Executive supports the objective of improving the property transaction process for all stakeholders and identifies the critical role UPRN databases can play in this process. Many industry trades bodies and commentators have long presented the benefits of UPRNs. For example, we support the Home Buying and Selling Group (HBSG) initiative on “UPRN Residential declaration”. However, the key that has so far been missing in driving the adoption of UPRNs, is the collective experience of the largest data companies in Great Britain being able to shape the agenda and break down the operational complexities associated with success.

Unquestionably, UPRN data has the potential to greatly improve the provision of property-level data in the public and private sectors. With the collective experience of the largest data companies in Great Britain, the CIE is in a unique position to shape the agenda and break down the operational complexities associated with success. We believe that there is more work needed to drive the adoption of UPRNs.

The CIE, along with its Industry Partners aims to create a cross industry working group to drive the agenda for UPRN adoption within all major stakeholders and companies across the property transaction sector. We welcome interest from like-minded organisations to join us in these working groups, to identify and drive practical solutions across the industry through continued debate, collaborative white papers, and round table discussions.

Once this is achieved the results would transform the property transaction process and experience into something fit for the digital and technological age we now operate in. To power this future state of a more enjoyable and fluid property transaction market, we need a more efficient, progressive and technology driven property transaction process. UPRNs are unquestionably the only unifying force currently capable of delivering this reality.

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