

Plots 4 & 5 Central Square, Cardiff

Cardiff Council

HERITAGE, TOWNSCAPE & VISUAL IMPACT ASSESSMENT | AUGUST 2025

On behalf of REAP 3 Limited



i | Table of Contents

CENTRAL SQUARE | CARDIFF

1 INTRODUCTION.....	1
Overview	1
Design Involvement & Pre-application Feedback.....	2
2 RELEVANT PLANNING POLICY, LEGISLATION & GUIDANCE	4
3 HERITAGE BASELINE.....	7
Historic Development of Site and Surroundings.....	7
Scope of Heritage Assessment.....	8
Assessment of Significance.....	9
4 TOWNSCAPE AND VISUAL BASELINE.....	17
Scope of Townscape Assessment.....	17
Townscape Character	17
Site Photos	19
Locating Tall Buildings.....	20
Scope of Visual Assessment	21
Views Mapping.....	22
5 PROPOSED DEVELOPMENT	25
6 HERITAGE ASSESSMENT.....	28
7 TOWNSCAPE AND VISUAL ASSESSMENT.....	32
Townscape Assessment	32
Visual Assessment	33
8 CONCLUSION.....	35

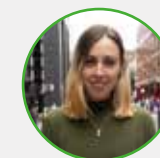
APPENDIX 1 TOWNSCAPE AND VISUAL ASSESSMENT METHODOLOGY	37
--	----

APPENDIX 2 VERIFIED VIEWS.....	40
----------------------------------	----

APPENDIX 3 VISUALISATION METHODOLOGY STATEMENT	72
--	----



Laurie Handcock
Director
lhandcock@iceniprjects.com
020 3725 3853



Georgia Foy
Associate Director
gfoy@iceniprjects.com
07799 089 4255



Georgina Mark
Senior Consultant
gmark@iceniprjects.com
020 3657 5031



Poppy Malcomson
Consultant
pmalcomson@iceniprjects.com
07833 483 775

Section 1

Introduction.

1 | Introduction

Overview

- 1.1 This Heritage, Townscape and Visual Impact Assessment ('HTVIA') has been prepared on behalf of REAP 3 Limited ('the Applicant') to support a full planning application at Plots 4 and 5, Central Square, City Centre, Cardiff ('the Site') within Cardiff Council. It provides an assessment of the anticipated heritage, townscape and visual impacts of the proposed development.
- 1.2 The proposed development can be summarised as follows:
- "Mixed-use development to provide residential accommodation, flexible non-residential uses, cycle parking, landscaping and other associated works"*
- 1.3 This report will:
- Set out the relevant legislative and policy framework within which to understand the proposed development of the Site;
 - Provide a proportionate and robust analysis of the Site and surrounding area's historic development;
 - Assess the effects to the significance and setting of identified heritage assets resulting from the proposed development;
 - Assess the effects to the townscape character of the Site and surroundings arising from the proposed development; and
 - Undertake a visual assessment of the effects of the proposed development on visual receptors (people experiencing views and visual amenity) using a selection of key representative viewpoints.
- 1.4 The methodology used in this assessment is set out in Appendix 1.
- 1.5 The baseline was prepared using ongoing desk-based research and fieldwork undertaken in January 2025.
- 1.6 The report is produced by the Built Heritage and Townscape Team, Iceni Projects. Specifically, it is authored by: Poppy Malcomson BA(Hons) MA - Consultant, Georgina Mark BA(Hons) MSt(Cantab) -Senior Consultant, with review and guidance from Georgia Foy MA MAUD IHBC - Associate Director. Final sign off has been provided by Laurie Handcock MA (Cantab) MSc IHBC MCifA - Director, Built Heritage & Townscape.

Site Description

- 1.7 The Site sits within the administrative area of Cardiff. It encompasses 0.21ha and comprises a cleared rectangular plot of land, alongside two smaller parcels of land located to the north of Wood Street within the public realm (these smaller parcels will accommodate public cycle parking spaces). The Site is bound by Wood Street to the south, Scott Road to the west, Park Street Lane to the north-west, and a public square to the east. The Site was formerly occupied by St David's House, until it was demolished in late 2018.
- 1.8 The Site benefits from full planning permission for the following development (Ref: 21/02984/MJR), which was granted by the Council on 2nd May 2024:
- 'Full planning application for a mixed-use building providing commercial uses at ground floor/mezzanine level (Use Classes A1/A2/A3/B1/D1/D2) and residential accommodation above (Use Class C3 and including non C3 Use Class residential), a pavilion (Use Classes A1/A2/A3), public realm, cycle parking, access, drainage and other infrastructure works required for the delivery of Central Square Plots 4 and 5.'*
- 1.9 The Site sits within the Cardiff Central Square Masterplan area. Whilst this masterplan was never formally adopted, it has catalysed significant development and has led to the transformation of the area in and around Cardiff Central Station. The prevailing building heights ranges between 7 to 25 storeys, which includes buildings of a variety of land uses and architectural styles.
- 1.10 The Media Wales office building is located at 6 Park Street, immediately adjacent to the north west of the site. The HMRC building is located immediately adjacent to the north east of the site. The Millennium Plaza leisure complex is located immediately to the west. To the south across Wood Street lies the Cardiff University School of Journalism, Media and Culture, and the BBC Cymru building. The Principality Stadium is located further to the north and can be accessed via Central Square.
- 1.11 The Site is not within a conservation area and does not include any listed buildings.

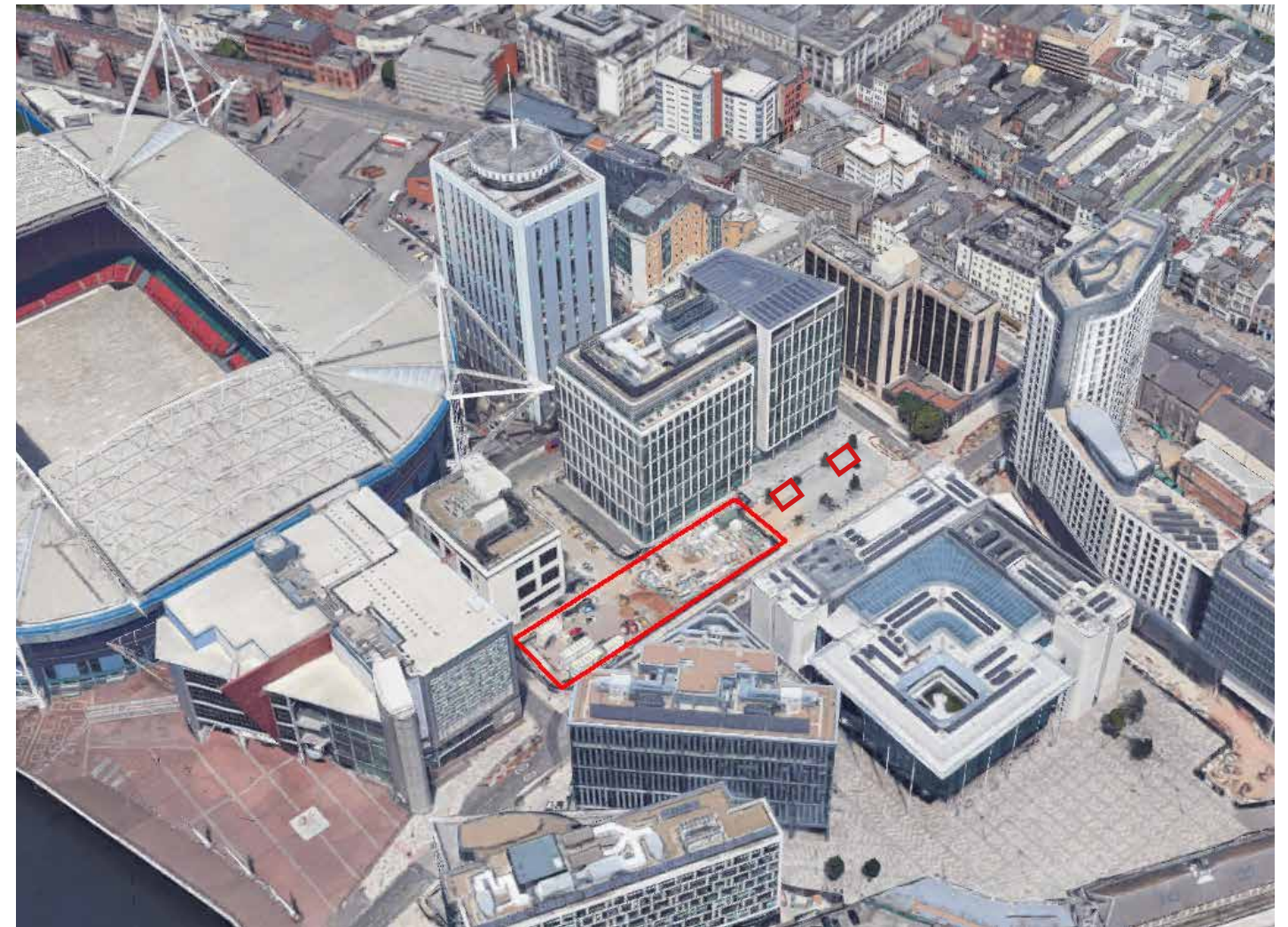


Figure 1.1 Site Location (approximate site boundary)

Design Involvement & Pre-application Feedback

- 1.12 Icenl have been involved in advising the design development of the scheme since January 2025 for PPA-1. The proposed development has undergone several design iterations which has been subject to an extensive process of pre-application consultation with Council Officers. Design development of the proposal has been informed by consultation feedback, and seeks to respond to the Site’s existing and emerging heritage and townscape context.
- 1.13 The majority of feedback from Cardiff Council has been extremely positive, and the following process has been a collaborative effort to achieve a high-quality design led by heritage and townscape contexts.
- 1.14 Responses to ongoing consultation are summarised in the adjacent Table 1.1.

Pre Application Consultation			
Proposed Development	Pre Application Meeting 1	Pre Application Meeting 2	Pre Application Meeting 3
Design	The Local Planning Authority expressed support for the revised internal layouts, noting that the proposed changes represent a clear improvement in terms of functionality and spatial organisation. The overall silhouette of the building was well received, with officers describing it as “magnificent.” This indicates strong support for the proposed scale, roofline, and general form of the development. Officers expressed a clear preference for the building to be sensitively illuminated at night, suggesting that a considered lighting scheme could further enhance the building’s architectural presence in the surrounding townscape. The LPA advised that further attention should be paid to the articulation of the building’s elevations, particularly in terms of profile and depth. Officers encouraged the use of dark materials with gold detailing or accents to enrich the building’s visual character and create a high-quality, striking appearance.	Officers reiterated a general desire for the scheme to be more architecturally bold. While progress has been acknowledged, there remains an overarching theme that the development should demonstrate greater confidence and distinctiveness in its design approach. The LPA requested that precedent studies should be undertaken to explore the use of natural and local materials. This should inform the proposed material palette and ensure it aligns with the character of its wider context.	Officers welcomed the introduction of bolder colours within the scheme, noting that the revised palette appears to be well-informed by contextual studies and the use of natural materials. This approach has helped to strengthen the building’s identity and connection to its surroundings. The lighting strategy for the crown of the building was positively received. Officers felt the illumination was successful in enhancing the architectural expression and night-time presence of the development. Officers encouraged further enhancement of the crown element. It was suggested that the crown could be made even more striking, potentially through an increase in height or further refinement of its form. The LPA acknowledged and commended the influence of the previously requested precedent studies on the design of the ground floor. The incorporation of references to the St Mary’s Conservation Area and the Classical Revival style was recognised as a successful strategy for representing Cardiff’s architectural heritage. Officers noted that this contextually responsive approach is a positive evolution of the scheme.

Table 1.1: Consultation Responses

Section 2

Relevant Planning Policy, Legislation & Guidance.

2 | Relevant Planning Policy, Legislation & Guidance

Policy Summary

Local Policy and Guidance

- 2.1
- The local Statutory Development Plan includes the following documents relevant to this report:
 - National Development Framework: Future Wales 2040 (February 2021)
 - Cardiff Local Development Plan 2006-2026 (2016).
- 2.2
- The relevant policies to this report are summarised in Table 2.1 adjacent.
- 2.3
- The Council has started to prepare a new draft Cardiff Replacement Local Development Plan, guiding development up to 2036. Consultation on the strategic options paper ran from November to February 2022. Consultation of the Preferred Strategy and Candidate Sites took place from July to October 2023.
- 2.4
- Consultation on the Deposit Plan took place from February to April 2025. It is anticipated to be submitted for Examination in September 2025 and adopted in April 2026.
- 2.5
- Additional local guidance which will be a continued consideration in this report are as follows:
 - Tall Buildings SPG (2017)
- 2.6
- The Site falls within the Cardiff Central Square Masterplan and thus has been identified as part of a wider redevelopment. The Masterplan sets out a vision to make the area comprising Central Square a new Gateway to the capital of Wales. The completed buildings include BBC Cymru, and emerging tall buildings include the Interchange and 6 Central Square.

National Policy and Guidance

- 2.7
- The following national policy and guidance is relevant to this assessment:
 - Planning Policy Wales (2024)
 - Technical Advice Note 12: Design (2016)
 - Technical Advice Note 24: the Historic Environment (2017)
 - Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011)

Planning Policy Wales (2024)

- 2.8
- Planning Policy Wales Edition 11 (February 2024) is the national planning framework for Wales setting out policies and guidance for making planning decisions. Of specific relevance is section 6.1 'The Historic Environment':
- 2.9
- Paragraph 6.1.10 states: *'There should be a general presumption in favour of the preservation or enhancement of a listed building and its setting, which might extend beyond its curtilage'.*
- 2.10
- 'For any development proposal affecting a listed building or its setting, the primary material consideration is the statutory requirement to have special regard to the desirability of preserving the building, its setting or any features of special architectural or historic interest which it possesses.

Technical Advice Notes

- 2.11
- The Welsh Government and Cadw have produced guidance which support the legislative and policy frameworks, including the following which are of particular relevance.
- 2.12
- Technical Advice Note 12: Design (2016), in particular section 4 'Delivering Good Design'. Page 19 of TAN12 discusses design solutions proposed developments may consider to respond appropriately to a site's context. Solutions regarding the scale of a development include considering: *'height, width and length of each building proposed within the development; how the massing of the proposal contributes to the existing hierarchy of development to reinforce character; how the mass and height impacts on privacy, sunlight and microclimate; and how height impacts on the attractiveness and safety of neighbouring public space'.*
- 2.13
- Technical Advice Note 24: the Historic Environment (2017), in particular sections 5 ('Listed Buildings') and 6 ('Conservation Areas'), and Annex B ('Listed Buildings'). Paragraph 5.13 of TAN24 states when determining a listed building consent application, the local planning authority should consider, among other things, *'the extent to which the proposed works would bring substantial community benefits for example, by contributing to the area's economy or the enhancement of its local environment'.*

Statutory Development Plan		
Policy Document	Relevant Policy	Summary
Cardiff Local Development Plan 2006-2026 (2016)	KP2(A): Cardiff Central Enterprise Zone and Regional Transport Hub	Land is allocated at Cardiff Central Enterprise Zone, as defined on the Proposals Map, for a major employment-led initiative including a Regional Transport Hub together with other mixed uses in Cardiff City Centre in order to fulfil Cardiff's role as economic driver of the city-region, providing major employment opportunities focused on financial and business services and maximise the advantages of its central location. Supporting essential, enabling and necessary infrastructure will be delivered in a phased manner with specific requirements secured through planning consents
	KP5: Good Quality and Sustainable Design	To help support the development of Cardiff as a world-class European Capital City, all new development will be required to be of a high quality, sustainable design. Tall buildings must be placed in locations which are highly accessible through walking and public transport and within an existing or proposed cluster of tall buildings
	KP17: Built Heritage	Cardiff's distinctive heritage assets will be protected, managed and enhanced, in particular the character and setting of its Scheduled Ancient Monuments; Listed Buildings; Registered Historic Landscapes, Parks and Gardens; Conservation Areas; Locally Listed Buildings and other features of local interest that positively contribute to the distinctiveness of the city.
	Policy EN9: Conservation of the Historic Environment	Development relating to heritage assets (or their settings) will only be permitted where it can be demonstrated that it preserves or enhances that asset's architectural quality, historic and cultural significance, character, integrity and/or setting
National Development Framework: Future Wales 2040 (February 2021)	Policy 6 – Town Centre First	Significant new commercial, retail, education, health, leisure and public service facilities must be located within town and city centres. They should have good access by public transport to and from the whole town or city and, where appropriate, the wider region
	Policy 33 – National Growth Area – Cardiff, Newport and the Valleys	Cardiff, Newport and the Valleys will be the main focus for growth and investment in the South East region. Strategic and Local Development Plans should recognise the National Growth Area as the focus for strategic economic and housing growth; essential services and facilities; advanced manufacturing; transport and digital infrastructure. Cardiff will remain the primary settlement in the region, its future strategic growth shaped by its strong housing and employment markets and it will retain its capital city role, accommodating higher level functions and attractions.

Table 2.1 Summary of Local Policy

2 | Relevant Planning Policy, Legislation & Guidance

Conservation Principles for the Sustainable Management of the Historic Environment in Wales (2011)

- 2.14 This document was prepared by Cadw and provides guidance for managing change to all places of heritage significance. Paragraph 39 states that changes which would harm the heritage values of an historic asset will be unacceptable unless
- the changes are demonstrably necessary either to make that asset sustainable, or to meet an overriding public policy objective or need; and
 - there is no reasonably practicable alternative means of doing so without harm; and
 - that harm has been reduced to the minimum consistent with achieving the objective; and
 - it has been demonstrated that the predicted benefit decisively outweighs the harm to the values of the asset, considering its comparative significance; the impact on that significance; and the benefits to the asset itself and/or the wider community or society as a whole.

Tall Buildings SPG (2017)

- 2.15 The Tall Buildings Supplementary Planning Guidance (2017) sets out useful criteria for the location, design, and how to assess the impact of tall buildings across the city. It recognises that well-designed tall buildings, when delivered in appropriate locations, have the potential to contribute positively to Cardiff's urban identity. In particular, they can enhance the city's skyline, define key views, and establish recognisable landmarks that support Cardiff's identity at both a national and international level.
- 2.16 The guidance is primarily focussed on the city centre and Cardiff Bay, which are identified as the most suitable areas for tall building development. Outside of these zones, proposals for tall buildings are unlikely to be supported unless a robust justification is provided, demonstrating compliance with the wider parameters of the SPG, including design quality, contextual response, and public benefit.
- 2.17 For the purposes of the SPG, a tall building is defined as any structure of eight storeys or more (or approximately 25m+) within the city centre and Cardiff Bay, or buildings that are double, or more than double, the height of their surrounding context elsewhere in the city.
- 2.18 The guidance is underpinned by several policies from Cardiff's Local Development Plan (LDP), including:
- KP5: Good Quality and Sustainable Design
 - KP8: Sustainable Transport
 - EN9: Conservation of the Historic Environment
 - EN12: Renewable Energy and Low Carbon Technologies
 - H3: Affordable Housing
- 2.19 The SPG sets a strong emphasis on townscape integration, design legibility, and environmental performance. It highlights that the success of a tall building is not determined by height alone, but by how well it responds to Cardiff's character, enhances public realm, and delivers lasting public benefit.



Table 2.1 Sensitive Locations Within Cardiff (approximate Site location in red)

Section 3

Heritage Baseline.

3 | Heritage Baseline

Historic Development of Site and Surroundings

Temperance Town

- 3.1 The Site is located in an area of reclaimed land, situated adjacent to the River Taff. This land was developed in the late 1850s as an inner-city suburb named Temperance Town, and comprised blocks of terraced housing arranged along a grid street system. Historic map regression suggests that by the 1870s, the town was occupied by shops, a chapel, two boys and girls schools, a theatre and a music hall. It was serviced by a tramway which connected the town to the city centre. The Site occupied part of the housing blocks located between Eisteddfod Street and Scott Street.
- 3.2 To the north of Temperance Town existed Little Park; an area of land which the public were permitted to use by the Marquis of Bute. The park historically formed part of the low-lying land of Cooper's Field located between the River Taff and the city wall. Following the construction of the original Cardiff Bridge in 1794-95, Cooper's Field was divided and Little Park established. Historic map regression reveals that by the 1870s, a circus existed in the south-east corner of Little Park, and by 1901, a football ground had been established.



Figure 3.1 1930's Photograph of Wood Street
Source: Wales Online



Figure 3.2 1947 Aerial Photograph
Source: Reproduced with the permission of the National Library of Scotland



Figure 3.3 1870 Photograph of Temperance Town
Source: Wales Online



Figure 3.4 1930's Photograph of Gough Street
Source: Wales Online



Figure 3.5 1932 Photograph of Wood Street
Source: Wales Online



Figure 3.6 Undated Photograph of Temperance Town
Source: Wales Online

3 | Heritage Baseline

- 3.3 By the early twentieth century, a new block located north of Park Street had been developed with a post office and the Territorial Army Headquarters. By this time, Temperance Town had grown overcrowded and its condition severely deteriorated. In the 1930's, the Cardiff Corporation demolished the town and redeveloped the area to provide new public facilities such as the Cardiff Bus Station.
- 3.4 The original grid street layout of Temperance Town was somewhat retained by the area's redevelopment, however it was completely reconfigured by the 1970's. The area's historic residential character was now replaced with a mixed civic and commercial character, being developed with buildings of varied use that occupied large floor plates. Such buildings included the Head Post Office, the Telephone Exchange, the Wales Empire Pool, and the bus station. The area, being located close to the National Stadium, was a hub of activity.
- 3.5 Extensive development occurred throughout the city during the late twentieth and early twenty-first centuries, including the regeneration of Cardiff docs, the demolition of the Cardiff Central Bus Station and developments at Cardiff Central Railway Station. The bus station was specifically demolished in c.2018 and the replacement Cardiff Bus Interchange opened in 2024. During this time, the area around the Site comprising central square was also developed with large-scale, tall buildings. Large-scale developments including tall buildings have also been constructed elsewhere in the City Centre, such as around Churchill Walk and Cardiff Queen Street Station.



Figure 3.7 1947 Aerial Photograph
Source: Reproduced with the permission of the National Library of Scotland



Figure 3.9 1972 OS Map
Source: Reproduced with the permission of the National Library of Scotland

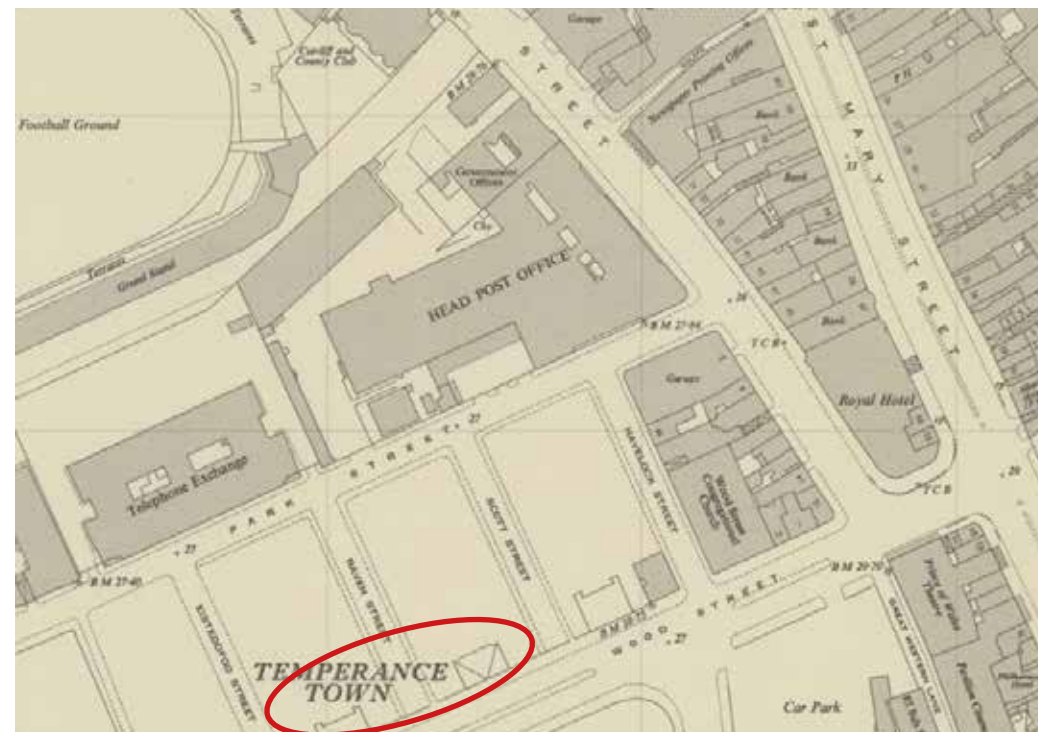


Figure 3.8 1953 OS Map
Source: Reproduced with the permission of the National Library of Scotland



Figure 3.10 2001 Aerial Photograph
Source: Google Earth

3 | Heritage Baseline

Historic Development of the Site

- 3.6 During the late nineteenth-century, the Site occupied part of the housing blocks located between Eisteddfod Street and Scott Street within Temperance Town. Following the demolition of the town in the 1930's, the Site existed as an unoccupied remnant of land set out amongst the former town's surviving street layout.
- 3.7 By 1972, this street layout had been absorbed into a new arrangement surrounding the 'central square' area. The Site formed part of St David's House; a six-storey office building arranged along a linear footprint which framed the northern end of central square. This building was located adjacent to the Cardiff Central Bus Station. It remained largely unchanged throughout the early twenty-first century, and was eventually demolished contemporaneously to the redevelopment of the bus station in 2018-24. At this time, the existing Site plot was established, and the Site has subsequently remained unoccupied by built form.



Figure 3.11 1989 Photograph of Cardiff Central Bus Station with St David's House (the Site) located behind
Source: ThenWas.com



Figure 3.12 2018 Photograph of St David's House
Source: Wales Online



Figure 3.13 2018 Aerial Photograph
Source: Google Earth



Figure 3.14 2022 Aerial Photograph
Source: Google Earth

3 | Heritage Baseline

Scope of Heritage Assessment

3.8 GIS software and Cadw's Historic Asset Data Map have been used to identify heritage assets within a 500m radius of the Site. The scope of assessment has been informed by a review of the Committee Report for the extant permission for a 35-storey development at the Site (ref. 21/02984/MJR), which identified the following heritage assets as having the potential to be affected by the approved scheme. A Heritage Statement was not required for the extant permission, however Council Officers considered heritage effects in the Committee Report, and identified no effects resulting from the 35-storey development.

- Cardiff Castle (Grade I)
- Cardiff Castle and Roman Fort (Scheduled Monument)
- St Mary Street Conservation Area (including listed buildings located within it - all Grade II)
- Cardiff Central Railway Station (Grade II)
- Water Tower at Cardiff Central Station (Grade II)

3.9 Whilst the current proposal involves an uplift in the height of development within the Site compared to the extant permission, the scope of assets which have the potential to be affected by the development is judged to remain the same. This is due to no change having occurred to the baseline heritage context of the Site since 2024, and ZTV analysis of the current proposal suggesting that the scope for visibility of the proposed development from within the setting of heritage assets will largely remain the same as the extant permission. The exception to this is Cathays Park Conservation Area (and associated designated assets, including the law courts) where the Council have requested a view, this has been included within the assessment.

3.10 The scope of assessment will therefore comprise the heritage assets listed above, and Cathays Park Conservation Area (and associated assets). The assessment will, where appropriate, group assets which possess a shared heritage value and are likely to experience similar affects resulting from the proposed development. The scope of this assessment is considered to be proportionate to the significance of identified heritage assets and the nature of change proposed, in line with PPW TAN24: The Historic Environment, paragraph 5.12.

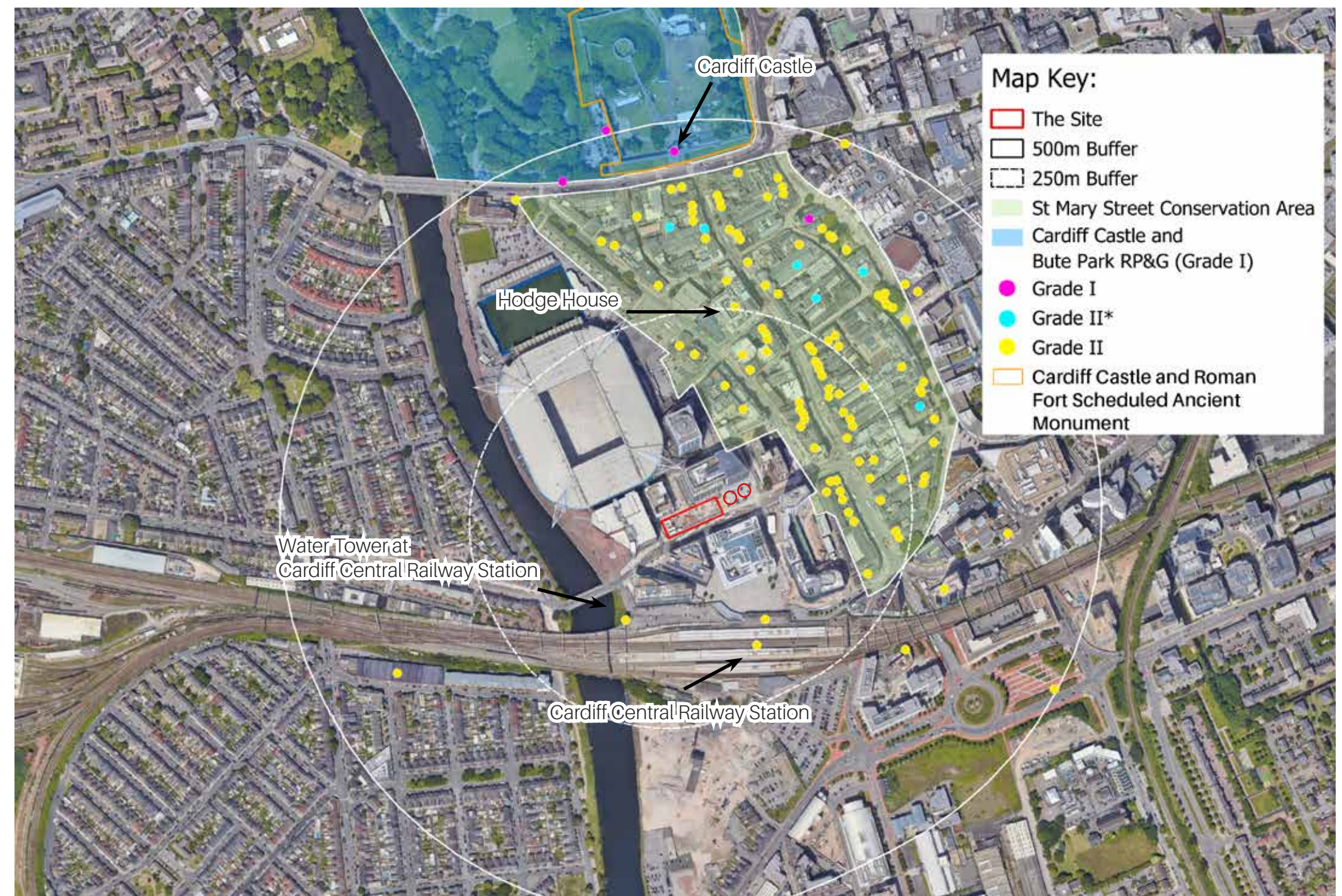


Figure 3.15 Heritage Asset Mapping

3 | Heritage Baseline

Assessment of Significance

St Mary Conservation Area (including listed buildings)

- 3.11 St Mary Conservation Area reflects the medieval arrangement of Cardiff borough, as it was recorded on sixteenth-century maps. Whilst the composition of the area is largely Victorian, it retains much of the medieval street pattern which was focused around St. John the Baptist Church and Cardiff Castle. This street pattern is narrow and irregular in character, containing traces of surviving historic burgage plots. Street names provide a source of interest, reflecting historic activities which took place in the area.
- 3.12 The area further derives interest from its characterful diversity in architectural design, material pallet and use. Such variety is sourced from buildings constructed at historic periods, and reflects the area's continuous development. Indeed, the St Mary Street Conservation Area Appraisal (2006) recognises that, 'much of the character of the area is derived from the variety and juxtaposition of styles and materials'. Nevertheless, there exists a reasonably consistent building height and frontage amongst the area which results in a well-proportioned streetscape.
- 3.13 The (generally) characterful consistency amongst the height and scale of buildings within the conservation area positively contrasts with that of contemporary developments located in its wider surrounds. Existing and emerging large-scale developments bounding the conservation area to the west and set amongst a modern street layout emphasise the value of the area's historic building proportions and medieval street pattern.
- 3.14 The area displays a highly active streetscape, with St Mary Street and the High Street comprising principal thoroughfares within the City Centre. These places contain a large concentration of commercial uses which spill into the street and remain functional day and night. Views looking north and south along these street also form a source of interest as they support an appreciation of the vast architectural variety of the area, and make legible the area's valuable association with Cardiff Castle.
- 3.15 Finally, the conservation area contains a large concentration of designated heritage assets, which, according to the Appraisal, 'demonstrates the degree of national importance which the area possesses'.



Figure 3.16 St Mary's Street forms the principal route through the centre of the conservation area. It is characterised by its pedestrianised thoroughfare and active streetscape, populated by shopfronts and buildings of varied architectural design, many of which are designated.



Figure 3.17 View into St Mary Conservation Area from Wood Street. Wood Street sits outside the conservation area boundary and is characterised by contemporary commercial blocks of limited architectural quality.



Figure 3.18 High Street is located at the northern end of the conservation area. Cardiff Castle provide a focal point in views along this street. The street is active with a high amenity value, and is also populated by listed buildings.



Figure 3.19 Duke Street forms the northern boundary of the conservation area, and presents a characterful street frontage comprising buildings of varying architectural design.

3 | Heritage Baseline

Setting

- 3.16 The setting of the conservation area is defined by its location within the City Centre; a place which has expanded and developed continually over time. To the north exist Cooper's Field and the Cardiff Castle and Roman Fort Scheduled Monument. These features contribute to interest to the conservation area through their association with the earliest settlement of Cardiff, which is expressed in views along St Mary Street and in an analysis of the area's surviving medieval street layout.
- 3.17 To the south of the conservation area exists Cardiff Central Station and the station forecourt. These areas contribute to the value of the asset as the historic pivot point of the city, around which expansive development, including the arrival of the railway, occurred. The proximity of the conservation area to the station further reflects its character as a continuously-active place.
- 3.18 An area of large-scale, contemporary developments bounds the conservation area to the west. Such developments positively juxtapose the generally consistent scale and height of buildings within the conservation area. High-quality developments located amongst here contribute to the appearance of this part of the conservation area's setting, however low-quality twentieth-century developments detract from this setting.

The Site's Contribution to the Significance of the Conservation Area

- 3.19 The Site is located amongst the area of large-scale, contemporary developments which bounds the conservation to the west. However, it forms an unoccupied, backland space which fails to reflect its historic association with Temperance Town or the subsequent evolution of the this part of the townscape, bounding the conservation area. As such, the Site makes a neutral contribution to the setting of the conservation area.



Figure 3.20 View of High Street, looking south.



Figure 3.22 The Head Post Office and County Court Offices are two examples of high-quality listed buildings located within the conservation area.



Figure 3.21 View out of the conservation area, along Wood Street, shows tall buildings and large-scale contemporary development within the wider setting of the conservation area



Figure 3.23 Cardiff Central Station (Grade II), viewed from the station forecourt, with emerging tall buildings located in the background.
Source: Google Streetview 2024

3 | Heritage Baseline

Cardiff Central Railway Station (Grade II) and Water Tower at Cardiff Central Station (Grade II)

- 3.20 These designated heritage assets derive significance from the individual and group value associated with the development of Cardiff Railway Station.
- 3.21 The listed station comprises the station building, booking hall, passenger subway, platforms 1-4, and platform buildings 6 and 7. These buildings were completely rebuilt in 1932-4 to designs by the Great Western Railway's architect's department, and they replaced a previous iteration of the station which dated to 1895-6. The asset derives interest from its status as a surviving early-twentieth century station complex, which possesses architectural value through its cohesive and aesthetic station design, as well as its historic association with the twentieth-century redevelopment of the area. Permissions have recently been granted for changes to the station, including the construction of a new building to Platform 0 and works to the west wing and a new southern entrance (refs. 25/00645/PRAP and 25/00630/LBC).
- 3.22 The listed Water Tower is contemporaneous to the station complex, being constructed as part of the station's rebuilding in 1932-4. The water tower historically serviced the former Fish Platform. It derives significance from its group value and legible association with the station complex.

Setting

- 3.23 The setting of the listed station contributes to its significance through its expressed association with the station's historic function and role amongst the expansion of Cardiff. Specifically, the forecourt of the station contributes to an appreciation of the station's value as an arrival and terminus space within the city. This part of the station's setting is characterised by its high-quality public realm, which comprises an open, pedestrianised space which is designed to facilitate intense activity and movement associated with the station. This character contributes to the significance of the asset.
- 3.24 Furthermore, the presence of high-quality, large-scale contemporary developments surrounding the forecourt area reflect the station's value as an established focal point around which this part of the City Centre has evolved and regenerated since the nineteenth century.



Figure 3.24 View of the Water Tower at Cardiff Central Station (Grade II) from Wood Street Bridge. The Water Tower is experienced in an existing and emerging context of contemporary, large-scale developments.



Figure 3.25 Cardiff Central Station (Grade II), viewed from the station forecourt, with emerging tall buildings located in the background.

- 3.25 The setting of the Water Tower is characterised by its situation between the railway line and the River Taff. This situation reflects the historic function of the water tower and is a key source of significance.

The Site's Contribution to the Significance of the Assets

- 3.26 The Site forms part of the area of large-scale, modern development located within the wider surrounds of the assets. However, it comprises an unoccupied, backland space which fails to reflect its historic role amongst the evolved townscape. As such, the Site fails to contribute to an appreciation of the assets' significance as a focal point for evolution of this part of the City Centre. It furthermore fails to contribute to the quality and appearance of the wider surrounds of the assets and is judged to make a neutral contribution to the setting of the assets.

3 | Heritage Baseline

Cardiff Castle (Grade I) and Cardiff Castle and Roman Fort (Scheduled Monument)

- 3.27 Cardiff Castle and the Roman Fort derive significance from their high architectural, archaeological, historic and aesthetic interest, associated with their national importance as a surviving, if altered, Roman and medieval defensive complex and landscape.
- 3.28 The monument consists of the remains of Cardiff Castle which form a significant collection of archaeological remains including a Roman fort, a Norman motte and bailey, a medieval castle, 18th century buildings and the late 19th century additions and restorations of the 3rd and 4th Marquesses of Bute. Collectively, these elements of the monument possess high heritage value for their evidence of the chronology, layout and building techniques of the historic occupation of Wales, and subsequent administration and developmental evolution of the city.

Setting

- 3.29 The setting of the assets principally derives interest from the collection of buildings comprising the castle complex, and their proximity to the City Centre and medieval city core (St Mary Street Conservation Area). It is characterised by the designed relationship between the fort, motte, bailey, keep, gatehouse and other elements which represent the evolved use and role of the asset over its extensive history. Likewise, these elements support an appreciation for the historic evolution of the assets in the context of the establishment and expansion of the Cardiff more generally. The proximity of the assets to the medieval city core, to the River Taff and to reclaimed land adjacent to the river, further contributes to its significance as the origin of the city's settlement. The setting of the assets contributes a key source of significance.
- 3.30 Similarly, the wider setting of the assets is characterised by a wider, largely modern urban townscape which features prominent and tall buildings which are visible within the Castle grounds, the motte and from the walls. Visibility of such contemporary development, experienced in clusters in the background of views from the assets, contributes legibility to the phased development of the city and reinforces the castle's importance as the origin of the city's development.



Figure 3.26 Cardiff Castle (Grade I and Scheduled Ancient Monument)



Figure 3.27 View of Castle Green, looking towards the City Centre. The Principality Stadium and other modern, large-scale and tall developments are visible behind the castle walls, gate tower and museum building.

The Site's Contribution to the Significance of the Assets

- 3.31 The Site forms part of the area of large-scale, modern development located within the wider surrounds of the assets. It is neither visible from the assets being located approximately 450m away and screened by intervening buildings and roads, nor does it form a legible part of the historic streetscape associated with the assets' medieval function. As such, the Site is considered not to form part of the setting of the asset.

Cathays Park Conservation Area (including associated designated assets, including the Law Courts (Grade I) and City Hall (Grade I))

- 3.32 Cathays Park Conservation Area is extensive in its coverage, including areas comprising the city’s civic quarter, Bute Park, the Cardiff Castle site, residences around Park Place and the key thoroughfare of North Road. The conservation area derives significance from its strong character and appearance, associated with these well defined areas of distinctive architectural typology, public amenity and historic interest.
- 3.33 The conservation area derives significant from its inclusion of numerous high-value heritage assets, including the Law Courts, City Hall and National Museum of Wales, Cardiff Castle (all Grade I) and other Grade II* and Grade II listed buildings. Multiple Registered Parks and Gardens exist throughout the conservation area, including the Grade I listed Bute Park.
- 3.34 The civic core of the city features centrally within the conservation area and contributes a key source of significance. It is characterised by the formal layout of its streets, which are arranged along a clearly defined north-south and east-west axis. Buildings are large-scale, and express a strong, unified character that is formal and civic. The tower element of City Hall contributes a key landmark within the conservation area.
- 3.35 Views of the civic quarter, namely the Law Courts, City Hall and National Museum of Wales, comprise an important source of interest. The Conservation Area Appraisal (2009) notes that such views, ‘can be seen from the south, east and west. The most impressive and familiar of these views are those gained from Park Place, Boulevard de Nantes, and The Friary’.
- 3.36 Views of these buildings can be experienced from Alexandra Park, however the Appraisal references such views in the context of their facilitation of an appreciation for the setting and significance of the Welsh National War Memorial (Grade II*), rather than the surrounding assets. The Appraisal notes that the memorial comprises a focal point for views within Alexandra Gardens.

Setting

- 3.37 The conservation area is expansive and extensive in its coverage, with all elements which make a key contribution to its character and appearance significance being included within its designation. As such, the setting of the conservation area and its contribution to the asset’s significance is limited. The asset’s setting is characterised by its location amongst the City Centre, specifically adjacent to the medieval core of the city (St Mary Street Conservation Area). Within the wider surrounds of the conservation area exist large-scale contemporary developments, associated with the city’s continuous expansion and regeneration over time. These elements contribute to a layered historic built environment within which the conservation area can be appreciated as an area which includes the origin point (Cardiff Castle) and administrative centre (Civic Quarter) of the city.

The Site’s Contribution to the Significance of the Conservation Area

- 3.38 The Site forms part of the area of large-scale, modern development located within the wider surrounds of the assets. It is neither visible from the assets being located approximately 450m away and screened by intervening buildings and roads, nor does it form a legible part of the historic streetscape associated with the assets’ medieval function. As such, the Site is considered not to form part of the setting of the asset.

Section 4

Townscape and Visual Baseline.

4 | Townscape and Visual Baseline

Scope of Townscape Assessment

- 4.1 The townscape assessment considers the changes to the character and qualities that define the townscape. Scoping an assessment of townscape character can be based on dividing an area into character areas or by analysing visibility. Regardless of method, the emphasis in the Third Edition of Guidelines for Landscape and Visual Impact Assessment (2013) and Technical Information Note 05/17 is ensuring a full understanding of the many factors influencing the character of an urban context that may be significantly affected by the proposed development.
- 4.2 Following the TVIA from the previously consented scheme for 37 storeys (Ref: 21/02984/MJR), the townscape will be assessed using the already identified Townscape Character Areas (TCAs) within 500m.
- 4.3 The previously identified TCAs are outlined on the adjacent map and are as follows:
- Principality Stadium Environs
 - Central Square and Station
 - River Taff Waterside
 - St Mary Street Conservation Area
- 4.4 As the previous application did not include a heritage statement, this report will be assessing St Mary Street Conservation Area within the Heritage Baseline and Assessment. As such, it has been omitted from the townscape character areas.

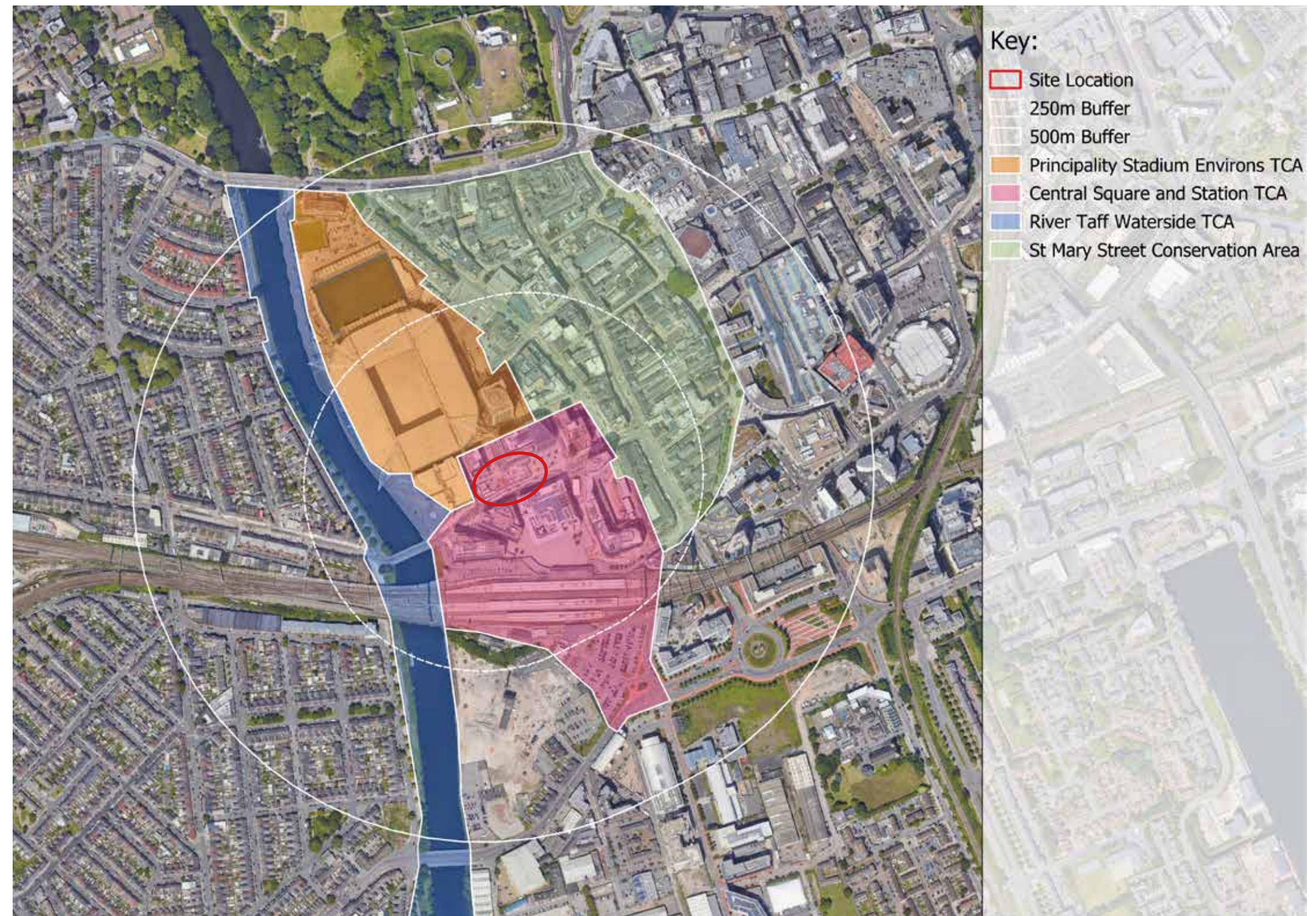


Figure 4.1 Townscape Assessment Study Area

Townscape Character

- 4.5
- The consideration of the townscape character of the Site and surroundings have heavily informed by the previously consented scheme and TVIA (31636/02/JCO/SG).
- 4.6
- As the previously consented scheme did not include a heritage assessment, this report has assessed TCA4 St Mary Street Conservation Area separately from townscape, in Section 6 of this report.

Principality Stadium Environs

- 4.7
- This TCA comprises of the Principality Stadium (formerly Millenium Stadium) and Cardiff Arms Park, which take up the majority of this TCA. It lies immediately to the north of the Site and was once an area known as Little Park.
- 4.8
- It is dominated by large scale individual buildings, surrounded by smaller servicing buildings. It does not contain any formal road layout and consists of pedestrian walkways and carparks to provide access to the Stadium. Instead it is accessed via several service roads from West Gate Street.
- 4.9
- There is no greenery or planting present in this TCA, but it is well lit by many street lights. The primary use of this TCA is recreational, with large numbers of people within buildings with no or limited outward views.
- 4.10
- Overall, as the TCA has no designations and other than the Stadium itself is poor condition and low quality, it is of a **low** townscape value.
- 4.11
- Due to its already existing modern developments and built form, this townscape area has a **low** susceptibility to change.
- 4.12
- Overall, taking into consideration the value and susceptibility to change of the TCA, the sensitivity for the Stadium Townscape Character Area is **low**.

Central Square and Station

- 4.13
- This TCA mainly comprises of the Site and Cardiff Central Station, the Bus Station and the BBC buildings. Historically it was known as Temperance Town and comprised of terraced streets, however following the the second world war the area has slowly become more developed. It is now known as Central Square.
- 4.14
- It is characterised by modern, taller buildings surrounding the historic Grade II listed train station. Its nearby location to the train station means it is a transport hub and arrival point into Cardiff, as well as a large amount of buildings used as office space.
- 4.15
- The plot layouts and urban grain of this TCA is formed of large individual blocks located surrounding a large area of public open space to the north of the station's entrance. The heights of the buildings within this TCA vary greatly, from two storeys up to the 27 storey tower located at the junction of Wood St and Great Western Lane. There is a substantial amount of emerging development, especially to the West of the City Centre. This includes the ongoing development of the Central Square masterplan, of which the Site is identified within, and the redevelopment of 'Central Quay' (18/00735/MJR, 21/02883/MJR, 21/02884/MJR) which was formerly occupied by Brains Brewery.
- 4.16
- There is limited urban greening in this TCA, but it is well lit by many street lights and there is also some street furniture consisting of benches and seating blocks within Central Square. The primary users within this TCA are there for recreational and office use, or visitors and commuters from and to Cardiff travelling in and out of the station. The Site in its current vacant and undeveloped form is a detractor to the TCA, and poses opportunity to help enhance the value of the townscape.
- 4.17
- The TCA has minimal designations but generally the design is of a high quality, however following the recent assessment it is of a **low-medium** townscape value.
- 4.18
- Due to its already existing modern developments and built form, coupled with the vast amounts of emerging development this townscape area has a **low** susceptibility to change.
- 4.19
- Overall, taking into consideration the value and susceptibility to change of the TCA, the sensitivity for the Central Square and Station Character Area is **low-medium**.

River Taff Waterside

- 4.20
- This TCA is comprised of the River Taff and the accompanying pedestrian walkways. It is bordered by low rise residential properties to the west and larger industrial buildings as well as Cardiff Central to the east. There is also an emerging presence of taller urban development that is under construction along its eastern boundary. It is of a linear character and extends from Cardiff Bay to Cowbridge Road east.
- 4.21
- The River Taff is the central feature within this area, and is of importance as a Site of Nature Conservation Interest (SNCI). Not only is the river a key landscape feature but the western riverside contains a large row of mature vegetation and trees, with grassy banks and open space in front of the residential streets. The area to the east has less vegetation and no publicly accessible river side spaces.
- 4.22
- There is no built form other than bridges within this character area, instead it is characterised by open views along the River, with the Principality Stadium as a key landmark. As such the area has a very open character.
- 4.23
- Whilst the northern end of the river is surrounded by expansive open parkland and limited built form, the southern end is bordered by large scale development and industrial warehouses. The urban grain along the border of the river frontage vary in sizes, from 2 storey residential properties, tall blocks of flats and large industrial warehouses.
- 4.24
- Due to the TCA's designation as a SNCI, its open character and accommodation for a key cycle and pedestrian route it is of a **medium** townscape value.
- 4.25
- Its primary users are residents and those visiting for recreational purposes, however due to the emerging height and cluster of development to the east, as well as the existing Principality Stadium, the TCA has a **medium** susceptibility to change.
- 4.26
- Therefore, by taking into consideration both the **medium** townscape value and susceptibility to change, the sensitivity of the River Taff Waterside is **medium**.

Summary

- 4.27
- To summarise, the Site lies within a dynamic part of Cardiff city centre where surrounding townscape character areas (TCAs) vary from high-density urban developments to open riverfront natural landscape. The three identified TCAs all differ in form, function, and their overall sensitivity to change.

Stadium TCA

- 4.28
- Dominated by the Principality Stadium and Cardiff Arms Park, this area is defined by large-scale buildings, a lack of greenery, and a recreational function.
- Townscape value: **Low**
 - Susceptibility to change: **Low**
 - Sensitivity: **Low**

Central Square and Station

- 4.29
- A primarily modern area of existing and emerging height centred around the historic Cardiff Central Station, with a mix of office, recreational and travel use.
- Townscape value: **Low - Medium**
 - Susceptibility to change: **Low**
 - Sensitivity: **Low-Medium**

River Taff Waterside

- 4.30
- A linear, open character area focused on the River Taff, (SNCI) with cycle and pedestrian routes. Low rise residential to the west, and increasing built form of emerging heights to the east.
- Townscape value: **Medium**
 - Susceptibility to change: **Medium**
 - Sensitivity: **Medium**

4 | Townscape and Visual Baseline

TCA 1 Principality Stadium Environs

Figure 4.2 Westgate Street Southbound



Figure 4.3 NCP and Principality Stadium



Figure 4.4 Westgate Street Northbound



Figure 4.5 TCA Viewed from Wood Street



TCA 2: Central Square

Figure 4.6 Wood Street



Figure 4.7 Central Square



Figure 4.8 BBC Building in Central Square



Figure 4.9 Wood Street and St Mary Street Junction



TCA 3: River Taff Waterside

Figure 4.10 River Taff looking North



Figure 4.11 River Taff Western Walkway towards Principality Stadium



Figure 4.12 Emerging Development on Eastern Boundary of the River Taff



Figure 4.13 Low - Rise Residential Properties Fronting the River Taff



Locating Tall Buildings

- 4.31

In Cardiff's Tall Building SPG, tall buildings are identified as 8+ storeys or over 25 metres. In this context, the proposed development would be considered a tall building.
- 4.32

When considering optimising a Site and the potential for taller buildings from a townscape context, it is important to consider whether the Site is a suitable location for height, and if so, to what end.
- 4.33

The following sets out a townscape-led framework for understanding whether an area might be suitable for tall buildings. It is informed by best practice urban design guidance, the Tall Building SPG and KP5: Good Quality and Sustainable Design (Cardiff Local Development Plan 2006-2026).
- 4.34

As part of the impact assessment in the next section, the proposal will be assessed against key criteria set out in paragraphs 2.1 and 2.2 of the Tall Buildings SPD (2017):

• There would be no negative impacts on important views or vistas

• The proposal will be a positive feature in skyline & streetscape, either by complementing a cluster of tall buildings or forming a strategic landmark

• Exhibit exceptional architectural standards: elegance in form, silhouette and quality of materials

• Maximise activity through ground floors uses and fenestration

• Deliver significant enhancements to the public realm
- | Tall Building Policy Matrix | | |
|--|----------------------------------|---|
| Criteria for Locating Tall Buildings | Does the Site meet the criteria? | How? |
| Area identified for tall buildings in local plan or design code | Yes | Central Square sits within the centre of Cardiff, an area that has been identified to provide tall buildings in the local plan. Furthermore, it sits outside of the outlined sensitive areas and within existing emerging context of height in Central Square. |
| Existing or emerging context of taller or larger buildings | Yes | The Site is nearby to emerging context including the ongoing development of The Interchange within Central Square, among developments along the east side of the River Taff. |
| Area identified for growth or regeneration | Yes | The Site is identified for growth and regeneration to become a 'gateway' for Cardiff in the Central Square masterplan and has previous consent for a tall building of 37 storeys (Ref: 21/02984/MJR). The Site was previously assessed against the SPG and was considered to be one which can accommodate a sensitively designed building of significant height, which accords with the wording of para. 2.1. |
| High connectivity or accessibility to public transport | Yes | The Site is in close proximity (<200 metres) to Cardiff Central station and the bus and coach station and is very highly connected and accessible to the public. |
| Within an established or emerging urban hierarchy, such as a centre of activity (i.e. city, district or town centre), or important street junction/transport interchange | Yes | The Site is located in Central Square, at an important transport interchange within the centre of Cardiff City. Furthermore the Site is nearby to the Principality Stadium, which is a hub of activity, with Wood Street being a key route into central Cardiff. |
| Close to a mix of uses, services and amenities | Yes | Due to its close proximity to Cardiff Shopping centre and the train station it is close to a wide variety of services and amenities. |
| Would not have an adverse effect on a protected view of setting of a heritage asset | Yes | See heritage assessment. |
- Table 4.1: Tall Building Policy Matrix
- Heritage, Townscape & Visual Impact Assessment | 20

4 | Townscape and Visual Baseline

Zone of Theoretical Visibility

- 4.35 A Zone of Theoretical Visibility ('ZTV') was prepared to 2km radius using Vu.City 3D modelling software to understand the potential visibility of the proposed development. This considers the maximum possible visibility, taking into account buildings, but excluding trees and small structures (i.e. fences, walls, sheds).
- 4.36 This understanding of visibility, along with the previous application (Ref: 21/02984/MJR), has informed the selection of representative views and visual receptors.



Figure 4.14 2km ZTV

4 | Townscape and Visual Baseline

Scope of Visual Assessment

Representative Viewpoints

4.37 In line with GLVIA, a selection of representative views have been identified from publicly accessible places which are considered to proportionately illustrate the likely effects of the Proposed Development on identified visual receptors in Table 4.2.

4.38 10 representative viewpoints have been identified within the identified Study Area, drawing from ZTV data and the previously consented scheme (Ref: 21/02984/MJR). Views 4 and 5 have been amended slightly from the previous scheme, following consultation with Council Officers:

- 1 St Mary Street
- 2 Wood Street
- 3 Penarth Road
- 4 Westgate Road
- 5 Castle Grounds

4.39 The following additional views have been agreed following consultations with Council Officers:

- 6 Castle Keep
- 7 Alexandra Gardens
- 8 Cardiff Bay
- 9 Barrage (Trail Walk)
- 10 Penarth Marina

4.40 Visualisations are included at Appendix 2

4.41 These viewpoint locations have been agreed with Council Officers during email correspondence in March and July 2025.

Visual Receptors

4.42 The visual assessment considers the potential changes to visual amenity of people experiencing views (often referred to as visual receptors).

4.43 Views are identified within a 500m radius of the Site, with three long range views to capture the emerging Cardiff Skyline.

4.44 The visual receptors and their sensitivity which may be affected are identified in Table 4.2 on the following page.

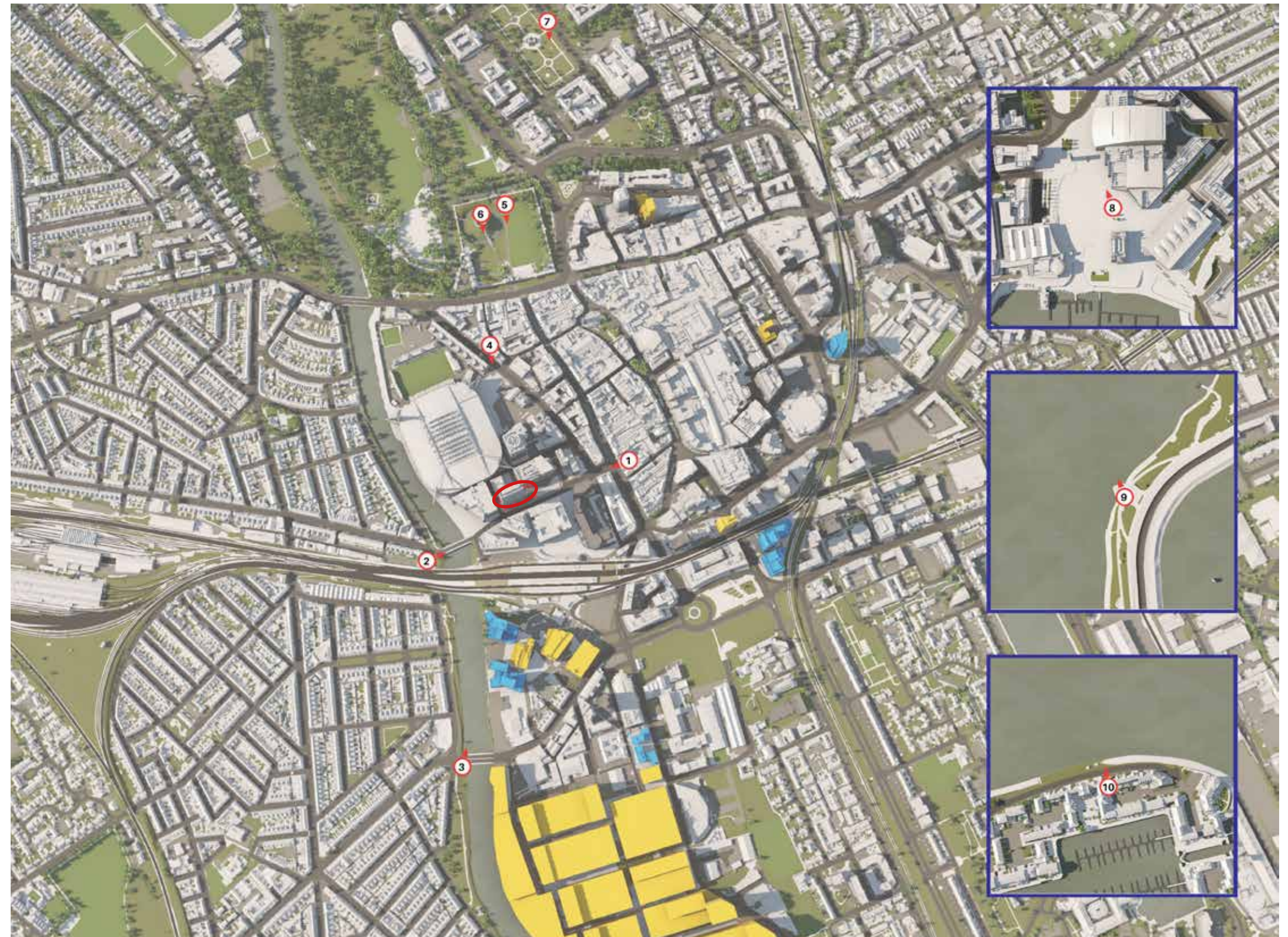


Figure 4.15 View Location Mapping

4 | Townscape and Visual Baseline

Visual Receptor	Value	Susceptibility to Change	Sensitivity	Representative Viewpoint
Users of River Taff Waterside	River Taff Waterside has open views towards the City Centre, with the Principality Stadium being the focus of this view, as well as other elements of Cardiff's skyline such as Stadium Plaza and Stadium Tower. Emerging heights and modern developments within Central Square are also visible. The Bairns Brewery development site and surrounding industrial buildings along the western side of the River greatly detract from the visual amenity that the River Taff does provide. Thus the overall visual value is medium.	Visual receptors will include pedestrians and motorists, who are crossing the bridges over the River Taff. These are likely to be local residents, commuters and those walking along the river for recreational purposes. Local residents and those appreciating the landscape features will be more likely to notice a change in their surroundings, however the pre-existing developments present along the entire western boundary of the river have established a modern character including emerging height. Therefore the overall susceptibility to change is low-medium.	The medium value combined with a low-medium susceptibility to change results in an overall medium-low sensitivity.	2 and 3
Users of Westgate Street	Westgate Street is surrounded on the western side by The Stadium TCA and to the east it is bordered by St Mary Street Conservation Area. The key focus when looking towards the Site from Westgate Street is Stadium House; it is 17 storeys high and rises above the Principality Stadium. However also in view is a number of listed buildings, that are part of the Conservation Area, this provides a more historical character to the street, contrasting with the modern taller developments that dominate it. Despite the listed buildings that are located on its eastern boundary, this Street is largely without designation and the NCP car park greatly detracts from the Street's visual amenity. Therefore the overall visual value is low-medium.	Visual receptors will include pedestrians and motorists, who are commuting into the City Centre or attending a game or event at the Principality Stadium. Due to visual receptors primarily being in transit, any changes in surroundings will go unnoticed, especially as the area already has an established a modern character including emerging height. Therefore the overall susceptibility to change is low.	The low-medium value combined with a low susceptibility to change results in an overall low sensitivity.	4
Users of Cardiff Castle	Cardiff Castle is a Grade I listed building, and Scheduled Monument, situated in the Cathays Park Conservation Area. Views towards the Site are framed by the historic structures of the Castle, along with its enclosing stone walls. In the foreground is the more contemporary visitor centre as well as a more modern urban background rising up from the City Centre. This diverse skyline is made up of juxtaposing buildings including the Principality Stadium, The County Court Offices (Grade II) and the emerging height of the Inter-change development on Wood Street. Due to its designations and amenity value, the overall visual value is high.	Visual receptors are primarily tourists who are visiting the Castle, staff working within the grounds and occasional users for events or other leisure activities. While the Castle holds significant value, which heightens the sensitivity of the user, it is relatively contained by its walls and already sits within a varied townscape of modern development. Furthermore tall buildings are characteristic of the wider skyline visible in views looking out from the Castle Grounds, Castle Motte and Castle Walls. Therefore, the overall susceptibility to change is considered to be medium-high.	The high value combined with a high susceptibility to change results in an overall high sensitivity.	5 and 6
Users of Alexandra Park	Alexandra Park is located to the north of the Site, within Cathays Gardens Conservation Area. It is frequently used historic public open space which offers green space within the surrounding urban fabric. Views outward are mostly screened by mature trees and landscaping, with some glimpsed views towards civic buildings such as the City Hall, which contribute to the park's sense of place. Due to its location within a designated conservation area, and its primary use being recreational, the overall visual value is medium.	Visual receptors of the park include a wider range of users, including local residents, students and tourists, as well as those who work within the park, but the predominant use is passive recreation such as walking through or sitting and enjoying the open space. Whilst users may be more sensitive to changes due to this, the park is fairly enclosed and already surrounded by high levels of development, as well as its wider setting being characterised by tall buildings. Therefore the resulting susceptibility to change is medium.	The medium value combined with a high susceptibility to change results in an overall medium-high sensitivity.	7
Users of Cardiff Bay	Cardiff Bay is a major waterfront destination, visited by a wide range of users not just local residents. It has expansive long range views across the Bay and northward to Cardiff City Centre. From various locations across the waterfront, the distant views inland highlight various elements of Cardiff's growing skyline, including the Principality Stadium and other emerging developments within Central Square and along the River Taff. Whilst some of the emerging waterside developments are a positive contribution, there is some built form that detracts from the visual value of the Bay. Therefore, the overall visual value is low-medium.	Cardiff Bay has a wide variety of users, residents, tourists and those who work in the area. While many of these users are engaged in leisure activities, there is also a high number of workers, who are less sensitive to change. Whilst the open nature of Cardiff Bay allows these expansive views, it also means that visual change is camouflaged by the complex urban context. The distance the Site sits from the Bay also lessens any visual impact on the users. Therefore, the resulting susceptibility to change is low-medium.	The medium value combined with a low-medium susceptibility to change results in an overall low-medium sensitivity.	8 and 9
Users of Penarth Marina	Penarth Marina sits outside of Cardiff, to the south west, and is a residential and leisure-focused waterfront area. The marina is a relatively enclosed space bordered by low-rise residential development, boat moorings and waterside walkways. To the north and north-east, particularly along the Barrage, there are expansive views across Cardiff Bay and towards the City Centre of Cardiff itself. Within these framed views, visibility of the Principality Stadium and the emerging height within Central Square are evident. As Penarth Marina is located within the wider Penarth Conservation Area and contains several dockside Grade II listed structures, the overall visual value is low-medium.	Visual receptors at Penarth Marina include local residents, those who moor at the marina, as well as walkers and cyclists using the surrounding coastal paths. The majority are engaged in passive recreation or live in close proximity to the waterfront, which can increase susceptibility to visual change in their surroundings. The marina itself however is fairly enclosed by low to mid-rise development and views towards the Site are already framed by additional modern development and built form. Whilst the historic dockside character and Conservation Area designation does introduce some sensitivity the area is fairly resilient to context change a considerable distance away. Therefore the resulting susceptibility to change is low-medium.	The low-medium value combined with a low-medium susceptibility to change results in an overall low-medium sensitivity.	10

Table 4.2 Visual Receptors

Section 5

Proposed Development.

5 | Proposed Development

5.1 The proposed development comprises the following:

'Mixed-use development to provide residential accommodation, flexible non-residential uses, cycle parking, landscaping and other associated works.'

5.2 As set out in detail within the submitted Planning Statement by Iceni Projects, and the Design & Access Statement by 5Plus, the proposed development seeks to deliver the following:

- A landmark 50 storey building with a maximum height of up to 177.85m AOD.
- 528 new homes (Class C3) comprising a mix of 1-bed and 2-beds.
- A pavilion building within Central Square comprising up to 601sqm of flexible non-residential floorspace (flexible Class A1 and A3).
- 2,856.5qm of high quality internal and external amenity space through provision of roof terraces, lounges, coworking, gym and other wellbeing spaces.
- A basement level providing ancillary residential floorspace.
- A car free development with 528 cycle parking spaces within proposed building, including 5% accessible spaces, and a publicly accessible bike hub and café. Additionally, 52 public cycle spaces are provided within adjacent square provided as Sheffield stands.

5.3 The proposed development seeks to build upon the extant permission (21/02984/MJR) for a 35-storey development at the Site, by optimising the capacity of the Site and maximising opportunities for the development to contribute to the emerging Cardiff Central Square Masterplan. The proposed development is 50-storeys in height. It enhances the design and functionality of the extant permission, and is considered to more successfully deliver a high-quality landmark feature which has the potential to contribute a jewel in the crown of Central Square.

5.4 In their Committee Report for the extant permission, Council Officers established the acceptability of a tall development within the Site. Specifically, officers accepted that the 35-storey scheme would meet the requirements of the Tall Buildings SPD, which include *'The proposal will be a positive feature in skyline and streetscape, either by complementing a cluster of tall buildings or forming a strategic landmark'.*

5.5 The proposed development represents an uplift in density and height of the extant permission and continues to promote the established principles of providing a high-quality development, of appropriate scale and height, which will contribute to the gateway role of Central Square and provide a landmark feature within the townscape more generally.

5.6 The proposed development further provides the opportunity to contribute to the regeneration of the Central Square area through enabling the timely delivery of new homes on this strategically important site at the heart of the City Centre, providing a high sustainable residential-led development on an optimised brownfield site. It will provide 528 new homes.

5.7 A pavilion building is proposed to be introduced to Central Square, comprising up to 601sqm of flexible non-residential floorspace which will contribute an active frontage to support the delivery of a high-quality, engaging public realm amongst Central Square. Within this area, 52 public cycle spaces will be provided as Sheffield stands, and a publically accessible bike hub and cafe will be introduced.

5.8 The proposed development is described in detail within the submitted Design & Access Statement, prepared by 5Plus. It is assessed below.



Figure 5.1 Aerial view of the proposed development
Source: CGI prepared by OurStudio

5 | Proposed Development



Figure 5.2 View of the public space of the proposed development
Source: CGI prepared by OurStudio



Figure 5.3 Aerial nighttime view of the proposed development
Source: CGI prepared by OurStudio

Section 6

Heritage Assessment.

6 | Heritage Assessment

St Mary Conservation Area (including listed buildings)

- 6.1 As discussed in Section 3, St Mary Conservation Area derives significance from its characterful diversity in architectural design, material pallet and building uses. Such variety is sourced from buildings constructed at historic periods, and reflects the area's continuous development. Many buildings within the conservation area are listed, and the area's high concentration of designated assets further contributes to its value. The setting of the conservation area is likewise varied, with interest derived from the area's legible association with Cardiff Castle and Cooper's Field reflects the area's value as the medieval centre of Cardiff.
- 6.2 The presence of large-scale, contemporary developments to the west of the conservation area further reinforces this value, owing to the positive juxtaposition between the scale, architectural design and material pallet of buildings. The Site, as existing, makes a neutral contribution to the setting of the conservation area. The proposed development takes the opportunity to improve this contribution by introducing a high-quality development that enhances the appearance of this part of the asset's setting, and reinforces its character as historic core of the city.
- 6.3 Specifically, the proposed development, through its provision of an attractive and engaging public realm, will improve the pedestrian experience when approaching and entering the conservation area from Wood Street. This new public realm element of the proposal reflects the lively, vibrant street frontages found amongst the conservation area and reinforces the character of the area as a hub of activity amongst the City Centre. In doing so, the proposed development takes the opportunity to better integrate the Site into the setting of the conservation area.
- 6.4 Through its improvement of the public realm along Wood Street, the proposed development also enhances the quality of views into the conservation area from this street. When experienced in views from St Mary Street (View 1), the complete form and full scale of the development will be appreciable. It will provide a high-quality focal point for views towards Wood Street, out of the conservation area, and will better define the transition between the area's tight-knit urban centre and its wider surrounds. In doing so, the scale, design and materiality of the proposed development will likewise positively juxtapose with that of buildings located within the conservation area, and thereby reinforce the value of the area as the historic core of the City Centre.

6.5 In views from Westgate Road (View 4), located at the northern end of the conservation area, the proposed development will be experienced amongst a cluster of large-scale contemporary developments, including the Principality Stadium and other tall buildings. The height of the proposal, alongside its simple form and refined elevation treatment, will contribute a rational feature amongst the existing unharmonious architecture projecting above the roofline of buildings within the conservation area. There will be no change to the immediate backdrop of buildings located along Westgate Road with regards to the legibility of their generally consistent building heights and characterful roofline. The character and appearance of the street will remain appreciable, and the value of the conservation area as a historic core amongst the City Centre will be reinforced.

6.6 More generally, ZTV analysis (Figure 4.4) suggests that visibility of the proposed development from within the conservation area will be limited. Where glimpses of the proposal will be experienced, the proposed development will be understood as a visible but contextual change to the key characteristics of the overall baseline setting of the asset, which comprises a varied townscape with buildings of ranging form, scale and architectural design, backdropped to the west by large-scale contemporary developments. The high-quality design of the proposed development will mitigate the visual impact of additional massing within the setting of these views.

6.7 The extant permission for a 35 -storey development introduced a landmark feature within the setting of the Conservation Area. While no heritage assessment was done for the application, the committee report clearly came to a conclusion of no harm which shows there is a precedent for tall, landmark buildings in this location coming to no harm in the setting.

6.8 As described by PPW TAN24 paragraph 1.25, the elements of an asset's setting may make a positive, negative or neutral contribution to its significance. Whilst the proposed development is visible from within the setting of the conservation area, it is considered to maintain an appreciation of its character and appearance. The proposed development will maintain an experience of the asset within its evolving townscape context and will make a neutral contribution to its setting.

6.9 Overall, the proposed development is considered to maintain the significance of the asset. It is considered to cause **no harm**.



Figure 6.1 View 1 Mary Street - Proposed



Figure 6.2 View 2 Wood Street - Proposed

6 | Heritage Assessment

Cardiff Central Railway Station (Grade II) and Water Tower at Cardiff Central Station (Grade II)

- 6.10 As set out in Section 3, these designated heritage assets derive significance from the individual and group value associated with the early-twentieth century development of Cardiff Railway Station. The setting of the assets contributes to their significance through its representation of the designed railway complex, and its expression of the assets' value as part of the city's expansion, performing a key role as a terminus and arrival space. The Site, as existing, fails to contribute to the detract from the setting of the assets.
- 6.11 The proposed development will introduce a high-quality feature within the setting of the assets, and reinforce the area's emerging character as a focus for regeneration and contemporary development amongst the city. In doing so, it will reinforce the assets' significance as a focal point around which the city has evolved since the nineteenth century.
- 6.12 The proposed development will contribute an enhancement to the quality and function of the public realm in the Central Square area, within the setting of the station. It will better activate this part of the asset's setting, in a manner which will reinforce the established character of the area, as defined by an open, pedestrianised space that facilitates activity and movement.
- 6.13 The proposed scale of the development will serve to provide a landmark feature within the townscape, defining the location around the station and reinforcing its pivotal role as a gateway into the city. It will furthermore be experienced as a building which is proportionate to the existing and emerging large-scale development in this area. It will support emerging developments at the station (refs. 25/00645/PRAP and 25/00630/LBC) in establishing an improved setting to the asset.
- 6.14 As suggested by ZTV analysis, there will be very limited visibility of the proposed development from these asses. The proposed development will maintain the existing grouped arrangement of the assets and will maintain an appreciation of their group value. Overall, the proposed development is considered to maintain, and where possible reinforce, the significance of the assets. It is considered to cause **no harm**.

Cardiff Castle (Grade I) and Cardiff Castle and Roman Fort (Scheduled Monument)

- 6.15 As set out in Section 3, these designated assets derive significance from their high architectural, archaeological, historic and aesthetic interest, associated with their national importance as a surviving, if altered, Roman and medieval defensive complex and landscape. The setting of the assets contributes a key source of significance, and principally derives interest from the collection of buildings comprising the castle complex, and their proximity to the City Centre and medieval city core. The Site is considered not to form part of the setting of the asset.
- 6.16 As demonstrated in Views 5 and 6 (assessed in Section 7), the proposed development will be visible in the background of views from the grounds and walls of Cardiff Castle. The proposed development will be experienced as a high-quality feature, set amongst an existing cluster of large-scale, high-quality contemporary developments already present in the wider surrounds of the assets. Its form, architectural design and material pallet will integrate it into the established building typology and architectural character which presently exists in this part of the asset's setting.
- 6.17 The extant permission for a 35 -storey development introduced a landmark feature within the wider surrounds of the assets, however the Committee Report confirmed that this change was considered to cause no harm. Whilst the current proposal is taller, it complies with the established principle of height and a landmark feature in the wider surrounds of the assets causing no harm.
- 6.18 The proposed scale and height of the development will rise above buildings comprising the historic core of the City Centre (St Mary Street Conservation Area). However, its situation and architectural design will reinforce the existing urban grain of the area, which involves well-defined areas of character, progressing south-west from the castle grounds, towards the historic city centre and onwards to an area of redevelopment and expansion around Central Square. As such, the proposed development is considered to support an appreciation for the area's historic development, and thereby maintain the castle's significance as the original focal point for such development.



Figure 6.3 View 6 Castle Keep - Proposed

- 6.19 As described by PPW TAN24 paragraph 1.25, the elements of an asset's setting may make a positive, negative or neutral contribution to its significance. Whilst the proposed development is visible from within the setting of the assets, it is considered to maintain an appreciation of its significance. The proposed development will maintain an experience of the asset within its evolving townscape context and will make a neutral contribution to its setting. Overall, the proposed development is considered to maintain the significance of the asset. It is considered to cause **no harm**.

6 | Heritage Assessment

Cathays Park Conservation Area (including associated designated assets, including the Law Courts (Grade I) and City Hall (Grade I))

- 6.20 Cathays Park Conservation Area derives significance from its well-defined character and appearance, associated with its distinctive areas associated with the city's historic development and administrative management. The Site is considered not to form part of the setting of the asset.
- 6.21 The proposed development will be visible from within the conservation area. Specifically, it will be experienced in views from within Alexandra Garden [View 7, assessed in Section 7]. Regarding the extant permission for a 35-storey development, the visibility of this scheme from within the conservation area was not required to be assessed within a Heritage Statement. Nevertheless, the effects of the scheme's visibility on several heritage assets was reviewed by Council Officers and by Cadw, and no effects were found to occur.
- 6.22 Views of the 35-storey development from Alexandra Garden were not required by Council Officers, nor assessed as part of the extant permission. They are, however, provided within this assessment to ensure a robust understanding of the effects of the current proposal. As set out in detail in Section 7, View 7 from Alexandra Garden shows that the proposed development will appear in the background of the view, behind the Law Court.
- 6.23 The extant permission also appeared in this location, therefore the current proposal would not introduce a new change to the composition of the view, when compared to the extant permission. In reality, the proposed development would be experienced at a considerable distance from Alexandra Garden and in parallax with the roofline of the Law Court. This means that when travelling through the area, there would only be a brief moment where the two overlap. Elsewhere, there would be many other views of the Law Courts where they do not overlap and as such, the development and the Law Court would be appreciable as two distinct elements.
- 6.24 The proposed development possesses a much lighter material palette than the extant permission; white, cream and gold, rather than black, grey and gold in the extant permission. As such, whilst it would also appear behind the tower of the Law Courts, it could be argued as an enhancement from the extant position as the light materiality would ensure the form Law Courts towers are still legible against the background, which may not have been the case for the extant scheme.
- 6.25 The proposed development is considered to maintain a clear appreciation of the form, design and setting of both the National War Memorial and the tower element of City Hall. It is therefore judged not to materially affect any key landmarks within views from Alexandra Garden, and maintain their contribution to the significance of the conservation area.
- 6.26 Overall, the proposed development is considered to cause **no harm** to the conservation area, nor assets included within it.



Figure 6.4 View 7 Alexandra Garden - Proposed

Section 7

Townscape and Visual Assessment.

Townscape Assessment

- 7.1 In accordance with the guidance set out in the Tall Buildings SPG (2017), the design and public benefits of this proposal has been carefully considered. It is assessed against the key criteria below:
- 7.2 In accordance with the guidance set out in the Tall Buildings SPG (2017), the design and associated public benefits of the proposal have been carefully considered. The scheme has been assessed against the following criteria below:

No negative impacts on important views or vistas

- 7.3 The importance and prominence of the Principality Stadium was held as a key consideration, especially important views towards it. Visual transparency towards this key landmark in Cardiff has been preserved with large glazed openings, which maintains the connection to the stadium and aids the preservation of the character of TCA1. The visually open colonnade at the base of the building also frames these important views towards to the stadium, which was an important aspiration set out by key stakeholders.

Compliment an existing cluster or form a landmark to be a positive feature in the skyline

- 7.4 The proposal will be a positive feature in the skyline; it forms a strategic landmark within an existing cluster of buildings. The increase in height from the previously consented scheme has been considered so this landmark is better articulated from long range views to the south. It creates a more legible form to the building as well as a cohesive skyline, which is evident in representative views from Cardiff Bay and Penarth Marina (views 8, 9 and 10).

Exhibit exceptional architectural standards

- 7.5 The overall massing has been softened with horizontal window groupings, which helps to break the emphasis vertically. Additional material studies of local precedents, and drawing from the historic environment, have been completed and the proposed materiality has been directly informed from these (see associated Design and Access Statement for further detail). This has resulted in the proposal sitting seamlessly within the wider urban context, whilst still being an elegant landmark structure, and resulting in a cohesive townscape of shared materiality and architectural style. This is evident in rendered views from heritage sensitive locations that the precedent studies have drawn from, such as St Mary Street Conservation Area (View 1) and Cardiff Castle (View 6).

Townscape Receptor	Magnitude of Impact	Description of Effect	Classification of Effect	Cumulative Effect
TCA1 Principality Stadium Environs	The proposed development, whilst introducing an increase in height on the southern boundary of the TCA, the existing height of the surrounding context means the proposed development will result in a low magnitude of change to this TCA and its character. The proposed development will see a considerable change in terms of the Site's role in the wider townscape. The Site will transform from a vacant area, which is currently screened from this TCA, into a landmark building seen from a variety of locations in the TCA. Generally the height and massing will be consistent with the surrounding context and the proposed development as a whole will offer vast improvements in landscaping, amenity and aesthetic contribution to the local townscape.	The effect is considered beneficial on account of the Site's role as a transitional and connecting hub for the surrounding townscape. The regeneration will bring significant improvements that positively impact the wider area. While the development includes an increase in height, there is clear capacity to accommodate higher-density growth in adaptive and resilient locations such as this. The proposed development would encourage an increased level of activity over an extended period of the day to the southern edge of the TCA and the associated public realm enhancements would enhance the area surrounding the development site, providing a more attractive outlook from the southern end of the TCA. Furthermore the creation of an important and distinctive landmark for the stadium itself will improve legibility and wayfinding to this important area.	Minor Beneficial	Minor Beneficial
TCA2 Central Square	The proposed development will result in a medium-high magnitude of change. It introduces a tall building on a previously vacant site within the surrounding townscape which is a considerable visual change in the baseline. However the surrounding townscape exhibits a predominantly modern character of emerging heights which is capable of accommodating development of this scale. The proposal aligns with the architectural style of nearby modern developments and responds to the Cardiff's ongoing needs, and contributing to its continued evolution as a capital city within Wales.	The effect of the proposed development is judged to be beneficial , as it aims to transform a large, inactive site that currently detracts from the overall value of the townscape. The Site occupies a strategic position between the city centre, Cardiff Central station and the Principality Stadium and the scheme will introduce a high-quality tall building that will significantly enhance activity, architectural quality and the overall appearance of the Site. The 50 storey tower, would be the tallest building in both the surrounding area and the entire city, and is designed as a landmark structure to positively contribute to the skyline and streetscape and greatly improves legibility in both Central Square and the wider townscape area. The massing and materiality have been carefully considered in order to respond to the surrounding context with contextual materials and architectural elements incorporated to provide a cohesive streetscape. Furthermore, the two storey pavilion will provide additional visual focus at ground level, which, when coupled with the active ground floor use of the tower, will increase pedestrian activity and natural surveillance along Wood Street.	Moderate Beneficial	Moderate Beneficial
TCA3 River Taff Waterside	The proposed development will result in a low-medium magnitude of change to the River Taff Waterside TCA. Although this TCA has an open character and has landscape designations such as being a SNCI, it has the ability to accommodate some change in its wider townscape due to the existing modern character to the east of the River Taff. Whilst the introduction of a tall building is a notable addition to the skyline visible from multiple locations within the TCA, it is located well beyond the river's edge and within Central Square, an area already defined by urban infrastructure such as Cardiff Central and the Principality Stadium.	The proposed development is judged to have a neutral effect on this TCA, as despite it being visible from the TCA it aligns with the emerging cluster of tall buildings to the east of the river and existing built form within Central Square. While the River Taff Waterside is primarily defined by its open views and natural vegetation, the eastern boundary is already subject to significant urban change, including the presence of Cardiff Central Station, industrial warehouses of low architectural quality and the nearby Principality Stadium. The proposed development would strengthen the emerging cluster of taller buildings in Central Square and Central Quay, enhancing visual legibility and helping to reinforce a clear urban edge between the river and the city centre. Its location at a key arrival point near the Principality Stadium and Wood Street, which is a key route into the city centre, it would serve as a distinctive landmark and wayfinding marker.	Moderate Beneficial	Minor Beneficial

Maximise activity through ground floor use and fenestration		Cumulative Assessment	Summary
7.6	By maximising the opportunity to activate the streetscape, the entrance to the building will be a double height space with large arched windows. The entirety of the first floor will be used for amenity, and the majority of the ground floor, which, along with the housing delivery, provides significant enhancements to the public realm.	7.7 As developments of emerging height are completed, this cluster of buildings and the skyline of Cardiff will only be strengthened. The additional buildings will frame the proposed landmark building, creating a cohesive townscape and iconic skyline for the City of Cardiff.	7.8 The technical assessment is summarised in Table 7.1

Table 7.1: Effects on Townscape Character

Visual Assessment

7.9 The effects on identified visual receptors are identified in Table 7.2 with visualisations for representative viewpoints are included at Appendix 1.

Visual Receptor	Magnitude of Impact	Description of Effect	Classification of Effect	Cumulative Effect
Users of River Taff Waterside <i>Representative Views: 2 and 3</i>	There is a visible change to the baseline of this visual receptor mainly due to the increased height. However due to the surrounding emerging heights and development it is a contextual change, and in the wireline view 3, the proposed development is mainly screened by the new developments taking place on the eastern riverside. Therefore there is considered to be a low-medium magnitude of impact.	The visibility of the development varies along the River Taff, however the materiality shown in the render of view 2 compliments the surrounding urban context and it sits comfortably within the wider urban context of developments on the eastern side of the river. The limited visibility, combined with the contextual design and colour palette, means the development integrates well without drawing attention. Therefore, the effect is considered neutral .	moderate neutral	moderate beneficial
Users of Westgate Street <i>Representative Views: 4</i>	The proposed development introduces a large increase in height visible from certain parts of Westgate Street, looking south. Despite this, there will be a low magnitude of change to this visual receptor, as the existing height of the surrounding context and emerging cluster of buildings, including the Principality stadium. Furthermore, the wireline of view 4 shows the proposed development sitting comfortably within the wider townscape.	The proposed development will extend the built form in Central Square, it aids wayfinding to the city centre and fills a noticeable gap in the townscape alongside additional contextual development, such as the Principality Stadium. The scheme creates an attractive cluster of buildings of emerging height and cohesive high quality design and as such the effect is considered to be beneficial .	minor beneficial	minor beneficial
Users of Cardiff Castle <i>Representative Views: 5 and 6</i>	The proposed development introduces an increase in height amongst a cluster of existing large-scale development, visible from the grounds of Cardiff Castle, looking south towards the city centre. Due to the heritage sensitivity of the Grade I listed asset and the visual change in the baseline, evident in both the wireline and rendered representative view, the magnitude of impact is considered to be low .	Within the wider urban context, the proposed development would be a visible element of the established tall skyline throughout the castle grounds, however the materiality shown in the render of view 6 shows how the proposal compliments the surrounding townscape. The contextual design and colour palette, means the development integrates well within the surrounding townscape, despite being a considerable change to the baseline. Furthermore once the emerging development is complete will be a key landmark structure amongst an attractive cluster of buildings. Therefore, as these developments are not yet finished, the effect is considered neutral .	minor neutral	moderate beneficial
Users of Alexandra Park <i>Representative Views: 7</i>	The wireline view demonstrates how effectively the proposal integrates with the surrounding townscape, despite the introduction of new height, the existing civic buildings still maintain their prominence. In terms of scale and form, the proposal blends subtly into the existing emerging context, making the change seem minimal despite being centrally positioned within the view. Overall, the magnitude of impact is considered to be low .	Visibility of the proposed development within Alexandra Park varies greatly, with considerable levels of screening from the large amounts of mature planting. The wireline of the representative view shows that the proposal sits well within the surrounding townscape. As such the effect is considered neutral .	minor neutral	minor neutral
Users of Cardiff Bay <i>Representative Views: 8 and 9</i>	The representative wireline view for users of Cardiff Bay illustrates the effective townscape and visual integration of the proposed development from a further distance. The scheme introduces a subtle change to the view whilst providing a landmark structure for Cardiff and its skyline. Considering the modern urban development of the emerging cluster of buildings in Cardiff, there is a visible but contextual change to the baseline and therefore, the magnitude of impact is considered to be low .	This longer-distance view effectively highlights how well the proposal responds to the evolving context and emerging development, particularly in scale and form. It provides a key landmark structure which positively impacts the skyline of Cardiff, resulting in a subtle but positive and well integrated change. Therefore the overall effect is assessed as beneficial .	negligible beneficial	negligible beneficial
Users of Penarth Marina <i>Representative Views: 10</i>	Users of Penarth Marina experience long range visibility of the proposed development, which although introduces additional height to the baseline, it sits comfortably within the existing context of Penarth Marina where modern built form frames key views. The wireline for representative view 10 demonstrates how effectively the proposal integrates with the surrounding townscape. Overall, the magnitude of impact is considered to be low .	This longer-distance view effectively highlights how well the proposal responds to the evolving context and emerging development, particularly in scale and form. It provides a key landmark structure which positively impacts the skyline of Cardiff, resulting in a subtle but positive and well integrated change. Furthermore, by providing a well-formed silhouette to the skyline, the proposed development enhances the legibility of Cardiff's urban structure and townscape; its illuminated crown serves as a distinctive landmark, reinforcing its presence at night. Therefore the overall effect is assessed as beneficial .	negligible beneficial	negligible beneficial

Table 7.2: Effects on Visual Receptors

Section 8

Conclusion.

- 8.1

This Heritage, Townscape and Visual Impact Assessment ('HTVIA') has been prepared on behalf of REAP 3 Limited ('the Applicant') to support a full planning application at Plots 4 and 5, Central Square, City Centre, Cardiff ('the Site') within Cardiff Council. It provides an assessment of the anticipated heritage, townscape and visual impacts of the proposed development.
- 8.2

This report has assessed the historic development of the Site, its current appearance and contribution to the surrounding area, and has described and assessed the significance of heritage assets whose settings have the potential to be affected by its development.
- 8.3

The report has considered the effects of the proposed development on the heritage assets identified and on the townscape of Cardiff more generally, making use of Accurate Visual Representations (AVRs) of the proposed development from view positions discussed and agreed with Cardiff Council Officers during a detailed pre-application process. The proposed development has been assessed to appropriately respond to the existing and emerging composition and character of the setting of nearby heritage assets. It is considered to maintain the significance of such heritage assets, overall.
- 8.4

Visual receptors including users of Cardiff Bay, users of Westgate Street and users of Penarth Marina are considered to experience effects of a beneficial nature due to the proposal's contribution of a landmark feature within the townscape, which provides wayfinding and completes the cluster of high-quality, large-scale contemporary buildings populating the area's skyline. The proposed development contributes an active gateway entrance into the city, around Central Square, and improves the pedestrian experience of arriving into St Mary Street Conservation Area along Wood Street, from the station. Overall, the development would optimise the Site capacity in a manner which would not adversely affect visual amenity in the long term.
- 8.5

The proposed development is considered to be of high quality architectural design which is responsive to both the existing and emerging townscape character and appearance. It achieves a contextual design approach which positively reinforces the surrounding character in a manner which is complimentary to the aesthetic value of the area. The proposed scale and
- 8.6

Owing to its high quality design, its strong contribution to the ground floor public realm, its distinctive top (experienced as an engaging design element both night and day), the proposed development has the potential to feature as a jewel in the crown of the Cardiff Central Square Masterplan. The scale and architectural treatment of the proposed development is high in quality, and is considered to complement the existing and emerging character of the Central Square area. Overall, the proposed development is considered to enhance and secure the Site's long-term contribution to creating an attractive, sustainable and successful approach into the city centre.

8.7

The proposed development preserves the character and appearance of nearby conservation areas and the special interest of historic buildings, therefore satisfying the Welsh Government's specific objectives for the historic environment, set out in paragraphs 6.1.6 and 6.1.7 of Planning Policy Wales. In doing so, the proposed development further complies with paragraphs 1.23-1.29 of TAN24. Where there is potential for some harm to occur to an appreciation of the listed Law Court in views from Alexandra Garden, this harm would be very limited and would be outweighed by the public benefits of the proposal, and considered acceptable owing to the proposal's compliance with paragraph 39 of Conservation Principles Wales (2011).

8.8

By preserving the setting of nearby listed buildings, the proposed development complies with PPW paragraph 6.1.10 and by preserving the character and appearance of nearby conservation areas, it complies with PPW paragraph 6.1.14. The proposed development is judged to comply with guidance set out in TAN12 Section 4 relating to the delivery of good design. It also satisfies local policies KP2(A), KP5 and KP17 of the Cardiff Local Development Plan 2006-2026 (2016) and criteria set out in Cardiff's Tall Buildings SPG (2017). The proposed development is likewise assessed to, on balance, preserve the setting and significance of all identified heritage assets.
- | Receptors | Overall Effect | Cumulative Effect |
|--|--|---------------------|
| Heritage | | |
| St Mary Street Conservation Area (including listed buildings) | The proposed development will not harm these assets, thus preserving the asset in line with PPW paragraphs 6.1.6, 6.1.7, 6.1.10 and 6.1.14 and paragraphs 1.23-1.29 of TAN24 | No change (no harm) |
| Cardiff Castle (Grade I) and Cardiff Castle and Roman Fort (Scheduled Monument) | The proposed development will not harm these assets, thus preserving the asset in line with PPW paragraphs 6.1.6, 6.1.7 and 6.1.10 and paragraphs 1.23-1.29 of TAN24 | No Change (no harm) |
| Cardiff Central Railway Station (Grade II) and Water Tower at Cardiff Central Station (Grade II) | The proposed development will not harm these assets, thus preserving the asset in line with PPW paragraphs 6.1.6, 6.1.7 and 6.1.10 and paragraphs 1.23-1.29 of TAN24. | No Change (no harm) |
| Cathays Park Conservation Area (including listed buildings) | Whilst there is the potential for small amount of harm to appreciation of the Law Courts within the conservation area, this would be an enhancement from the extant scheme by way of the proposal's high-quality design, scale and materiality. Therefore, on balance, the proposal would cause no harm. | No Change (no harm) |
| Townscape | | |
| TCA 1 Principality Stadium Environs | minor beneficial | minor beneficial |
| TCA 2 Central Square & Station | moderate beneficial | moderate beneficial |
| TCA 3 River Taff Waterside | moderate beneficial | minor beneficial |
| Visual Receptors | | |
| Users of River Taff Waterside | moderate neutral | moderate beneficial |
| Users of Westgate Street | minor beneficial | minor beneficial |
| Visitors and Users of Cardiff Castle | minor neutral | moderate beneficial |
- Heritage, Townscape & Visual Impact Assessment | 35

Appendix 1

Townscape and Visual Methodology.

Townscape & Visual Assessment

The purpose of the townscape and visual appraisals is to determine the likely townscape and visual effects of the proposal by considering a combination of the townscape or viewer’s sensitivity, and the magnitude of change that will be experienced.

The methodology used by Icení Projects to assess the likely townscape and visual effects of the proposal is based on best practice guidance set out by the Landscape Institute in:

- Guidelines for Landscape and Visual Impact Assessment (GLVIA, Third Edition, 2013);
- Townscape Character Assessment Technical Information Note (TIN 05/17, 2018); and
- Visual Representation of Development Proposals, Technical Guidance Note (TGN 06/19, 2019).

GLVIA states in para. 1.1 that when identifying landscape/ townscape and visual effects there is a *‘need for an approach that is in proportion to the scale of the project that is being assessed and the nature of the likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional.’*

GLVIA recognises within para. 2.23 that professional judgement is at the core of LVIA/TVIA, and that while some change can be quantified, *‘much of the assessment must rely on qualitative judgements’*. The Landscape Institutes Technical Committee has advised that the 2013 revision of GLVIA *‘places greater emphasis on professional judgement and less emphasis on a formulaic approach’*.

Townscape Character

Townscape is defined in GLVIA at para.2.7 as *‘the landscape within the built-up area, including the buildings, the relationship between them, the different types of urban open spaces, including green spaces, and the relationship between buildings and open spaces.’*

The assessment of townscape character provides an understanding of the distinctive qualities and characteristics that make up an area of townscape, including an understanding of how a place has evolved over time. Character analysis is supported by materials such as maps, illustrations and photographs.

Townscape Sensitivity

Establishing townscape sensitivity involves combining judgments about: (i) the value of the townscape character; and (ii) the susceptibility of the townscape to the change caused by the proposal.

The value of a townscape character area is defined in TIN 05/17 as its *‘relative importance’* to *‘different stakeholders’*. Value can be influenced by a range of factors including its intactness/condition, scenic quality, rarity, representativeness, conservation interests (i.e. heritage or environmental designations), recreational value, perceptual qualities or communal associations.

The susceptibility of townscape character areas to change is the ability of the townscape receptor to accommodate change without undue consequences for the maintenance of the aspects of the baseline condition that are of townscape value.

Value and susceptibility to change will be described in line with Tables T1 and T2. Overall sensitivity will be calculated by combining the two resulting judgements.

Visual Sensitivity

Assessments of visual effects focuses on the likely effects to visual receptors, i.e. people experiencing townscape views, and considers changes in visual amenity as a result of the proposal.

Establishing visual sensitivity involves combining judgments about: (i) the value of the view; and (ii) the susceptibility of the visual receptor to the change caused by the proposal.

The value attached to views relates to planning designations or their identification in tourist guidebooks, literature, art etc.

For visual receptors (i.e. people), susceptibility to change depends on their circumstances (location, time of day, season, length of exposure to view) and reason for being at this viewpoint (i.e. passing through while commuting or using the area for recreation).

Value and susceptibility to change will be described in line with Tables V1 and V2. Overall sensitivity will be calculated by combining the two resulting judgements.

Townscape Value	Typical Criteria
High	Often featuring or contributing positively to national heritage designations (i.e. conservation areas, listed build-ings), protected view corridors/skylines, designated green spaces or award-winning design. Generally of high quality urban design or amenity value and in good condition, with very few detracting features (if any). A rare example of, or representative of, a particular characteristic townscape element or feature.
Medium	Often featuring or contributing positively to local heritage designations (i.e. locally listed buildings, areas of town-scape value), locally identified view corridors, or locally designated green spaces. In relatively good condition, with areas of high quality urban design or amenity value, or containing some particularly characteristic features. Generally few detracting features overall.
Low	Generally without designations, of low quality and in poor condition with scope for enhancement in terms of appearance and amenity. May contain some positive features, but these do not characterise the whole.
Very Low	Of very low quality and in very poor condition with notable scope for enhancement in terms of appearance and amenity.

Table T1: Townscape Value

Townscape Susceptibility to Change	Typical Criteria
High	Townscapes with a little ability capacity to accommodate the type of change proposed, owing to the interaction of the proposed development with the prevailing character, built form, topography etc, and the limited presence of screening effects (if applicable)..
Medium	Townscapes with a good capacity to accommodate the type of change proposed as it might be reflective of the scale and character of parts of the surrounding townscape. There are opportunities for enhancement that proposals may address and/or some existing screening effects (vegetation, density of development, orientation of streets etc.).
Low	Townscapes with a very good capacity to accommodate the type of change proposed, as the proposed devel-opment may comprise only a small part of the wider townscape, or being in-keeping with the overarching char-acter of the surroundings. There may be distinct opportunities for enhancement and/or a high level of existing screening effects (vegetation, density of development, orientation of streets etc.).

Table T2: Townscape Susceptibility to Change

Visual Value	Typical Criteria
High	Designated or protected viewpoint, vista or panorama. Views related to highly graded heritage designations (i.e. World Heritage Sites, Grade I or II* listed buildings or registered parks and gardens, or of high importance to a conservation area), identified tourist spots or with well-known cultural associations.
Medium	Locally identified viewpoint, vista or panorama. Views related to heritage designations (i.e. conservation areas, Grade II listed buildings, locally listed buildings) or from within designated green/amenity spaces.
Low	General townscape view without designation, although may have some amenity value for local residents.
Very Low	General townscape view without designation, and likely of no amenity value for local residents.

Table V1: Visual Value

Magnitude of Change

The magnitude of change is considered to be a combination of (i) the size and scale of the potential change; (ii) the geographical extent of the area affected; and (iii) the duration of the change of the proposal in operation and its reversibility. Magnitude of change will be described in line with Table M1.

Overall Effect

Table E1 provides a matrix for determining the overall effect based on the sensitivity of the receptor and the magnitude of impact. Consideration is given to the extent mitigation and/or enhancement has been achieved through design and whether the qualitative nature of the resultant effect is, therefore, ‘beneficial’, ‘adverse’ or ‘neutral’.

Many urban developments provide an opportunity to enhance the condition, appearance and functionality of an existing townscape. Urban developments of quality, therefore, often have mitigation built into them by design and are designed to be visible. This can differ somewhat from the approach to Landscape and Visual Impact Assessments (as outlined in GLVIA3) where, generally, the visibility of a scheme can be inherently harmful when it is built development in a rural landscape.

Beneficial effects occur when the Proposed Development would give rise to:

- enhancement of the overall townscape quality or reinforcement of the key characteristics of townscape character; and/or
- enhancement of visual amenity of receptors.

Adverse effects occur when the Proposed Development would give rise to:

- harm to the overall townscape quality or the key characteristics of townscape character; and/or
- harm to the visual amenity of receptors.

As per GLVIA para. 5.37, it is possible for effects to be neutral and this a matter of professional judgement. These include:

- the degree to which the proposal fits with, or preserves, an existing character;

- where a fine balance occurs between beneficial and adverse effects, ‘neutral’ is considered the centre point of the nine-point scale. This assessment is on occasion adopted where a discernible impact is identified but other benefits are also delivered through the Proposed Development, for example, high-quality design in its own right even if contrasting to existing character.

The meaning of ‘neutral’ is distinct from the meaning of ‘negligible’ and these terms should not be conflated by the reader.

Cumulative Effect

The assessment takes the following approach as set out in GLVIA: “the additional changes caused by a proposed development in conjunction with other similar developments” (paragraph 7.3). This “additional” approach focuses on the additional effects of the project being assessed, on top of the cumulative baseline (as per paragraph 7.18) and has been selected to ensure that the scope of the assessment is reasonable and proportionate to the nature of the project (as per paragraph 7.5 and paragraph 7.18).

Visualisation

The visualisations within this report have been prepared in general conformance with the Landscape Institute’s TGN 06/19. This advocates a proportionate and reasonable approach, which includes professional judgement, in order to aid informed decision making.

In this case, Type 3 visualisations were prepared using Vu.City.

Visual Susceptibility to Change	Typical Criteria
High	Users of public rights of way, open spaces or outdoor recreational facilities where the purpose of the recreation is the enjoyment of visual amenity, such as visitors to heritage assets (such as National Trust properties, Conservation Areas), tourist spots or parks with generally open or unspoilt views.
Medium	Users of public rights of way, open spaces or outdoor recreational facilities where visual amenity is secondary to activity (e.g. sports pitches, golf courses, shopping). Open views but from less sensitive areas. Residents of an area more likely to notice change in their surroundings when travelling to or from home.
Low	Users of public rights of way, open spaces or outdoor recreational facilities where the view is restricted or incidental to the activity. People in transit (pedestrians, cyclists, motorists, public transport) or undertaking activities (i.e. commuting, working) where any views are incidental to the activity or capacity to take in views is restricted.

Table V2: Visual Susceptibility to Change

Magnitude of Impact	Typical Criteria
High	Total loss, major alteration or fundamental change to key characteristics or features of the baseline.
Medium	Partial loss, material alteration or visible but contextual change to key characteristics or features of the baseline.
Low	Minor loss, alteration or discernible but non-material change to key characteristics or features of the baseline.
Very Low	Barely distinguishable or very limited change from baseline conditions.
No Change	No change from baseline conditions

Table M1: Magnitude of Impact

Overall Effect	Magnitude of Impact				
Sensitivity	High	Medium	Low	Very Low	No Change
High	Major	Moderate	Moderate / Minor	Minor	No Effect
Medium	Moderate	Moderate	Minor	Minor / Negligible	No Effect
Low	Moderate / Minor	Minor	Minor / Negligible	Negligible	No Effect
Very Low	Minor	Minor / Negligible	Negligible	Negligible	No Effect

Table E1: Overall Effect

Appendix 2

Verified Views.



- Proposed
- Consented
- Under Construction

1. Guildford Crescent
21/01682/MJR
2. Plot J Capital Quarter
18/02634/MJR
3. Plot 1, Plot 2 Central Quay
21/02884/MJR
4. Dumballs Road
18/02383/MJR
5. Custom House
15/02820/MJR
6. Landore Court
19/02465/MJR
7. Brains Brewery
18/00735/MJR
8. The Brewhouse
20/00102/MJR
9. The Embankment
21/00783/MJR
11. Friary House
23/01174/FUL

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

11:44 09 May 2025

View 1 - Existing

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

11:44 09 May 2025

View 1 - Proposed

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

11:44 09 May 2025

View 1 - Cumulative

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

15:09 09 May 2025

View 2 - Existing

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

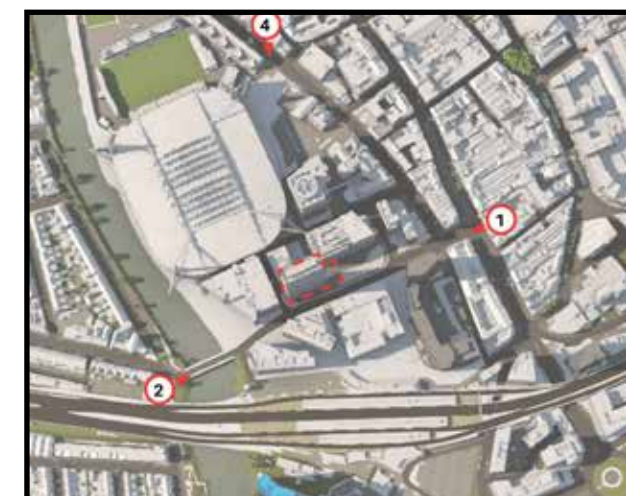
1.6 m above ground

15:09 09 May 2025

View 2 - Proposed

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

15:09 09 May 2025

View 2 - Cumulative

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



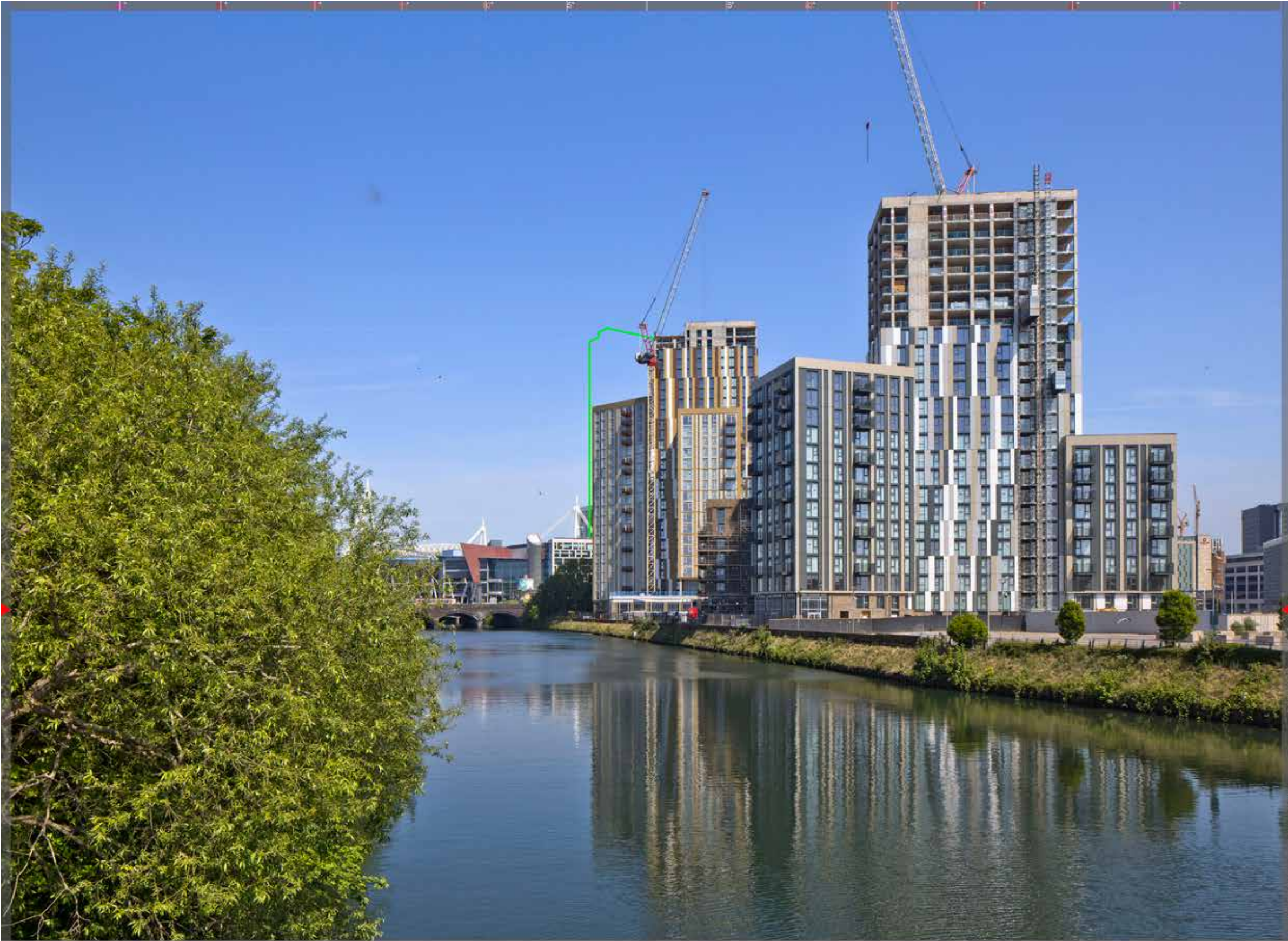
© AR LONDON

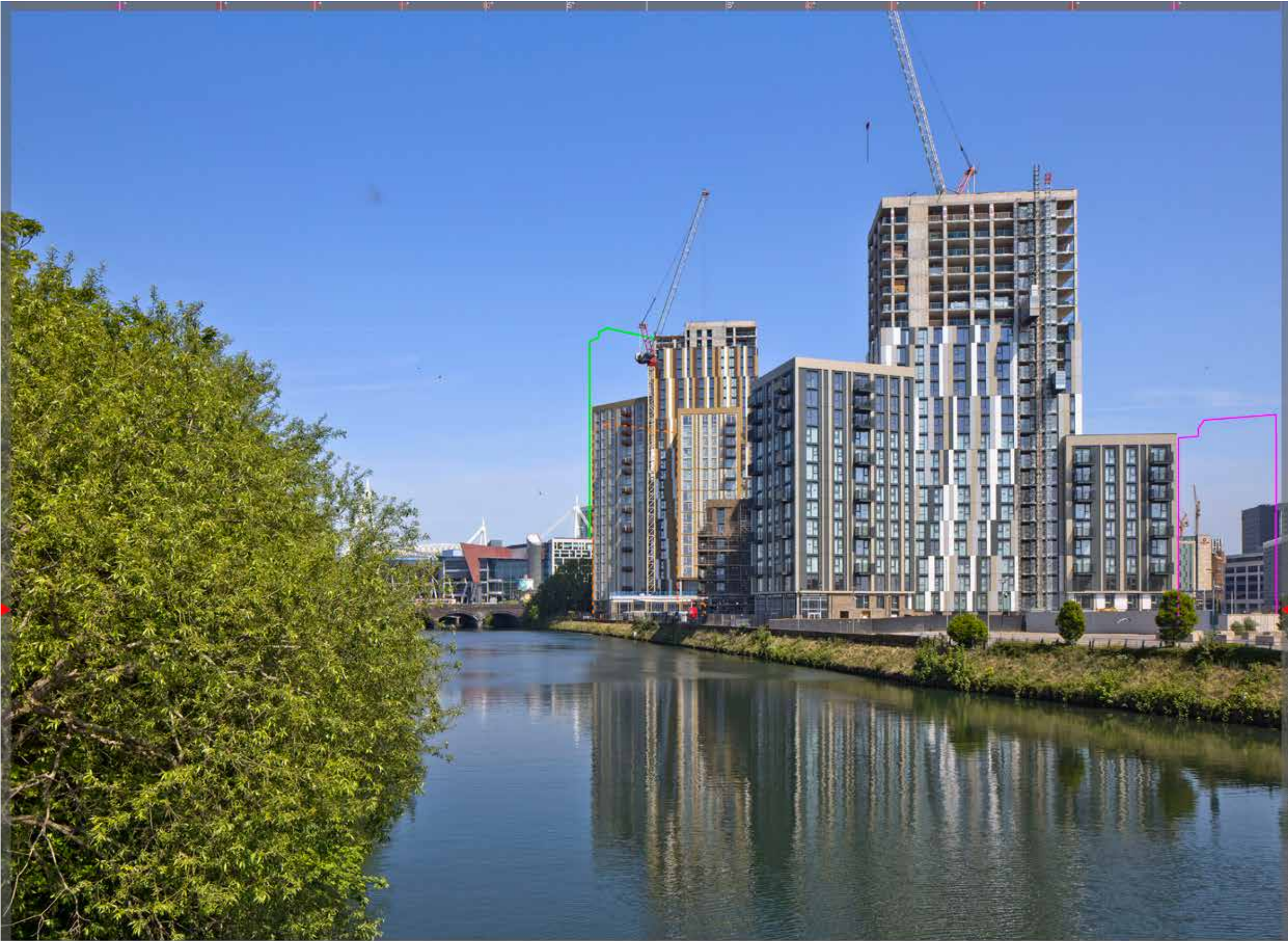
Preliminary Alignment

1.6 m above ground

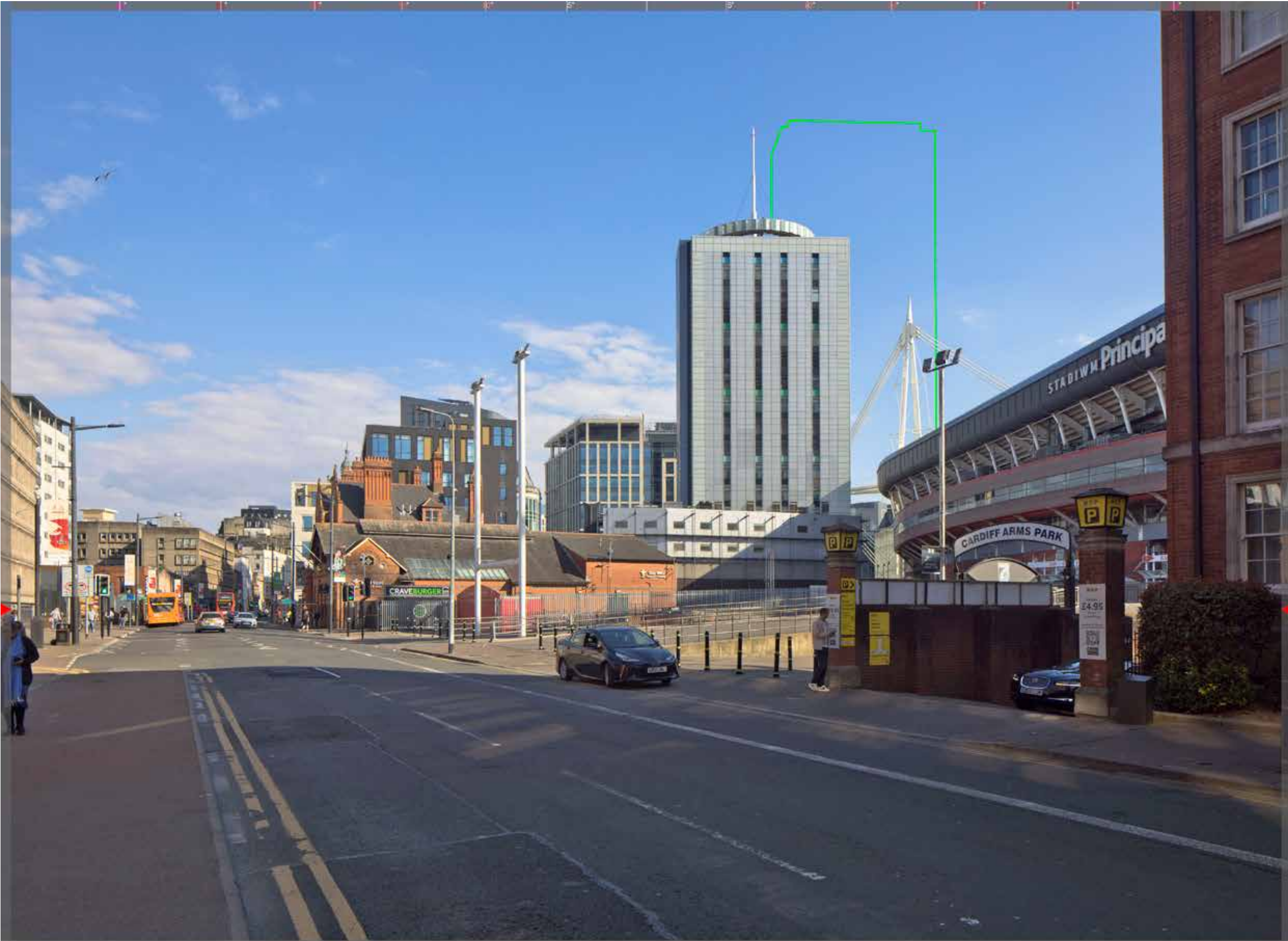
12:01 09 May 2025

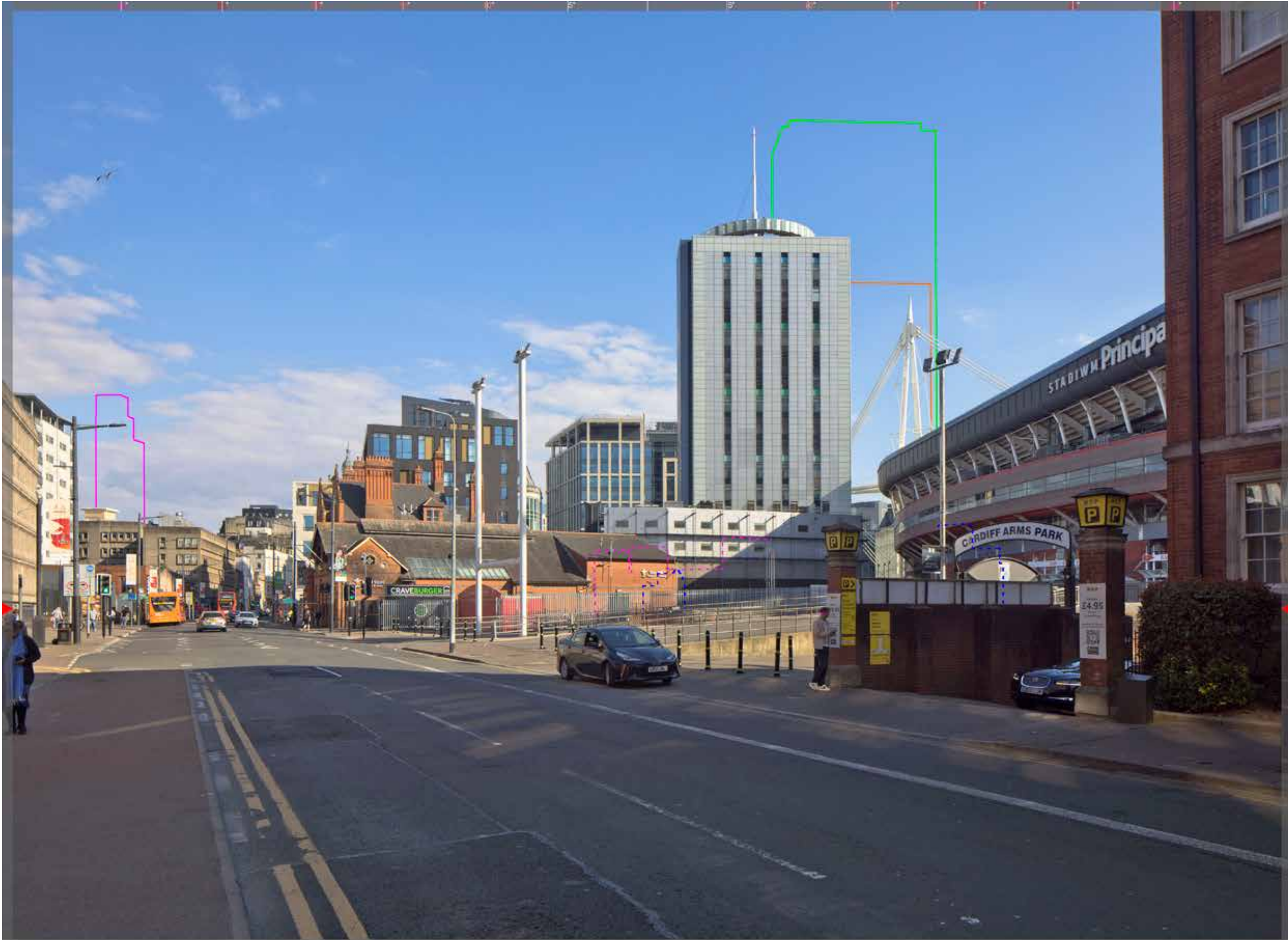
View 3 - Existing

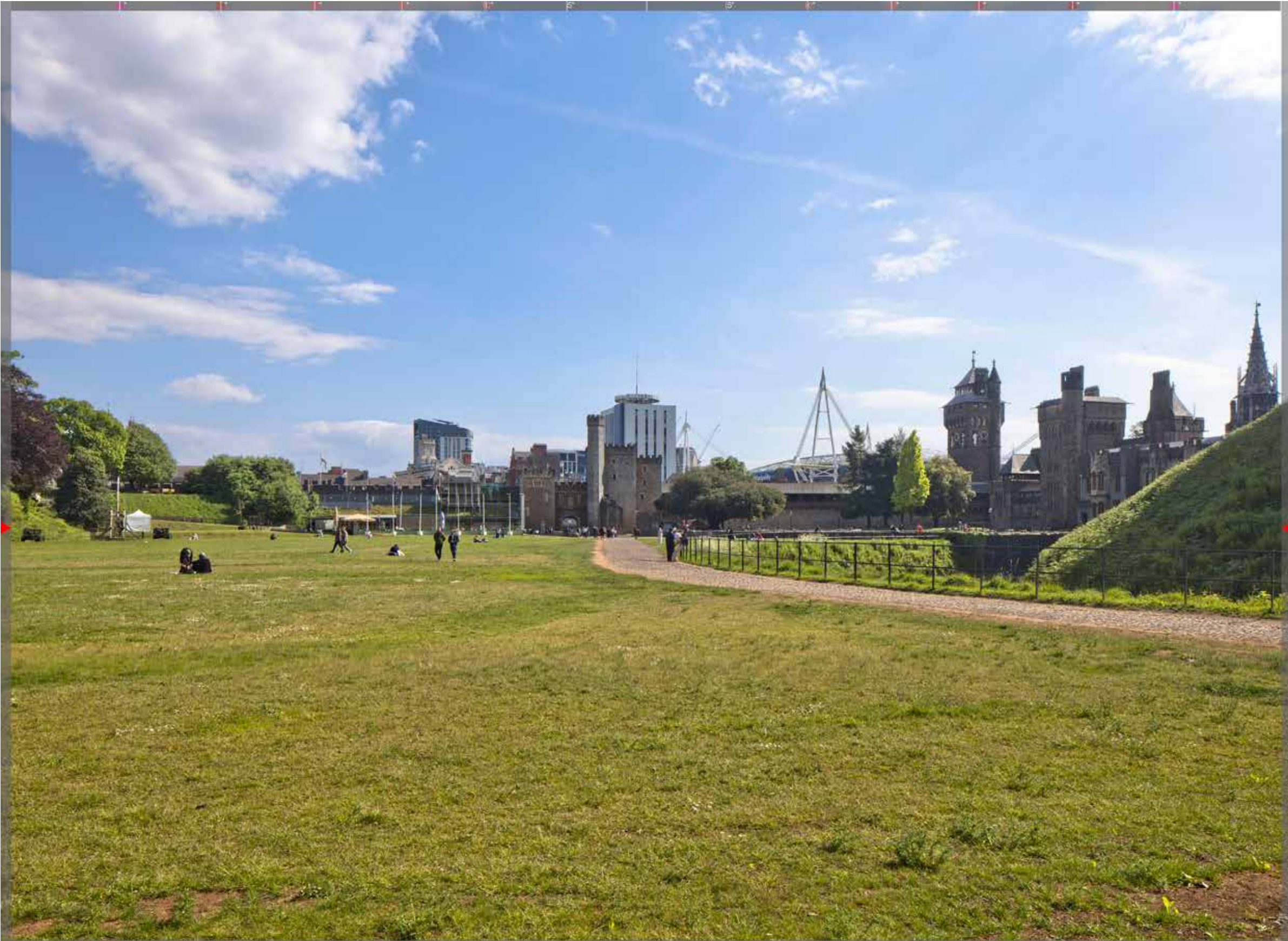












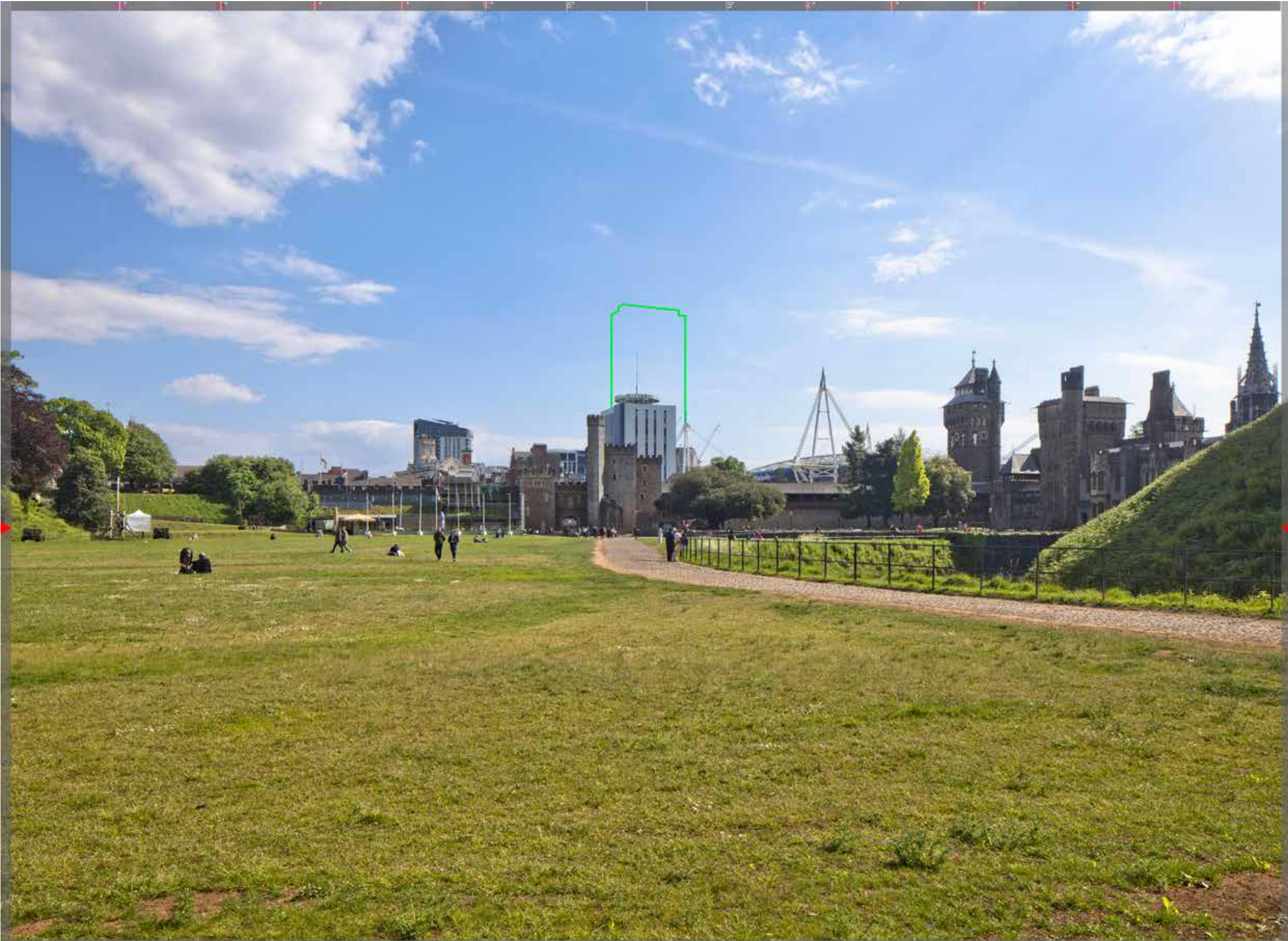
© AR LONDON

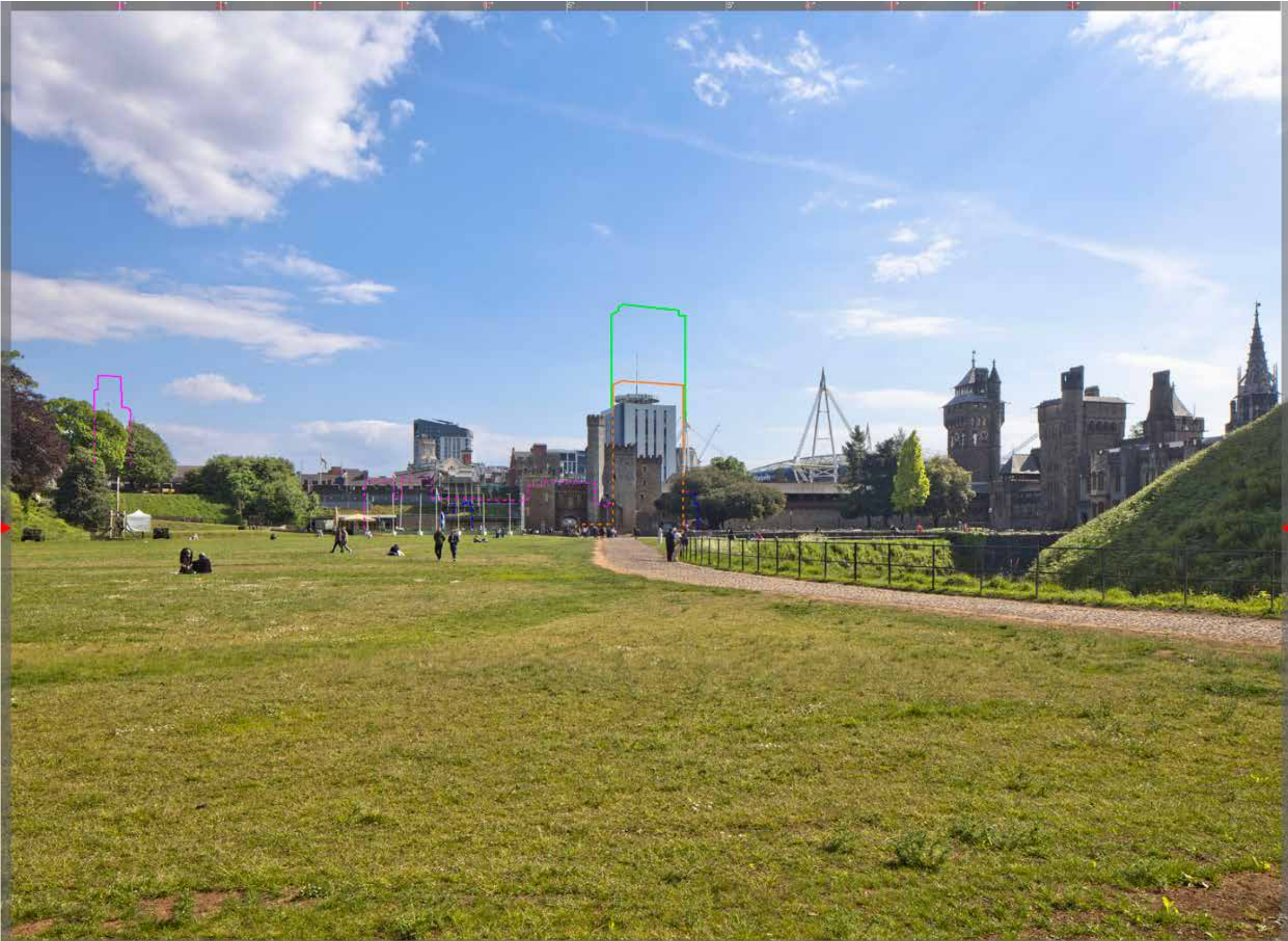
Preliminary Alignment

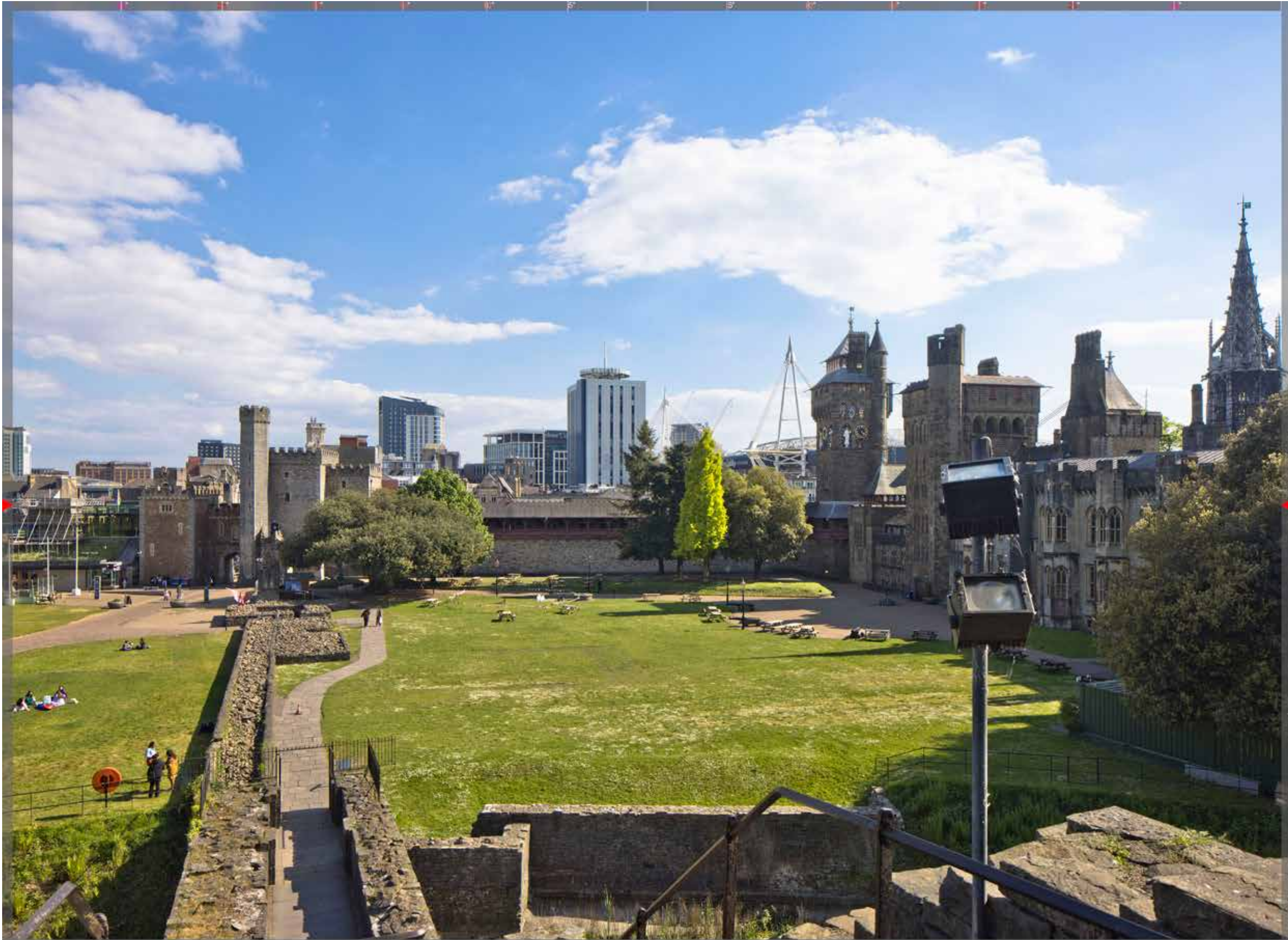
1.6 m above ground

16:10 09 May 2025

View 5 - Existing







© AR LONDON

Preliminary Alignment

1.6 m above ground

16:29 09 May 2025

View 6 - Existing

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



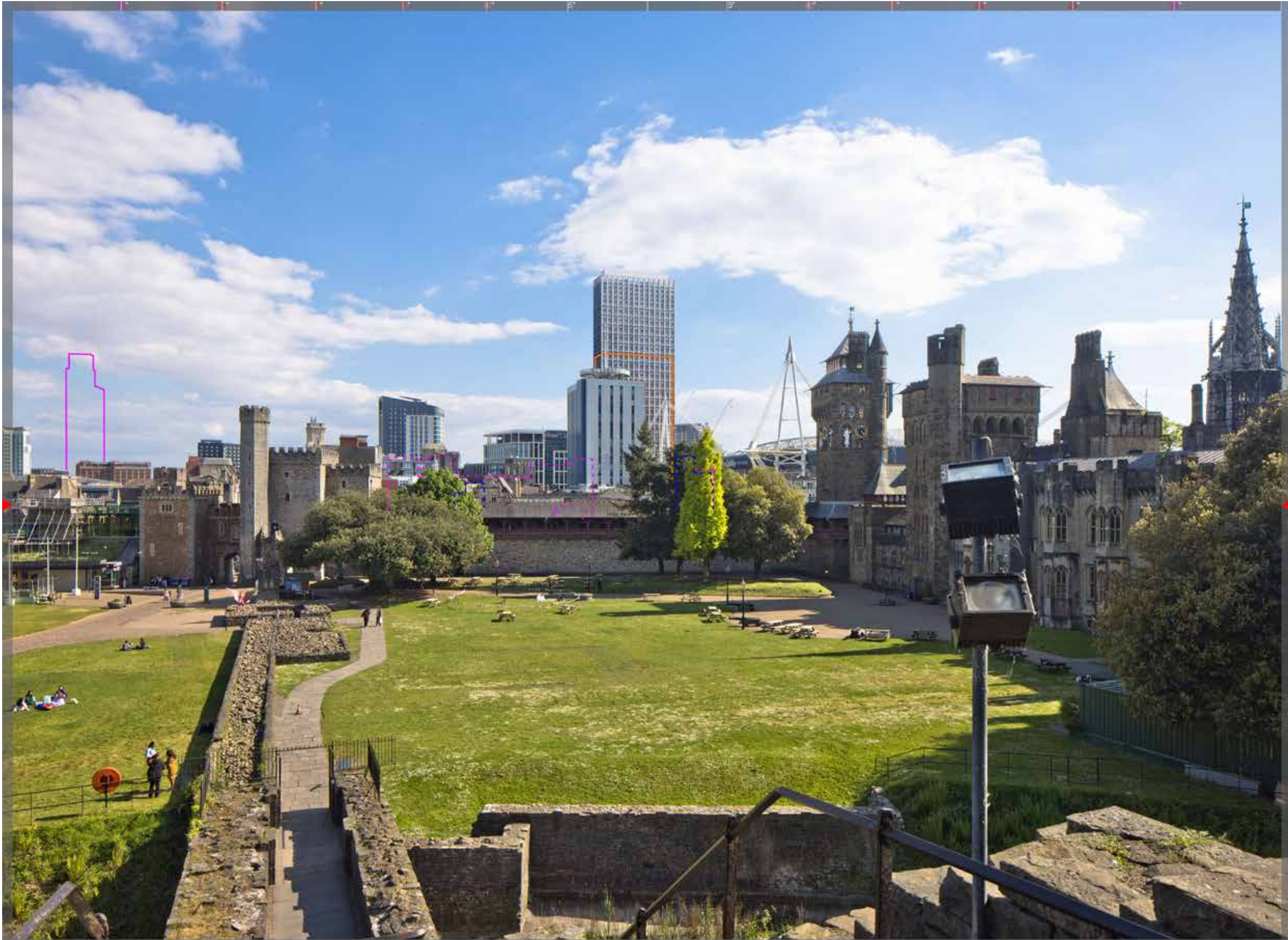
© AR LONDON

Preliminary Alignment

1.6 m above ground

16:29 09 May 2025

View 6 - Proposed



© AR LONDON

Preliminary Alignment

1.6 m above ground

16:29 09 May 2025

View 6 - Cumulative

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



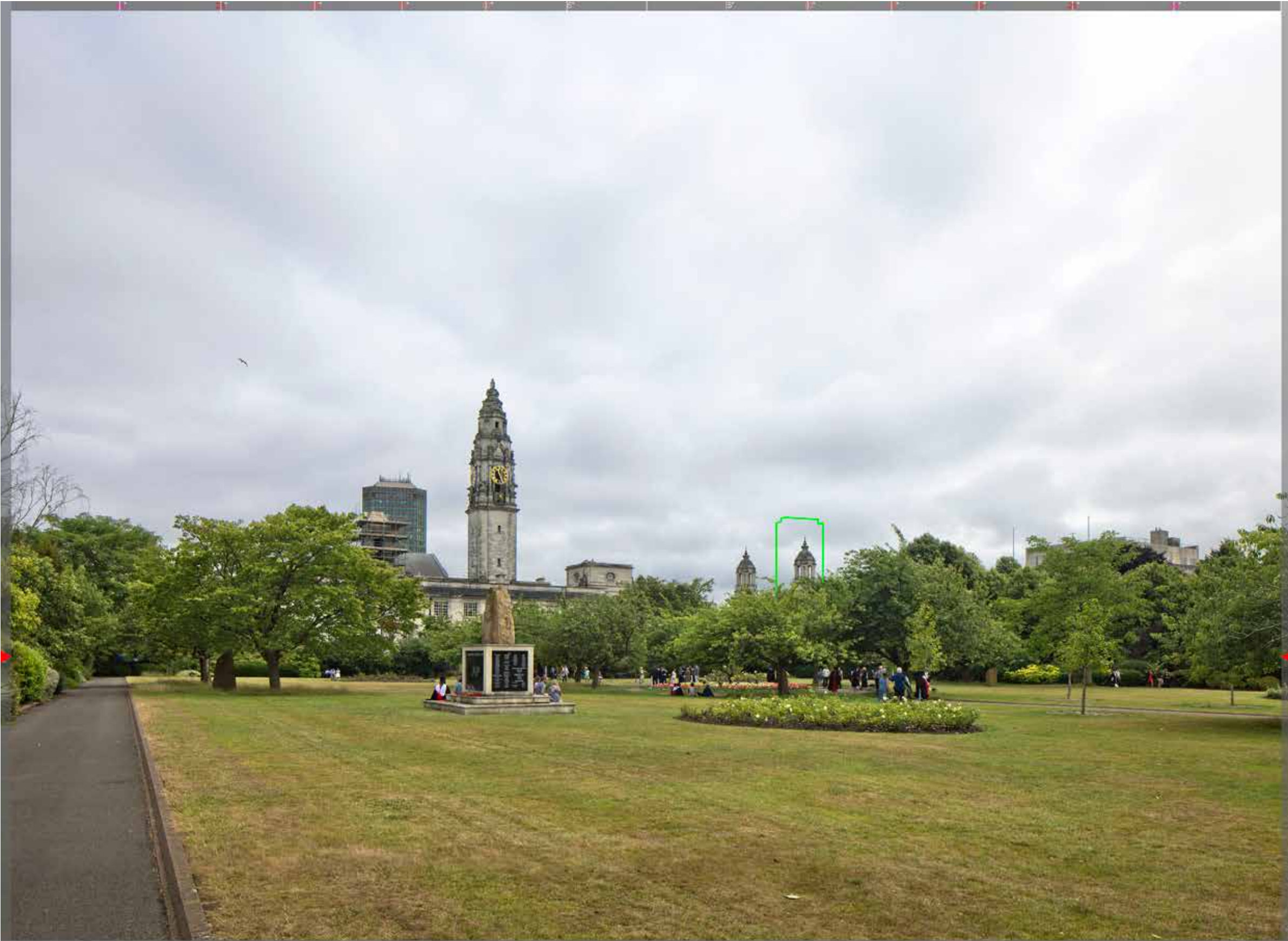
© AR LONDON

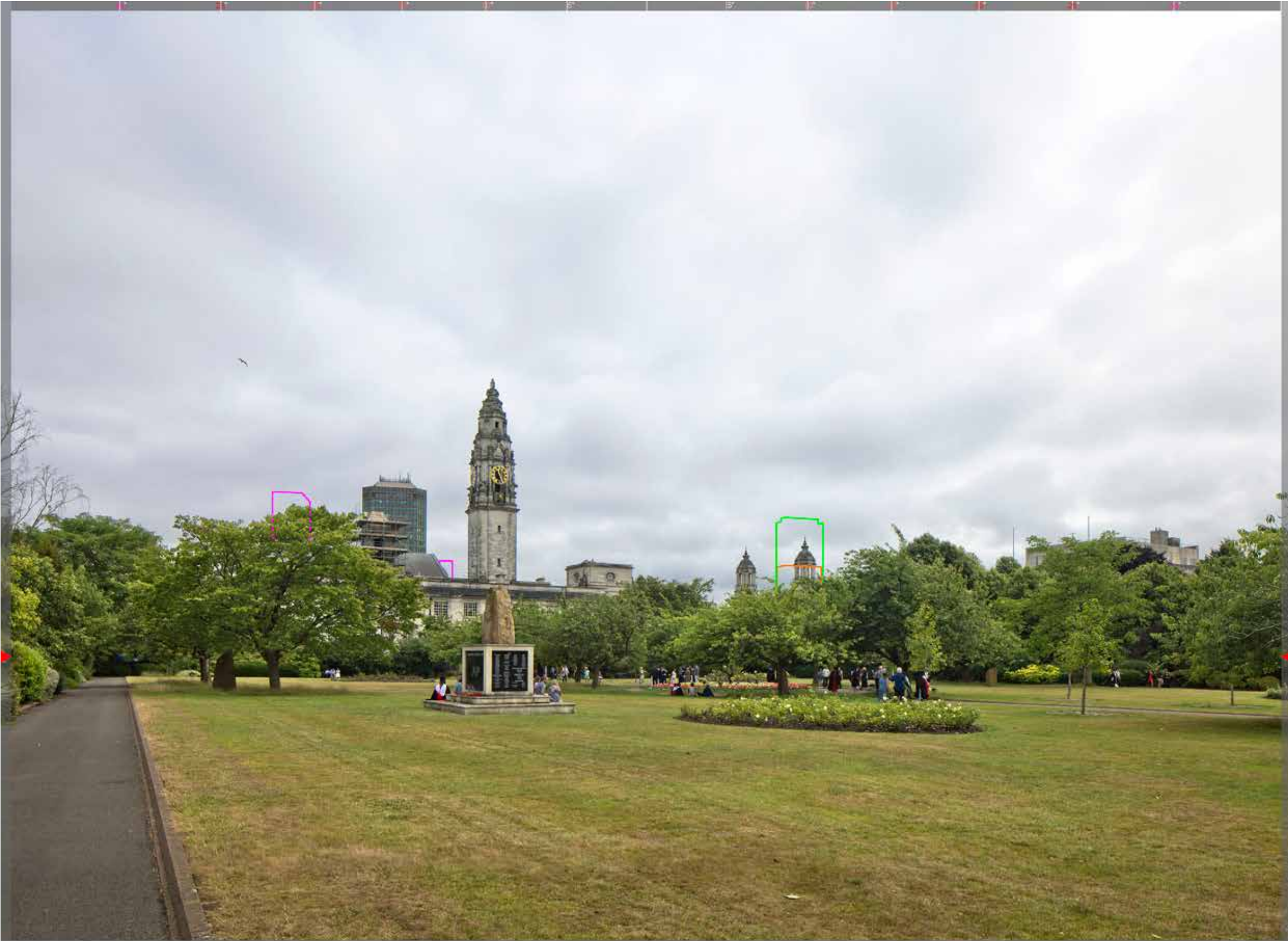
Preliminary Alignment

1.6 m above ground

15:46 17 July 2025

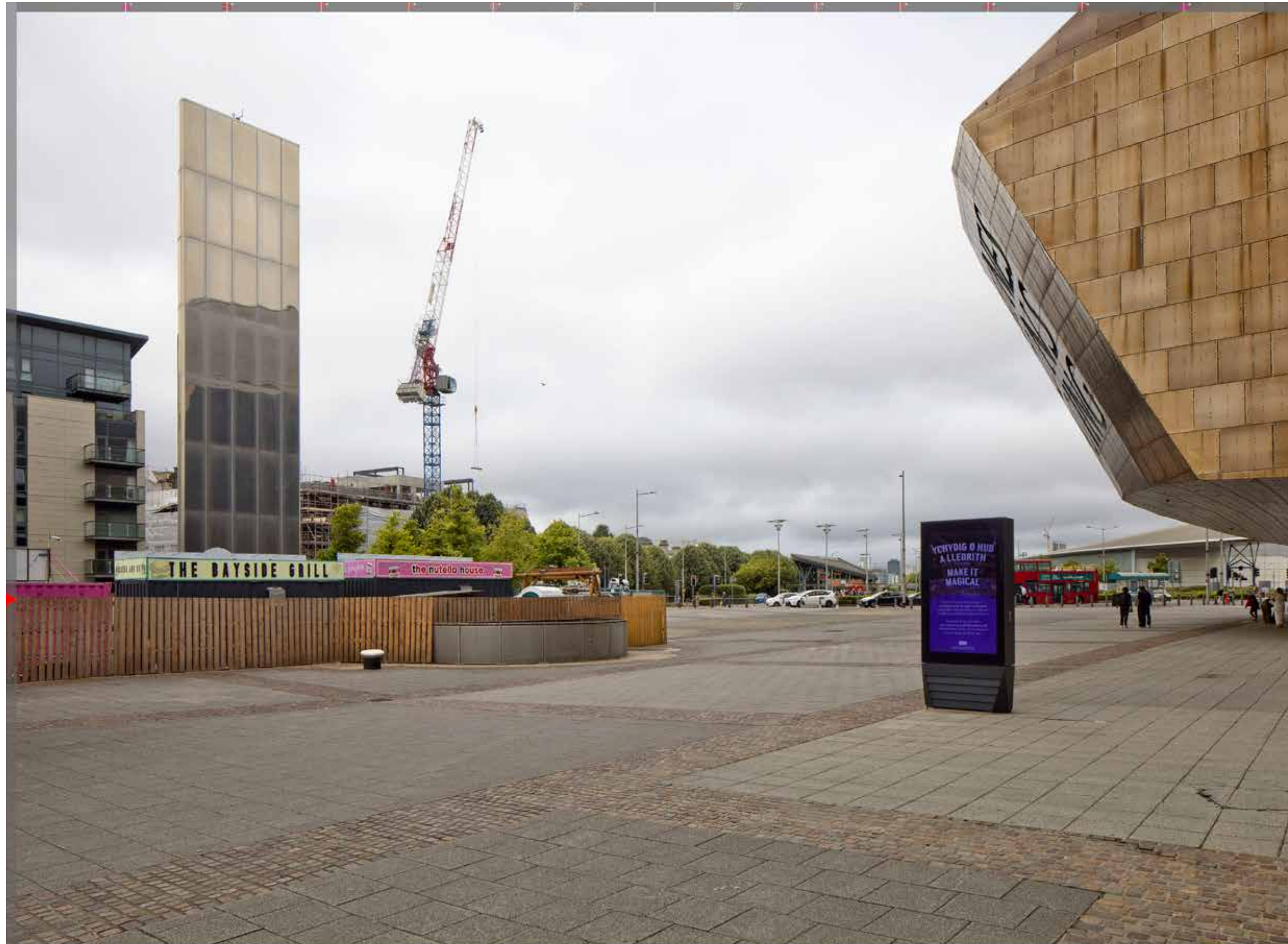
View 7 - Existing





Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

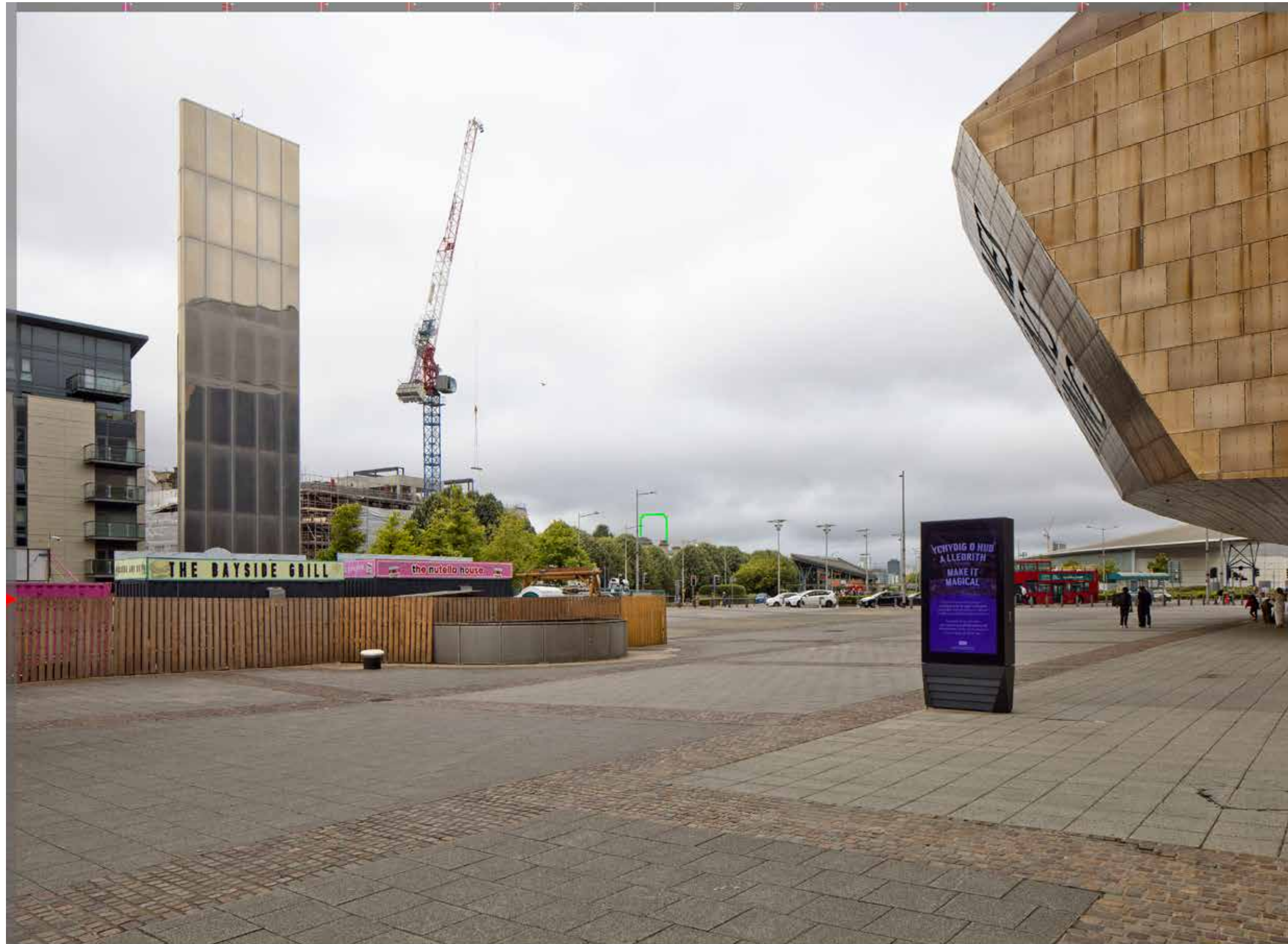
1.6 m above ground

14:29 17 July 2025

View 8 - Existing

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

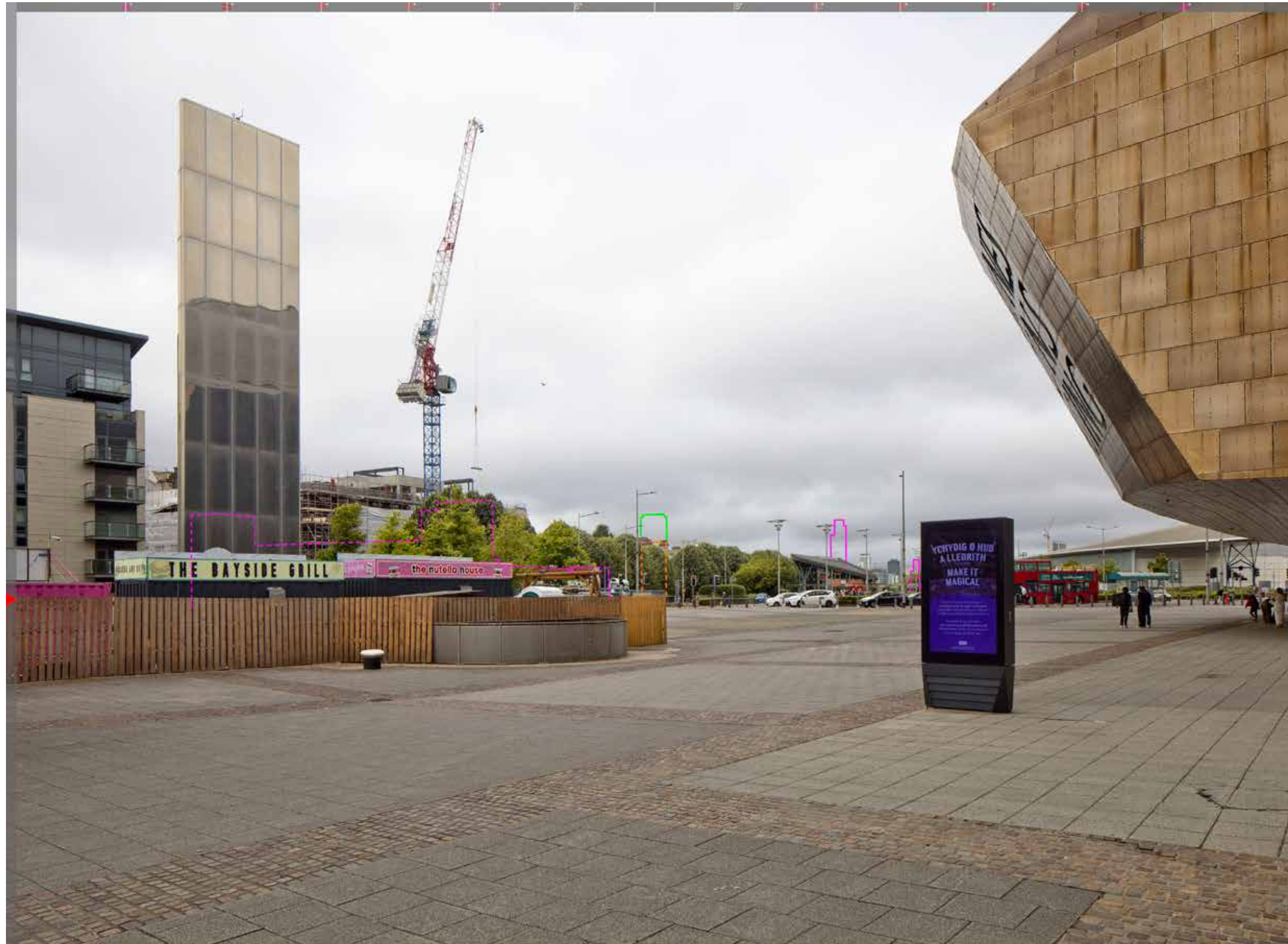
1.6 m above ground

14:29 17 July 2025

View 8 - Proposed

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

14:29 17 July 2025

View 8 - Cumulative



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:30 09 May 2025



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:30 09 May 2025

View9 - Proposed



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:30 09 May 2025



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:54 09 May 2025

View 10 - Existing

Appendix 2 | Verified Views

CENTRAL SQUARE | CARDIFF



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:54 09 May 2025

View 10 - Proposed



© AR LONDON

Preliminary Alignment

1.6 m above ground

13:54 09 May 2025

Appendix 3

Visualisation Methodology Statement.



L O N D O N

PROJECT: Central Square, Cardiff
DATE: July 2025

AVR London were commissioned to produce a number of verified views of the proposals at Central Square, Cardiff. AVR positions were identified by the planning consultant.

2D plans, Ordnance Survey Mapping, local survey data, and the 3D model for the proposed development were provided by the architect.

PHOTOGRAPHY

Equipment:

Canon EOS R5
Canon TS-E 24mm f/3.5L II

1.1 All photography is undertaken by AVR London's in-house professional photographers.

1.2 In professional architectural photography, having the camera level with the horizon is desirable in order to prevent three point perspective being introduced to the image and to ensure the verticals within the photographed scene remain parallel. This is standard practice and more realistically reflects the viewing experience.

1.3 The lens used by the photographer has the ability, where necessary, to shift up or down while remaining parallel to the sensor, allowing for the horizon in the image to be above, below or central within the image whilst maintaining two point perspective. This allows the photographer to capture the top of a taller proposed development which would usually be cropped, without introducing three point perspective.

When the shift capability of the lens is not used the image FOV and dimensions are the same as a prime lens of equal focal length.

1.4 Once the view positions are confirmed by the

townscape consultant, AVR London takes professional photography from each location. At each location the camera is set up over a defined ground point using a plumb line to ensure the position can be identified later.

1.5 The centre of the camera lens is positioned at a height of 1.60 metres above the ground to simulate average viewing height. For standard verified photography, each view is taken with a lens that gives a 68 degree field of view, approximately, a standard which has emerged for verified architectural photography. The nature of digital photography means that a record of the time and date of each photograph is embedded within the photo file; this metadata allows accurate lighting timings to be recreated within the computer model.

1.6 Once the image is taken, the photographer records the tripod location by photographing it in position to ensure the position can be accurately located for surveying (Fig 02).

1.7 Each image is processed by the photographer to ensure it visually matches the conditions on site when the photograph is taken.

REGARDING 24mm FOCAL LENGTH IN AN URBAN ENVIRONMENT

1.8 The Landscape Institute Technical Guidance Note [2] states:

1.5.5 *'When regulatory authorities specify their own photographic and photomontage requirements, the landscape professional should follow them unless there is a good reason not to do so.'*

1.9 The London View Management Framework: Supplementary Planning Guidance (2012) Appendix C: Accurate Visual Representation [1] sets out a well-defined and verifiable procedure for preparing Accurate Visual Representations as part of the assessment of the visual impacts of proposed developments. As the LVMF aims to protect the most significant views in London, the guidance set out in Appendix C is considered best practice within the industry.



Fig 01: 24mm photograph with 50mm photograph overlaid

The LVMF guidance indicates that creators of AVRs should use the appropriate lens for each study, which could include wide angle lenses (wider than 50mm) or telephoto lenses (more zoomed than 50mm), where necessary.

Over time the 24mm lens has become the industry standard in urban visualisation due to its ability to capture context with limited distortion.

Given the Landscape Institute's advice to follow the authorities' own requirements, where applicable, AVR London follows the LVMF guidance.

1.10 When we observe a scene, we can focus on 6-10 degrees. However, without moving our head, the scene

beyond is observed using our peripheral vision. Once we move our eyes we can observe almost 180 degrees without moving our head. In reality we do not view the world through one fixed position, we move our eyes around a scene and observe, height, width and depth.

1.11 This is acknowledged by the Landscape Institute's Technical Guidance Note [2]. The appreciation of the wider context seen through peripheral vision or by moving our eyes (changing the focal point) is key to our experience of a scene.

While photography cannot replicate the human experience entirely, it is widely acknowledged that the use of a 24mm lens in an urban environment provides the viewer with a more realistic experience

than a 50mm lens. For these reasons the 24mm lens is industry standard in the creation of urban photo montages. It should also be noted that using a consistent focal length is favourable so as not to confuse the viewer’s sense of scale.

50mm LENS/CROP

1.12 It should also be stressed that if you were to centrally crop into an image taken with a 24mm lens to the same HFOV (Horizontal Field Of View) as a 50mm lens, the resulting image is identical to that produced by taking it directly with a 50mm lens. An image with a 70 degree HFOV (24mm lens) is geometrically and perspectively identical to an image showing a HFOV of 40 degrees (50mm lens), the 24mm lens purely gives more context to all sides (Fig 01). Further, all of our images allow this 50mm equivalent HFOV to be seen, read and understood on the image itself.

The benefit of using images taken with a 24mm lens is that the observer and in particular an experienced inspector, is able to analyse the image with the benefit of both fields of view.

POINT	EASTING	NORTHING	HEIGHT
AVR03	318008.122	175474.355	10.061
301	318005.834	175986.895	41.533
302	318027.872	175880.856	27.271
303	318046.829	175900.012	43.566
304	318042.976	175756.977	76.261
305	318071.403	175732.644	95.037
306	318061.680	175715.446	67.405
307	318053.620	175652.343	34.243
308	318057.906	175611.035	52.406
309	318075.798	175616.877	82.204
310	318106.547	175608.030	82.200
311	318103.361	175606.874	40.412

Table 1: Example surveying data



Fig 04: Example AVR London graticule



Fig 02: Tripod location as documented by photographer



Fig 03: Survey points as highlighted by surveyor

SURVEY

Equipment:

- Leica Total Station Electronic Theodolite which has 1” angle measuring accuracy and 2mm + 2ppm distance accuracy.
- Leica Smart Rover RTK Global Positioning System.
- Wild/Leica NAK2 automatic level which a standard deviation of +/- 0.7mm/km

2.1 The photographer briefs the surveyor, sending across the prepared photographs, ground positions and appropriate data.

2.2 The surveyor establishes a line of sight, two station baseline, coordinated and levelled by real time kinetic

GPS observations, usually with one of the stations being the camera location. The eastings and northings are aligned to the Ordnance Survey National Grid (OSGB36) and elevation to Ordnance Survey Datum (OSD) using the OSTN15 GPS transformation program.

2.3 Once the baseline is established, a bearing is determined and a series of clearly identifiable static points across the photograph are observed using the total station. These observations are taken throughout the depth of field of the photograph and at differing heights within the image.

2.4 The survey control stations are extracted from the OS base mapping and wherever possible, linked together to form a survey network. This means that survey information is accurate to

tolerances quoted by GPS survey methods in plan and commensurate with this in level.

2.5 Horizontal and vertical angle observations from the control stations allow the previously identified points within the view to be surveyed using line of sight surveying and the accurate coordination of these points determined using an intersection program. These points are then related back to the Ordnance Survey grid and provided in a spreadsheet format showing point number, easting, northing and level of each point surveyed, together with a reference file showing each marked up image (Fig 03 and Table 1).

2.6 The required horizon line within the image is established using the horizontal collimation of the theodolite (set to approximately above the ground) to identify 3 or 4 features that fall along the horizon line. The theodolite more generally is used for measuring angles and distances.

2.7 Using the surveyed horizon points as a guide, each photograph is checked and rotated, if necessary, in proprietary digital image manipulation software to ensure that the horizon line on the photograph is level and consistent with the information received from the surveyor.

Accurate Visual Representation Production

Process

3.1 The 3D computer model is precisely aligned to a site plan on the OS coordinate grid system.

3.2 Within the 3D software a virtual camera is set up using the coordinates provided by the surveyor along with the previously identified points within the scene. The virtual camera is verified by matching the contextual surveyed points with matching points within the overlaid photograph. As the surveyed data points, virtual camera and 3D model all relate to the same 3-dimensional coordinate system, there is only one position, viewing direction and field of view where all these points coincide with the actual photograph from site. The virtual camera is now verified against

the site photograph.

3.3 For fully-rendered views a lighting simulation (using accurate latitude, longitude and time) is established within the proprietary 3D modelling software matching that of the actual site photograph. Along with the virtual sunlight, virtual materials are applied to the 3D model to match those advised by the architects. The proprietary 3D modelling software then uses the verified virtual camera, 3D digital model, lighting and material setup to produce a computer generated render of the proposed building.

3.4 The proposal is masked where it is obscured behind built form or street furniture.

3.5 Using the surveyed information and verification process described above, the scale and position of a proposal within a scene can be objectively calculated. However, using the proprietary software currently available the exact response of proposed materials to their environment is subjective so the exact portrayal of a proposal is a collaboration between illustrator and architect. The final computer generated image of the proposed building is achieved by combining the computer-generated render and the site photography within proprietary digital compositing software.

Presentation

Graticule

4.1 Each Accurate Visual Representation is framed by a graticule which provides further information including time and date of photography, horizon markers and field of view of the lens (Fig 04).

4.2 The Field of View is represented along the top of the image in the form of markers with degrees written at the correct intervals.

4.3 The horizon markers indicate where the horizontal plane of view from the camera lies. (section 2 above explains how the surveyor establishes these horizon points).

4.4 The date and time stamp documents exactly when the photograph was taken. This data is recorded in every digital camera file, known as EXIF data.

6. PUBLISHED GUIDANCE

6.1 The Landscape Institute, states in “Visual Representation of Development Proposals - Technical Guidance Note (September 2019)”, that:

“The LI recognises that, for some types of development, targeted or authority-specific guidance may be appropriate.”

“The London View Management Framework provides useful guidance for large-scale urban development, and is particularly useful in identifying what it refers to as ‘AVR Types’ (0 - 3)”

6.2 We agree with the Landscape Institute and it is broadly accepted across the industry that the London View Management Framework Guidance, Appendix C: Accurate Visual Representations outlines best practice for producing Accurate Visual Representations of urban developments.

The framework was set up to protect London’s most important views and has been used as the industry standard for all significant strategic developments in the capital since. The LVMF Guidance was the subject of full consultation with the local authorities in London and other bodies such as Historic England and Historic Royal Palaces.

The following, outlines the key reasons why LVMF guidelines for urban development are recommended:

Field of View (FOV) and Lens Selection

6.3 It is outlined in the guidance (Point 467) “As we experience a scene, our perception is built from a sophisticated visual process that allows us to focus onto individual areas with remarkable clarity whilst remaining aware of a wider overall context.” For this reason a 50mm lens with a FOV of 40 degrees is not appropriate in a built environment. In comparison a 24mm lens with a FOV of 70 degrees allows the viewer

to appreciate and understand urban context.

Tilt/Shift Lens

6.4 A tilt/shift lens allows the axis of the lens to be moved vertically or horizontally in order to avoid distortion and thus to replicate more closely the complex manner in which human vision is interpreted into an image in our mind.

Due to the complex nature of these lenses, they are of a much higher quality and cost compared to standard lenses and do not have any distortion, barreling/pin cushion effect that lenses of a lesser quality often have. Despite their complexity and cost, the ability to control the viewing centre of an image without any distortion has made these lenses essential to professional photographers, especially in the discipline of architecture in urban environments.

It should be stressed that AVR London only use the shift function of the lens and this is only shifted in the vertical direction. This is simply to allow us to compose images to better demonstrate the view and the proposal’s place within it without introducing 3-point perspective distortion (converging verticals) and to closer replicate how our mind interprets and corrects for such (Fig 04).

Not only is the use of tilt shift lenses standard practice within architectural photography, it is also standard practice throughout all the established professional practices conducting verified images in London. The LVMF guidance itself uses a vertical rise image as its main image of explanation in the Annex identifying good practice.

Stitching and Accuracy

6.5 A 24mm lens captures enough context that it almost always possible to use one photograph to capture a view position. This ensures stitching of multiple images will not be required, on the rare occasion that 24mm FOV is not wide enough a diptych or triptych is preferable, again this is to avoid stitching of images together. Stitching images together introduces inaccuracies and distortion in to

the photograph and leads to a composite of blended perspectives.

It is always more accurate to verify a single photograph compared to a stitched image. Stitched images are impossible to replicate using the same methodology compared with single photographs as the stitching is either done by hand with causes variation or by automated programs which may also introduce variation.

Proven History

6.6 AVR London has used this methodology, aligned with the London View Management Framework, for planning applications in every London borough, throughout the UK from Cornwall to Scotland and Northern Ireland and as far afield as Sydney, Australia without question.

AVR London have also presented work using this methodology at numerous planning inquiries without question.

Research and Future Developments

6.7 AVR London have always undertaken research in to new areas of technology within the industry and this includes within the verified workflow.

Given the previous stated issues surrounding stitched photography we have worked on various research projects and developed a separate methodology to ensure 360 degree photography can be fully verified and viewed within a headset where appropriate. This accuracy has been tested and proven at planning inquiry.

Notes:

The logo consists of the letters 'AVR' in a large, white, serif typeface. The 'A' and 'V' are connected, and the 'R' has a distinctive curved tail.

L O N D O N

avr.london
info@avrlondon.com
+44 (0)208 858 3226

AVR London
6 David Mews
Greenwich, SE10 8NJ



Delivery | Design | Engagement | Heritage | Impact Management | Planning
Sustainable Development | Townscape | Transport

Edinburgh : 11 Alva Street | Edinburgh | EH2 4PH

Glasgow : 177 West George Street | Glasgow | G2 2LB

London : Da Vinci House | 44 Saffron Hill | London | EC1N 8FH

Manchester : This is The Space | 68 Quay Street | Manchester | M3 3EJ

Birmingham : The Colmore Building | 20 Colmore Circus Queensway | Birmingham | B4 6AT

www.iceniprojects.com |  [iceni-projects](#) |  [iceniprojects](#) |  [@iceniprojects](#)