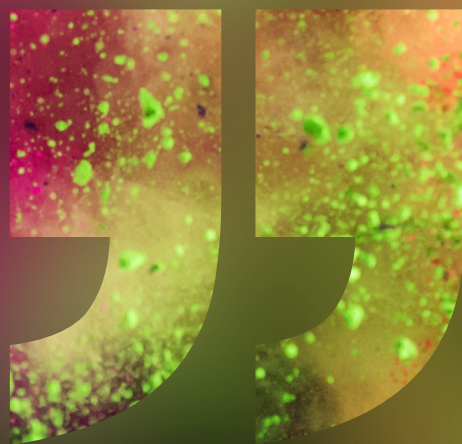


C L I F F O R D

C H A N C E



**THE METAVERSE:
WHEN IS REAL
ESTATE NO
LONGER REAL?**



— THOUGHT LEADERSHIP

OCTOBER 2022



THE METAVERSE: WHEN IS REAL ESTATE NO LONGER REAL?

Approximately US\$2 billion worth of 'land' has changed hands so far this year without a single human ever setting foot on it and with the knowledge that no human ever will. These sales were of virtual plots of land in the metaverse.

Land transactions in virtual worlds are skyrocketing and this trend is expected to continue, with a recent study forecasting that the virtual land market will grow by over US\$5 billion by 2026.

For all the hype, it is often difficult to navigate the conceptual and legal challenges that may arise when investing in, and developing, virtual land in the metaverse, as well as to make sense of the broader question: can something that's not 'real' have anything in common with real estate?

What is the metaverse?

There is no universally accepted definition of the metaverse, but it is generally regarded as a network of virtual worlds or augmented reality environments in which users can interact with each other. Some tech companies, including Meta (previously known as Facebook), believe that the metaverse is the future of the internet, and will soon become the place where we live, work and play. The metaverse is still in its infancy, but a number of these virtual worlds already exist, such as The Sandbox, Decentraland and Otherside.

While many view the metaverse as a network of interconnected virtual worlds, others envision multiple metaverses, each being a distinct virtual space owned and operated by a distinct proprietor and which is not necessarily connected to, or interoperable with, other virtual worlds.

From NFTs to virtual land

NFTs – non-fungible tokens – are central to how virtual land 'ownership' works. An NFT is a digital asset which is uniquely identifiable within the technological framework in which it exists. NFTs typically exist on a distributed ledger technology (DLT) system as unique data

elements. Unlike other tokens, NFTs are not interchangeable (fungible) with each other. If an NFT is linked to a digital asset, such as art or media, it can be used to evidence the transfer of the underlying digital asset from an initial minter to subsequent holders of the NFT.

Virtual land transactions have been made possible by linking the right to control and (partially) modify virtual spaces in the metaverse to an NFT. For example, a virtual land NFT may enable the holder to modify the NFT to include a virtual building on its virtual land plot which can be used by avatars in the relevant metaverse platform. These are created on the blockchain and each NFT representing such a virtual plot is unique. When the NFT is bought and sold, the sequence of transactions is recorded using blockchain, or another type of DLT, and is therefore traceable. Crucially, that record of transactions in the blockchain cannot be changed.

Virtual land mirrors 'real' land

Land in the metaverse shares a number of similarities with that in the real world. A virtual world can be set up so that the amount of land in it is finite and the laws of supply and demand apply.

Similarly, as in the real world, users of the metaverse are drawn to interesting places in the virtual world. The more popular the location, the higher the value of that virtual land – despite the fact that you can be instantly transported to any other place you like within the metaverse at the click of a button. Who your neighbours are can even affect the value of your land – earlier this year, one digital real estate enthusiast paid over US\$450,000 to acquire a plot of land next to rap artist, Snoop Dogg's virtual house in The Sandbox.

Who is investing in virtual land and why?

Investment in virtual land has grown significantly during the past 18 months. In 2021, The Sandbox saw 65,000 transactions with a combined value of US\$350 million, with the total cumulative value of virtual land sales on that platform having exceeded US\$570 million as at September 2022. Sales of virtual land in Otherside, the metaverse platform created by Yuga Labs, the start-up behind the popular Bored Ape Yacht Club NFT collection, have exceeded US\$1.28 billion since the platform's launch in April this year.

Typically, under the terms of use of a metaverse platform, virtual landowners will have the ability to transact, develop, lease or otherwise use their entitlement to the virtual land in any manner they see fit – for example, as a store front to sell digital goods or even physical goods that can be purchased in the metaverse and then delivered in the real world. In 2021, crypto-based investment company Everyrealm (formerly Republic Realm) purchased a plot of land in Decentraland for nearly US\$1 million and developed this into a 16,000 square foot shopping district called Metajuku, inspired by Tokyo's Harajuku shopping district. It was launched with tenants specialising in virtual fashion selling digital wearables to metaverse users. Everyrealm has raised over US\$60 million in Series A funding (led by Andreessen Horowitz) to fund developments such as this and, at the date of writing, holds over 100 metaverse real estate developments.

A number of real-world brands have also started taking an interest in the potential retail market in the metaverse. Sotheby's created a digital replica of its London headquarters in Decentraland in order to showcase digital art for sale, while Samsung launched virtual retail space in Decentraland in which it offers a range of virtual experiences designed to enhance customer engagement.

Companies are looking to acquire virtual office space in the metaverse, where their employees who are working remotely can have meetings and exchange ideas.

Meta and Microsoft are both developing products which will allow users to meet in three-dimensional virtual spaces, with the aim of creating a more immersive experience than traditional two-dimensional video calls.

A related concept is the digital twin, which involves the use of virtual representations of physical properties to seek to capture information relating to those physical buildings to enhance their real-world operation and efficiency. If linked with sensors, cameras and even nanobots implanted in construction materials, it would be possible for a digital twin in the metaverse to become a living, breathing virtual version of the physical building, rather than a mere static representation of it, in real time mirroring the actual operational state of the physical building and its contents. This would allow for potential changes to the use or operation of the building, or the impact of emergency events, to be simulated in the virtual version of the building before being implemented in the physical world.

Developments such as this highlight some of the exciting ways in which virtual land has the potential to provide actual operational value for physical land for asset management purposes.

Conceptual challenges

While there is increasing interest in virtual land, there are conceptual challenges around the proposition that virtual land offers similar investment opportunities to physical real estate.

- **Artificial scarcity**

Some have questioned the 'artificial scarcity' upon which most virtual land investments are predicated – can the laws of supply and demand really apply in a network where there is nothing stopping anyone else from building the same thing in a different virtual world or building another whole world entirely?



Some have questioned the artificial scarcity upon which most virtual land investments are predicated.





Any investment in virtual land is a bet on mass adoption of the metaverse itself as well as the particular platform where the virtual land is located.



The fact that additional virtual land can be created at essentially zero marginal cost creates the risk that a metaverse platform could release additional virtual land to meet demand, which may be dilutive to existing virtual land values.

That said, while in theory a metaverse platform can generate infinite virtual land, if when doing so it does not change relative notions of proximity already existing within the platform, this may not affect the existing virtual land which largely derives its value from its proximity to existing virtual landmarks (such as Snoop Dogg's virtual pad or Metajuku). Even leaving aside real-world spatial metaphors, location within the metaverse can clearly be important – arguably, a well-positioned piece of virtual land is not unlike a web page that appears first in a Google search.

Further, no two platforms are the same, as is evidenced by the vastly differing levels of transaction activity in each platform – compare the US\$165 million invested in virtual land in NFT Worlds, the fifth largest platform by cumulative investment, with the over US\$1.28 billion cumulative investment in Otherside (as at September 2022). Users are drawn to each world for differing reasons and some worlds are more popular than others. Against this backdrop, the argument that the construction of another virtual world would necessarily result in a reduction in the value of virtual land in existing similar virtual worlds appears overly simplistic.

Indeed, sophisticated virtual worlds take time and significant investment to develop and so the creation of a new virtual world which could rival an existing platform and potentially divert user traffic to such an extent as to materially reduce virtual land values does not appear to be an easy task.

- **Utility and adoption**

Another conceptual challenge is that virtual land has no inherent utility and there has been limited success in creating effective and meaningful use cases for it. Many acquisitions of virtual land are motivated either by short-term

speculation (buy and flip) or a long-term passive investment strategy (buy, wait, and sell, once the metaverse has matured, to someone who wants to develop the land at that stage). Despite a handful of high-profile metaverse launches there have arguably been relatively few transactions that in the short term have led to meaningful attempts to properly commercially develop, and create genuine commercial use cases for, the virtual land. Similarly, scepticism has been levelled at whether there will ever be mass adoption of virtual retail transactions in the metaverse – will people really choose to go into the metaverse to buy a product that they could just as easily buy through their smartphone app or web browser?

- **Volatility**

High levels of volatility are another issue. Any investment in virtual land is a bet on both mass adoption of the metaverse itself as well as the relevant platform where the virtual land is located.

Accordingly, volumes of transactions and prices strongly correlate with news and developments relating to the particular metaverse platform in question, market perception of development and adoption levels in the metaverse more generally as well as the performance of the cryptocurrency markets, which can lead to significant volatility. The virtual land market has not been spared during the 2022 crypto market crash; for example, the average price of land sales in Decentraland plummeted from approximately US\$37,000 in February this year to US\$5,000 in August this year.

- **Technological barriers**

There are technological barriers to realising the vision for the metaverse that many existing virtual land investments are predicated upon. Significant technological advances are required on many fronts to deliver truly persistent and immersive worlds with the requisite scale and real time accessibility. Intel, the microchip manufacturer, estimates that a

thousand times increase in computational efficiency from today's state-of-the-art technology is required. The user experience will also require improved and more inexpensive VR hardware, consumer graphics processing units (GPUs) and a continued roll-out of 5G and next generation communications technology. Ultimately, the value of virtual land will be driven by the popularity of the host metaverse, which itself is dependent on technological advancements facilitating widespread adoption.

- **Competing ideologies**

The differing visions for the metaverse referred to above (see *What is the metaverse?*) may lead to walled gardens of parallel competing metaverses that are ultimately never fully interconnected. A fragmented metaverse is likely to be a less compelling proposition for users due to a lack of network effects, in a similar way as if the Internet had simply been a collection of unconnected local networks, rather than the interconnected web that it is today.

Legal considerations

As the virtual land market in the metaverse develops in scale, technological maturity and adoption, it will increasingly give rise to novel and complex legal issues.

- **Ownership of NFTs representing virtual land**

An NFT is a unique cryptoasset that represents certain rights, including potentially to an underlying 'tokenised' asset (such as virtual land) and which is created and transferred using DLT. But what is the legal status of these cryptoassets? In England and Wales, the High Court recently recognised in response to an application for interim relief, that there is at least a realistically arguable case that NFTs are to be treated as property as a matter of English law. While it is important to recognise that the legal tests used by the court in cases such as these (which are heard in the absence of the defendants) represent a lower bar than at a fully contested trial, the judgment is consistent with existing jurisprudence

relating to cryptocurrencies. It accordingly lends credence to the notion that NFTs may be treated, in the eyes of English law, in similar ways to other property, such as being held on trust, gifted, used as security for a loan, etc.

This decision may help legitimise various different types of transactions of metaverse real estate, such as metaverse mortgages, the first of which was granted in January this year by US technology company TerraZero Technologies Inc. (although it is worth noting that this mortgage has some differences to a real-world mortgage, as the lender will hold the land NFT as registered owner until the loan is repaid, with the borrower simply having rights to use the land in the interim). However, it is not yet clear whether the courts of other jurisdictions will take a similar approach to the English courts when opining on the legal status of NFTs (albeit there has recently been a similar decision in Singapore). A convergence in approach to the recognition of ownership of digital assets such as NFTs across the world's legal systems will be important for the metaverse virtual land market to attract investment from global commercial real estate investors.

- **Ownership of virtual land represented by NFTs**

Perhaps more relevant for a virtual land NFT holder will be the question of the status of the legal rights linked to its NFT and whether the NFT in fact provides any sort of ownership rights to the underlying virtual plot of land itself or the buildings thereon. Arguably, the rights linked to the plot of virtual land will only be rights to control and use the land in a particular way (such as by developing a building on it), not necessarily ownership rights to that plot itself.

As such, it is important to recognise the difference between the NFT, which as noted above may constitute property in some jurisdictions, and the bundle of rights that it purports to represent, in this case being the right to control and (partially) modify the virtual land.



Recognition of legal ownership of digital assets across the world's legal systems will be important to attract investment.





Rights in virtual land are governed by mere contract and the very existence of the land depends on third-party operators.



Real estate laws – and the protections afforded to landowners thereby – do not apply to virtual land. Instead, the user's rights in respect of its virtual land NFT will be determined by contract law, in the form of the terms and conditions of the relevant platform, and potentially trust law, depending on whether or not the relevant NFT is being held directly by the participant or by the metaverse platform on behalf of the participant. The metaverse platform terms and conditions are particularly important, given that, unlike physical real estate, virtual land depends wholly on the vendor for its continued existence.

The terms of service of metaverse platforms often contain provisions that are at odds with traditional notions of real estate ownership. For example, certain terms and conditions may provide that the operator has no continuing obligation to operate the metaverse platform and may cease to operate it in its sole discretion without any liability. The terms may also give the operator the right to update the terms and conditions from time to time, putting users at risk that their rights to access and use their virtual land may at any time be unilaterally altered. In addition, the terms of service may give the operator the right to, at any time, suspend a user's access to the platform at its sole discretion, to the extent technically possible. If a platform were to exercise any of these rights, while the user would remain the owner of the underlying NFT linked to the virtual land, it would not be able to access or use that land (rendering the NFT effectively worthless).

Investors in virtual land in the metaverse must therefore keep in mind that ownership of a virtual land NFT is not equivalent to, and is far less robust than, ownership of real estate in the physical world: real-world land derives much of its value from its permanence and the robust property rights the law recognises in it, whereas rights in digital land are governed by mere contract and the very existence of the land depends on third-party operators.

- **Decentralised Autonomous Organisations**

Certain metaverse platforms operate as Decentralised Autonomous Organisations (DAOs), which are community-led decision-making structures with no central authority. Through this, virtual landowners on the platform (being the DAO members) have the ability to control key matters relating to the platform (such as decisions to increase the supply or size of new land and other important decisions which affect all users) through the exercise of voting rights. Smart contracts (discussed further below) set out the constitutional rules and automatically execute decisions that reach a pre-determined level of consensus.

While in theory this structure affords virtual landowners the opportunity to influence key matters relating to the virtual world in which they own land – thereby diminishing the influence of the third-party platform operator – in reality this opportunity may be limited in circumstances where a small number of investors have significant holdings (e.g., akin to typical listed company share ownership). In such circumstances, certain virtual land investors could find that key decisions relating to the relevant metaverse platform can be effectively controlled, vetoed, or significantly influenced by other commercial organisations (which may even be their competitors), rendering the purportedly decentralised platform in fact very much centralised. This may also lead to added complexity as virtual landowners may be incentivised to spend time lobbying other users to vote in their desired manner.

Further, the decision as to which matters are actually put to vote in the first place is often taken by a small group of individuals, again calling into question how decentralised these platforms actually are in practice.

- **Smart contracts**

Transactions in virtual land in the metaverse, such as acquiring, letting out or mortgaging virtual land, are effected through smart contracts. A smart contract is an agreement written in computer code which runs on the blockchain and is programmed to execute automatically when certain pre-determined conditions have been met.

It is important for virtual land investors to recognise that smart contracts can be markedly different to what one typically understands to be a contract. While smart contracts could be recognised in law as legal contracts, many smart contracts are computer programs that reflect a certain form of transactional logic by applying "If/when X, then Y" rules. For example, a smart contract may specify that if the purchase price for a digital asset is paid, then title to that asset will be transferred. As a result, they can only accommodate obligations that can be objectively determined to have been satisfied or breached and cannot cater for the shades of grey that are typically found in commercial contracts. As transactions in metaverse virtual land continue to grow in volume and complexity, parties to these transactions may find themselves with a need to enter into separate off-chain legal contracts in order to agree other material terms of the transaction that would not be capable of being embedded in a smart contract.

It is worth noting that, under English law, smart contracts are only legally binding if the basic formational characteristics of a legal contract – offer, acceptance and consideration – can be evidenced. Certain of the formalities that may be required in a typical real estate transaction (such as the transfer having to be effected by way of a deed) are not typically required.

- **Intellectual property rights**

Intellectual property law issues arise in different forms when acquiring,

developing, and operating virtual land. When acquiring a virtual land NFT, in the absence of express provisions otherwise, under English law the purchaser of the NFT would not acquire intellectual property rights in relation to the virtual land or virtual buildings, but merely a right to a digital record of data. Whether any rights beyond this are conveyed will depend on the terms applicable to the NFT smart contract governing the transaction as well as the terms of the relevant metaverse platform on which the virtual land is located. For example, under certain platforms' terms of use, there are no intellectual property rights in the virtual land NFT itself, as it is merely a digital record evidencing the holder's entitlement to control and modify the relevant virtual land parcel.

When developing virtual land, the IP ownership position will depend both on the terms applicable to the relevant metaverse platform as well as who is actually 'creating' the buildings on that virtual land. If a virtual landowner creates content itself – i.e., it codes its own virtual buildings within its virtual land, rather than using the relevant metaverse platform's generic 'drag and drop' builder toolkit (which contains a repository of pre-designed buildings and other objects) – in the absence of express provisions otherwise in the platform's terms of use, under English law the intellectual property rights in the digitally created buildings will belong to the virtual landowner. However, if a virtual landowner hires a software developer to code virtual buildings on its behalf, there is a risk that ownership of the rights subsisting in a digitally created building may vest with the software developer, rather than the virtual landowner. Virtual landowners should therefore take care to explicitly set out IP ownership provisions in consultancy agreements with computer programmers to ensure that any intellectual property rights created in connection with the development of virtual land are validly transferred to the virtual landowner.



Parties to virtual land transactions may find a need to enter into separate off-chain legal contracts to agree other material terms of the transaction that cannot be embedded in a smart contract.





Virtual land investors need to be alert to potential phishing and other cryptoasset scams. Whilst the law develops, prevention will be better than cure.



Virtual landowners must take care to ensure that they are not creating content on their virtual land which infringes third-party intellectual property rights. For example, recreating a real life building on virtual land could, under English law amount to copyright infringement unless the creator owns the intellectual property rights in the related building or drawing of the building or has the benefit of a licence from the copyright holder which permits it to reproduce the building in digital form. In addition, use of a third party's trademark rights in connection with a virtual building without their consent could result in trade mark infringement. An example of this is where the name of a physical building is used in connection with a virtual building where that name is protected by trademark rights (such as "BATTERSEA POWER STATION" or "LONDON AQUARIUM", which are building names that are protected as registered trademarks in the UK). In this respect, trademark rights holders should consider whether their existing trademark registrations do in fact provide sufficient protection when used in connection with virtual land or whether they may need to consider applying to broaden their trademark protection to cover virtual goods or services.

- **Fraudulent practice**

As the market for cryptoassets has rapidly grown, so has the prevalence of fraudulent practice, with cryptocurrency-based crime resulting in approximately US\$14 billion of stolen value during 2021. In the virtual land context, one example of such illicit activity is a phishing scam through which cybercriminals use fake links to a metaverse platform to steal a user's credentials to the digital wallet holding that user's virtual land NFT. The cybercriminal is then able to extract the virtual land NFT and other digital assets contained in the wallet and transfer them to its own wallet for onward sale.

When theft such as this occurs, the decentralised nature of the system makes it practically impossible to reverse or alter a transaction. This would require a radical change to the underlying protocol of the blockchain – a so-called 'hard fork' – resulting in a separation of the blockchain into two different versions of the network. An example of this occurred in 2016 when the Ethereum blockchain was subject to a hard fork in order to return approximately US\$50 million of stolen Ethereum to their original owners, resulting in a chain on which the fraud was reversed (Ethereum) and a chain on which the funds were never recovered (Ethereum Classic).

However, the English High Court has recently firmly rejected the argument that cryptoasset software developers owe a positive duty to fork a blockchain to return stolen cryptoassets, indicating that the English courts will be slow to order the reversal of transactions on blockchains in the case of theft. The courts may, however, assist victims of NFT theft in other, more limited, ways. As noted above, the English High Court recently granted a freezing injunction over NFTs that a claimant had alleged had been stolen and an order compelling OpenSea, the peer-to-peer NFT marketplace, to disclose the contact information of the persons in control of the wallets to which the claimant had traced the NFTs. This is assuming the English courts have jurisdiction, which is addressed further below (see *Conflict of laws*).

Given the significant risks of fraud, misappropriation, and theft of NFTs, virtual land investors must take care to appropriately secure their digital wallets and be alert to potential phishing and other cryptoasset scams. Whilst the courts continue to develop the law around cryptoassets, prevention will be better than cure.

- **ESG**

Potential virtual land investors will need to consider whether an investment in the metaverse aligns with their organisation's ESG commitments. As noted above (see *Technological barriers*), the development and operation of truly immersive virtual worlds will require a material increase in computing power and, therefore, energy. The precise impact of this on the environment will need to be studied further as the metaverse develops; however, even without a quantitative assessment it is already clear that the impact will be significant. That said, in some ways the use of virtual land in the metaverse may lead to a reduction in carbon emissions, for example through substituting virtual interactions for real-world interactions or by harnessing the potential for virtual land to advance ESG goals, such as through using digital twins to optimise the carbon efficiency of physical buildings.

- **Conflict of laws**

At a macro level, given that on most conceptions of the metaverse it comprises a network of interconnected virtual worlds not linked to any specific country or physical space, the metaverse will raise difficult questions of jurisdiction, technological sovereignty, and conflicts of laws on an

even greater scale than that currently faced by the internet. These can only be reduced in respect of contractual claims through jurisdiction clauses.

What does the future hold for virtual land investment in the metaverse?

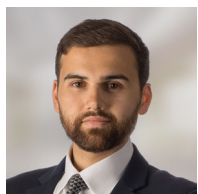
Virtual land transactions are likely to increase, as early investors seek to buy prime plots, software engineers seek to build new environments offering users virtual interactive experiences and businesses acquire or rent space to sell their products and services or even host their employees in virtual office spaces.

It is still far from certain whether the metaverse will provide a stable and secure platform that engenders widespread confidence in virtual land investment despite the unique (and, in some ways, fragile) nature of the legal ownership rights involved. Likewise, it is unclear when or whether it will be possible to develop meaningful use cases for virtual land which will lead to widespread adoption. Nevertheless, what is clear is that as the metaverse landgrab increasingly tempts investors to enter the virtual land market, they will need to navigate a whole host of difficult and novel legal and commercial risks along the way.

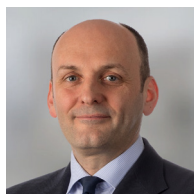


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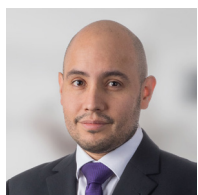
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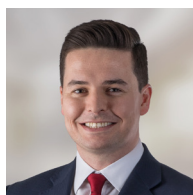
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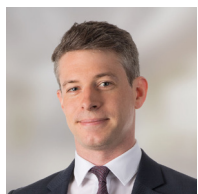
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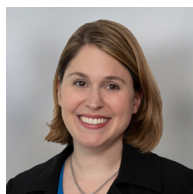
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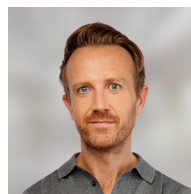
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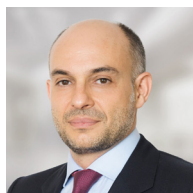
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