

Tall Buildings

Supplementary Planning Guidance



Mae'r ddogfen hon hefyd ar gael yn Gymraeg / This document is also available in Welsh

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1. Introduction



City centre public space with views to proposed elegant, reflective tall building (far right), Comcast Innovation and Technology Centre, Philadelphia
Dbox / Foster & Partners

1.0 Introduction

Policy context

- 1.1 This Supplementary Planning Guidance (SPG) supplements policies in the adopted Cardiff Local Development Plan (LDP) relating to good quality and sustainable design and more specifically tall buildings
- 1.2 Welsh Government support the use of SPG to set out detailed guidance on the way in which development plan policies will be applied in particular circumstances or areas. SPG must be consistent with development plan policies and national planning policy guidance. SPG helps to ensure certain policies and proposals are better understood and applied more effectively. They do not have the same status as the adopted development plan but are a material consideration in the determination of planning applications.
- 1.3. High quality design policies are embedded throughout the national and local planning policy framework. Welsh Government (WG) guidance includes the following:
 - Planning Policy Wales
 - Technical Advice Note (TAN) 12: Design
 - Practice Guidance: Planning for Sustainable Buildings
- 1.4. Policies in the LDP to which this SPG relates (amongst others) are identified below:
 - 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)

Shaping the character of Cardiff

- 1.5. Well-designed tall buildings in appropriate locations have the potential to add significant value to Cardiff. They can enhance skylines and provide recognisable landmarks that can serve to promote the city on a national and international stage.
- 1.6. This guidance is focussed on the development of tall buildings within the city centre and broadly Cardiff bay. Tall buildings outside of these areas are unlikely to be supported unless a justification within the parameters of the guidance can be provided.

Liveable city

- 1.7. Cardiff seeks to be the most liveable capital city in Europe and to create an inclusive, vibrant, thriving, sustainable and attractive city in which to live and work. Proposals for tall buildings need to demonstrate an exceptional standard of design together with appropriate land uses and public realm through careful planning and design so that they knit well into the existing fabric of the city.

Sustainability

- 1.8. As a very high density form of development, tall buildings have great potential to promote and deliver excellence in sustainability and help to conserve land resources. This guidance aims to ensure that innovative design solutions are employed to ensure that buildings achieve low carbon targets.

Application of the guidance

- 1.9. The SPG broadly covers appropriate locations of tall buildings, types of land uses, urban design, architecture and sustainable development. It will be used to assess the appropriateness of planning proposals for planning applications where it is considered to be relevant.
- 1.10. Each application for a tall building will be considered on its merits and the applicant will be required to justify the siting of the proposed scheme in the context of a clear design analysis and strategy for the site.

Definition of tall buildings

- 1.11. For the purposes of this guidance, a tall building is normally considered to be:
- Within the city centre and Cardiff bay: 8 storeys+ or circa 25m+
 - Outside the city centre: Buildings which are double or more than double height of surrounding properties or significantly taller in terms of actual height and number of floors.

City centre and Cardiff Bay

- 1.12. There are a range of tall and high density buildings in Cardiff and an audit and analysis of these was carried out prior to the SPG written in 2009. This exercise showed a high incidence of buildings up to six storeys which are fairly typical of the built form of the city centre. In this city centre context, buildings of eight storeys and above would be considered as tall buildings which stand above the general skyline and it is proposals of this order that this guidance seeks to address. Floor to ceiling heights can vary in different types of development so a pragmatic approach to this definition will be adopted, taking into consideration the typical characteristics and context of any proposal's surroundings.
- 1.13. In general terms, the city centre and Cardiff Bay area for the purposes of this SPG is considered to be within the City Centre Strategy boundary, which is currently under review as indicated in the LDP (KP10). The fringes of the city centre may adapt and change over time and each site will be considered in its own merits and how the site meets all the criteria in this guide.

Outside the city centre

- 1.14. In areas outside the city centre, buildings tend to be far lower. Buildings which are double or more than double height of surrounding properties or significantly taller in terms of actual height and number of floors, would be considered tall in this context. Tall buildings outside the city centre are unlikely to be supported unless they can be demonstrated as meeting all of the criteria outlined in this SPG.

2. The Location of Tall Buildings



30 St Mary the Axe, 'The Gherkin', London,
Nigel Young / Foster & Partners

2.0 The Location of Tall Buildings

- 2.1. Attractive tall buildings in clusters can help to signify the core areas of the city, particularly areas within the city centre and wider Cardiff Bay. The areas that tend to lend themselves to tall buildings are often along railway corridors, urban corner sites in the core of the city centre, sites that form part of existing clusters of tall buildings (see paragraph 4.8-4.12) and waterfronts.
- 2.2. To justify an appropriate location, proposals need to show a detailed context analysis at a variety of scales including street, block, neighbourhood, skyline and city.

All tall building proposals must demonstrate that:

- There would be no negative impacts on **important views or vistas**.
- The character or setting of **heritage assets** is not harmed.
- The proposal will be a **positive feature in skyline & streetscape**, either by complementing a cluster of tall buildings or forming a strategic landmark.
- No material harm is caused by **overshadowing or overlooking**.
- There will be walking and cycling **accessibility** to sustainable transport and local facilities.

Detailed proposals will:

- Exhibit **exceptional architectural standards**: elegance in form, silhouette and quality of materials.
- Maximise **activity** through ground floors uses and fenestration.
- Provide the highest standards of building **performance, safety, inclusivity** and **adaptability**.
- Include exemplary **cycle storage, low car parking levels** and **integrated servicing, recycling and waste storage**.
- Prove that the development will not create adverse **microclimatic** effects.
- Deliver significant enhancements to the **public realm**.

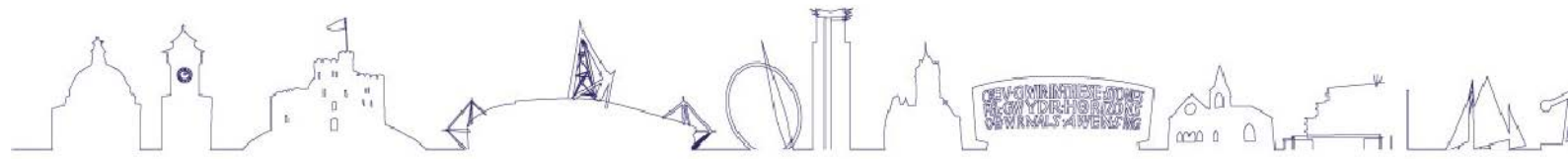
3. Sustainable Transport, Parking Guidance and Community Facilities



3.0 Sustainable Transport, Parking Guidance and Community Facilities

- 3.1. Tall buildings will only be acceptable in locations that are highly accessible by walking and cycling to a range of sustainable transport options, particularly bus stops on core routes and railway stations (as specified in Active Travel Guidance). Access to additional facilities such as car clubs and water taxi stops can also be beneficial to increase the range of options available.
- 3.2. The Active Travel Guidance (WG) indicates that transport stops are key walking trip attractors and their accessibility can be assessed using isochrones with a 400m / approximate 5-minute zone. A high quality route is of equal importance and an analysis of should be included in the Design and Access Statement. Manual for Streets advises that walkable neighbourhoods are characterised by having a range of facilities broadly within 10 minutes walking distance. The high population-density of tall buildings and the demand placed upon the transport network by this scale of development is a major consideration in determining their appropriate location. The site for a proposed tall building must be located where there is good access to community, leisure and other facilities.
- 3.3. The LDP targets for sustainable transport and aspirations for low carbon design mean that it will be unsuitable for private cars to be the predominant means of access to tall buildings. Important considerations in determining applications include capacity of the existing transport network, the quality of pedestrian and cycle links between the proposed site and public transport infrastructure and the feasibility of making improvements to the transport system. For proposals in sustainable locations, reduced or zero parking provision will be sought which will ensure that the development is not dominated by its parking provision. The design of parking measures needs to be considered along with the design principles for the public realm. Travel plans will be required to support sustainable transport proposals.
- 3.4. Any parking is preferably located completely underground. Undercroft parking is only acceptable where it does not have a negative impact on the public realm and does not create long stretches of unanimated edges. This can be overcome by wrapping car parking with ground floor uses. If a blank elevation of undercroft or partial underground parking is considered to be essential for a short stretch of the site, it must be screened with an appropriate materials such as soft landscaping, green wall, natural materials or engaging public art.
- 3.5. The entrance and exit to parking areas must be located where they minimise disruption of pedestrian movement on pedestrian routes or public spaces. Where vehicular access below the building is allowed, access needs to be strictly controlled and managed.

4. Skyline, Strategic Views and Vistas



1. Illustrative skyline of notable buildings,
2. Skyline across Cardiff Bay, City of Cardiff Council,
3. Tall building proposal at dusk, Callaghan Square, Rio Architects/ Watkins Jones/ Skyline

4.0 Skyline, Strategic Views and Vistas

i. City centre

Skyline

- 4.1. Tall buildings in the city centre and bay need to create a positive feature in the city skyline, as viewed from key locations around the city.
- 4.2. The skyline of Cardiff is typically made up of a number of tall buildings, in addition to other notable architectural features in the roofscape. It is considered important to retain key views to strategic architectural features and buildings in the skyline from both long range and intermediate range views because they create an image for the city of Cardiff as well as aiding legibility walking through the city. Examples of notable features in the city centre and bay include: the Millennium Stadium masts, the Millennium Centre bronze-coloured domed roof, the Pierhead building, church steeples, Cardiff Castle clock tower, City Hall clocktower and the Norwegian Church.
- 4.3. Buildings of character should be given sufficient breathing space to preserve their setting. Consideration should be given to how a tall building may impact on smaller buildings of character within a view corridor. The proposal should show how the building complements them character buildings, possibly framing them, but not distract from them.

Nightscape

- 4.4 The use of well-considered, artistic or innovative lighting solutions can also enhance the legibility of buildings at night adding value to the city's skyline.

Strategic views

- 4.5. Important strategic views, of an intermediate scale, towards the bay and city centre can be gained from: the Barrage, the 10k circuit around Cardiff Bay, Penarth and Lloyd George Avenue. Intermittent views can also be glimpsed from vehicular arterial routes, such as the Central Link road and A4232. Important local / close range views to notable features and key buildings can be gained from the Hayes, Queen Street, Cathays Park, Castle Street and bridges along the River Taff.
- 4.6. Tall buildings should, where appropriate, contribute to the opening up and framing of key views, or acting as an enclosing vista at the end of street to improve the legibility of the city and the wider townscape.
- 4.7. Relevant building proposals will be required to show these strategic viewpoints (and possibly others) with computer generated images (CGIs) and in some cases audited views. These need to be discussed with the local planning authority. Views to the city centre and bay may include long range views from suburban locations such as Penarth Head, Radyr and Rumney, views from within parks, river corridors and views from within relevant conservation areas, historic parks and gardens.

Clusters

- 4.8. Proposals for tall buildings should generally be located within an existing cluster or form part of a proposal to create a new cluster (a cluster can be defined as a group of buildings which form a visual cohesion from more than one viewing point). The building should demonstrate the ability to raise the quality and coherence of any existing cluster. There may be exceptions where a free-standing tall building outside of a cluster can be demonstrated as providing a landmark within the street scene and skyline or at the termination of a vista.
- 4.9. The development of a building within an existing cluster of tall buildings or the creation of a new cluster has specific design considerations. These include identification of the relationship of the new building to an existing dominant building in the cluster and to other surrounding buildings, or the consideration as to whether there is a need for the proposal to form a new dominant building to the group.
- 4.10. Additional tall buildings would only be acceptable if there is a distinct urban design rationale and benefit which does not prejudice other aspects of the SPG. These relationships need to be demonstrated through a skyline analysis and as the development is likely to be visible from 360° it must be assessed in this context from a number of different viewpoints. It is important to create a visual gap between tall buildings so that they do not appear to merge as one large slab.
- 4.11. It is important to consider the impact of a cluster of tall buildings at ground level. Continuity of active street edge is important and tall buildings should not become isolated objects in a space.
- 4.12. The replacement of an existing tall building with another will not necessarily be supported unless all the criteria of this guidance can be met.

Landmarks

- 4.13. Tall buildings can draw attention to locations of civic or visual importance such as city centres and major public transport interchanges. They can also help to give focus, momentum and publicity to areas undergoing regeneration. Well-designed tall buildings often gain attention from other cities as notable landmarks and create topics of interest and discussion.

ii. Areas outside the city centre: views

- 4.14. Views to sites for tall buildings outside of the city centre will be particularly important from parks and river corridors in the locality and anticipated views from areas where they will break an established tree line that interrupts a rural setting with hills or countryside as a back drop. A visual impact assessment is likely to be needed. The topography around the area and viewing places in the wider neighbourhoods need to be accounted for.

5. Historic Environment Setting



Tall Building proposal: materials, scale & massing respond sensitively to Listed Chapel,
Rio Architects; Watkins Jones; Skyline

5.0 Historic Environment Setting

- 5.1. Tall buildings can be highly visible from many outlying areas of the city, including sensitive historic environments, and so the potential impact on these environments needs careful consideration. Any tall building proposals relating to the heritage assets listed below (or their settings) will only be permitted where it can be demonstrated that they will preserve or enhance that asset's architectural quality, historic and cultural significance, character, integrity and/or setting:
- Scheduled monuments;
 - Listed buildings and their curtilage structures;
 - Conservation areas;
 - Archaeologically sensitive areas;
 - Registered historic landscapes, parks and gardens; or
 - Locally listed buildings of merit and other historic features of interest that positively contribute to the distinctiveness of the city.
- 5.2. The Town and Country Planning (Development Management Procedure, Wales, Amendment Order 2016) gives details of consultations to Cadw that are necessary. This includes development that has a direct physical impact on a scheduled monument and also where development is likely to be visible from a scheduled monument and where it meets one of the additional listed criteria in the Schedule.
- 5.3. In particular, the area surrounding Cardiff Castle along Castle Street is especially sensitive to any buildings which break the height of the walls of the castle. Any proposals that can be viewed in the vicinity of Cardiff Castle and the Civic Centre need careful attention. In this area of very high sensitivity, it is unlikely that proposed buildings significantly taller than the prevailing townscape will be supported. Please refer to Appendix A: City centre and bay aerial photo.
- 5.4. A Conservation Area Appraisal has been adopted for each designated area. These documents set out the special architectural or historic interest of each area and provide guidance to protect their character and appearance. These can be found at cardiff.gov.uk/conservation.

6. The Design of Tall Buildings



Tall building proposal: active ground floor frontages, Rio Architects/ Watkins Jones/ Skyline

6.0 The Design of Tall Buildings

6.1. Tall buildings have visual prominence and significant impact on the wider landscape of the city, and often take on the role of major landmarks. In this context it is essential that the design and appearance of tall buildings are of exceptional quality. The Design Commission for Wales' (DCfW) Design for Tall Buildings and CABE/ English Heritage's Guidance on Tall Buildings emphasises that tall building development carries with it an increased obligation to return positive benefits to the immediate and wider environment. In assessing this, particular attention will be focussed on five major issues:

1. A **mixture of land uses** within the tower that compliment other land uses within the area to create a vibrant city that supports streets that are busy at many times during the day and night;
2. The **form and silhouette of the building** - this includes consideration of visual impact, and relationships with both the local context and other tall buildings;
3. The **quality and appearance** of the proposed materials and architectural detailing;
4. The **impact and interface at street level**- how the building contributes positively to high quality, safe, secure and legible public realm and urban design;
5. The **sustainable building design** – how the building employs low carbon design.

i. A mixture of land uses

6.2. Tall buildings should ideally contain a range of land uses to support a vibrant area. At the least, ground floor uses should support frequent coming and going and overlooking. Opportunities may be explored in some cases to include publicly accessibly atrium areas.

6.3. Mixed uses within one building on different floors can support the provision of active frontages to the ground floor, enlivening streets and spaces at different times of year and throughout the day and night. Various uses can be accommodated within a tall building. These might include office development, a hotel, residential, student-accommodation, restaurants, cafes and shops, leisure use, and more public uses such as an art gallery, a university campus, libraries, and hospital buildings. The design principles set out below can generally be applied in most situations although there may be some specific design requirements that are relevant to a particular land use. The needs of the occupiers should be supported with suitable design. For example, any tall buildings that contain student accommodation need a clear strategy for pick up and drop off at the start and end of term.

Public access to top of building

6.4. Tall buildings can benefit from public viewing areas or restaurants on the uppermost floors of a tall building. If such an area is being included, it should be outlined how this access would be managed.

ii. The form and silhouette of the building

Architectural quality

- 6.5. The prominence of tall buildings dictates that they must be of outstanding quality in architectural form and detailing. The proposal must be a well-articulated structure developed from a strong understanding of the site context and a clear design vision.
- 6.6 The quality of the form and silhouette of the building is critical and includes consideration of visual impact, and relationships with both the local context and other tall buildings. Tall buildings should be elegant and slender in form and should not appear as slab like structures. The treatment of the top of the building is particularly significant given its visibility on the skyline. Attention needs to be given to the sensitive integration / screening, of antennae, aerials, roof plant, lift over runs health and safety barriers and external cleaning hoists to ensure that they become an integral part of the overall design of the building.

Scale and massing

- 6.7. The scale and massing needs to be considered in terms of impact at street level in addition to appearance from more distant views. Bulky tall buildings with a strong horizontal massing should be avoided, with the emphasis being on creating vertically slender buildings with a clear base, middle and top.

Legibility

- 6.8. The form of the building must have a positive effect on the skyline and where appropriate, aid the legibility of the townscape, for example by providing a terminating landmark to a vista (without compromising other criteria). The building should help pedestrians find their way around the local area.

Adaptability/ flexibility/ future proofing

- 6.9. The building should be designed to be adaptable for a range of future uses. Adaptability involves the design of buildings so that they are flexible and can be used for a variety of uses over time. Such considerations can include appropriate floor to ceiling heights and load bearing requirements. Layout and modular forms can also help with future adaptability, for example enabling an office building to be subdivided into smaller units either horizontally or vertically. The use of high quality materials result in durable buildings which can stand the test of time.

Civil Aviation Authority restrictions

- 6.10. Consultation with the Civic Aviation Authority may be required.

iii. Quality and appearance

- 6.11. The architectural quality of the building needs to be outstanding. There can be numerous design solutions to a site that respond to the built and natural context in terms of similarity or contrast. Whichever approach is chosen, it must convey how the proposal references its surroundings through a contextual appraisal.

Materials

- 6.12. Materials need to be of the highest quality and robust (given the prominence of the buildings and limited opportunities for maintenance access). Qualities which can work well at a building of this scale include lightness, reflectivity and transparency, as this can help to reduce visual bulkiness and add elegance. The appearance of the materials on the façade should appear seamless where possible to minimise the visual impact of vents and joints. At ground floor level, materials should be of sufficient quality, richness and scale for appreciation at the walking 'human scale'.
- 6.13. There are some instances of tall buildings in Cardiff where light coloured render has not weathered well. Applicants should demonstrate that the materials selected have been subject to a thorough assessment to demonstrate that they will stand up to the level of exposure they will experience. In general, render finishes do not weather well and should be avoided. Low carbon design may provide the opportunity for the use of innovative materials but the robustness and appropriateness of such materials will need to be clearly demonstrated.
- 6.14. The materials specification needs to demonstrate that appropriate levels of counter- terrorism measures have been taken. This will include, for example, the use of glazing that minimizes shattering and blast effects.

iv. Impact and Interface at Street Level

Street interface

- 6.15. The impact of the building at street level warrants focussed design to ensure successful design for the pedestrian experience. The interface between the building and the street or public realm is critical to the success of the overall building. The building at street level needs to integrate well into the remainder of the built environment. In rare cases where topography necessitates that the ground floor is above street level, care is needed at both the ground floor and the street. Active ground floor uses (in addition to residential or student accommodation access) including a sufficient number of entrance points are essential in city centre and urban locations at intervals along the façade at strategic places to enliven the street throughout the day and night. The quality of material, detailing, glazing and window design needs to articulate the street interface (which may be ground floor plus first floor and above) as a distinct section of the building to reinforce an animated facade.
- 6.16. Where a proposal for a tall building has private or semi-private space surrounding it, the space should be well defined, high quality, often frequented, overlooked and secure.

Public realm impact

- 6.17. The high volume of pedestrians moving from the main entrance hall / lobby of the building into the street places pressure on the surrounding public realm. The facade design at the first few floors should be integrated with landscaping and public realm design from the outset to achieve a holistic design of highest quality, both in the public realm and the architecture at the human scale.
- 6.18. Outside, there needs to be adequate circulation space and a high quality setting for the building including paving; any changes in level need to be well integrated into the landscaping strategy. Improvements to the public realm may necessitate redesign of street infrastructure, such as highway and footway layout. If there is space to do so and if it is appropriate for the

location, it may be necessary to design in bespoke lighting, benches, trees and planting, publicly accessible cycle stands, way finding and any other street furniture. Contributions towards public realm improvements via a financial contribution may be requested in lieu of physical works. Reference can be made to the LDP policy KP7: Planning Obligations, emerging SPG and the emerging guidance on Community Infrastructure Levy. The Cardiff Public Realm Manual provides more information on appropriate finishes.

- 6.19. Opportunities to manage water run-off through sustainable drainage systems through hard and soft landscape are encouraged and should be investigated.

Open space and parks interface

- 6.20. Where a tall building plot adjoins an area of public open space or a park, the existing use of the space as well as the anticipated uses will dictate a site-specific ground floor design in order to create an appropriate interface. Decisions will be needed with regards to the best boundary treatment and whether opening up to the space or creating a hard edge is most appropriate.

Water frontage

- 6.21. It is important that publicly accessible waterfront assets are maximised to their full potential. Creating, enhancing or continuing a pleasant waterfront walkway can increase quality of life benefits for residents of Cardiff and visitors. Such environments include Cardiff bay which includes a 10km circular walk, city centre river frontages, and canals. To create an inviting walkway, it should be sufficiently wide and the interface with the building needs to be active and overlooked to ensure that pedestrians feel safe. This includes ensuring there is sufficient interest and detailing, overlooking, windows and doorways from units to walkways and footpaths. In certain situations, a set-back with a small courtyard area with greenery and railings to a unit can provide such an environment. Public art can provide some interest for short stretches, but is not in itself a substitute for an active and overlooked water frontage.
- 6.22. There may be opportunities for public spaces to be created at strategic points along the walkway to facilitate sitting and opening up views to the walkway to aid legibility in the wider area and movement to key streets to facilitate links. Such an example includes the landscaped area in front of the Senedd building. The views and experiences gained along the waterfront experience as a sequence of spaces for any proposals along Cardiff Bay 10km circuit should be included in a Design and Access Statement.
- 6.23. North of the Millennium Stadium, the established Taff Trail running along the River Taff frontage is typically rural and screened in character and this should be maintained wherever possible. The Ely and Rhymney River frontages will also need careful consideration to improve the experience along the trails.

Accessibility, inclusive and universal design

- 6.24. There are a number of best practice documents which can be sourced with regards to mobility and inclusive design and can be referenced in association with the Equality Act. One such example is the: Inclusive Design in the Built Environment Handbook – Who Do We Design For? by Sandra Manley (2016) and endorsed by Welsh Government and Design Commission for Wales.
- 6.25. The seven principles of universal design should be looked at in conjunction with inclusive design and include: Equitable use; Flexibility in use; Simple and intuitive use; Perceptible information; Tolerance for error; Low physical effort; Size and space for approach and use.

- 6.26. The movement around the outside of the building and the access into the building needs to be designed with inclusive design principles. This aim should be to ensure a single, equal access treatment for all users. Proposals should be linked with surrounding buildings, transport facilities and existing footpaths effectively with dropped kerbs, appropriate tactile paving and adequate manoeuvrability and avoiding creating under-used routes through vulnerable areas.

Public art

- 6.27. Opportunities for the integration of public art should be investigated at early design stages in line with the Council's Public Art Strategy and Cardiff Public Art SPG. Well-designed public art can deliver a wide spectrum of positive outcomes for the scheme and the wider community, as well as enhance place identity. Tall buildings can often benefit from integrating art into the building itself such as façade details or as part of other necessary engineering such as wind breaks or doorways, for example.

Parking

- 6.28. The integration of parking should not have a negative impact on the public realm (see section 3).

Microclimate

- 6.29. The proposal must demonstrate evidence of an acceptable level of impact in terms of microclimatic effects including wind tunnel effect, shadowing, solar glare and the effect of night time illumination.
- 6.30. A daylight and sunlight assessment should include a technical assessment as well as a 3D model sun path analysis illustrating the shadowing of the building at during each season and in the morning, midday and evening.
- 6.31. In general, the taller the building, the stronger the potential for wind effects at the base of the building and the greater the need for mitigation measures. A full wind tunnel assessment should include evidence together with conclusions drawn about the impact on building entrances, pedestrian strolling, public spaces and seating areas, cyclists and other road users on nearby streets. The study should account for the impact it may create further down the street outside other existing buildings. Any adverse wind conditions should be identified during the design process, the design amended accordingly in an integrated way and summarised clearly in the Design and Access Statement.
- 6.32. A short summary of any studies that affect all aspects of microclimate should be given in the Design and Access Statement.

Security

- 6.33. The proposal must demonstrate that it positively contributes to community safety. This approach includes: ensuring public spaces around the building have regular pedestrian footfall; enabling capable guardianship; good natural surveillance; illumination; well defined, secure and inclusive points of access, and clearly defined public and private space. It is recommended that further advice is sought from the South Wales Police Design Out Crime Officer and where appropriate the Counter Terrorism Security Advisor during the design stage.

Waste management and servicing

- 6.34. The necessary servicing requirements such as refuse storage, access for refuse collection and transformer rooms should be well integrated and achieved with minimal impact on the quality and vitality of the public realm, including pedestrian movement and public spaces. Consideration needs to be given to the access for waste collection vehicles, particularly when emptying multiple bins. Where the collection of bins is likely to take a significant amount of time (i.e. more than 10 minutes) a service lane should be considered to prevent congestion.
- 6.35. A designated storage area to accommodate general waste, recycling and food waste needs to be provided at a suitable scale for the type of development. The Waste Storage SPG provides guidance on internal and external storage sizes including requirements for bulky item storage and division of waste streams for different types of developments, such as commercial units, residential flats and mixed-use. It is important that residential units in tall buildings, allow for a degree of flexibility with waste storage in order to accommodate possible future changes to the Council's waste collection method. In mixed-use developments, two storage areas need to be identified to clearly separate domestic and commercial waste streams.
- 6.36. A detailed waste management strategy will be required to outline how all waste from a tall building will be managed and collected. Integrated and innovative solutions that maximise recycling will be welcomed. Other types of deliveries to the building also need to be considered.

Amenity

- 6.37. Tall buildings will not be permitted in locations where they would overshadow or overlook adjacent properties to the significant detriment of the amenity of neighbouring occupiers.
- 6.38. The proximity of two or more tall buildings can create significant issues of overlooking and overshadowing. Proposals adjacent to or in the vicinity of other tall buildings need to ensure that the privacy and amenity of existing and future residents and occupiers is not compromised, in addition to the implications of the proposal on existing views from neighbouring properties. Appropriate positioning and orientation of windows and habitable rooms may assist in mitigating amenity issues.

v. Sustainable building design

- 6.39. The planning system plays an important part in improving the sustainability, including the energy performance, of new developments whilst helping to address the impact of climate change. As set out in Planning Policy Wales (PPW) the planning system must provide for new homes and buildings in a way which is consistent with sustainability principles.
- 6.40. Tall buildings are considered by the Council to be a form major development where the co-location of high density living and mixed-use development can present significant opportunities for utilising renewable and low carbon technologies including energy supply systems. An environmental strategy for the building should be based on analysis of the site and should inform early decisions such as building form and orientation. An independent energy assessment should be submitted with the scheme investigating the financial and technical feasibility of incorporating such a scheme and submitted at planning application stage, in line with LDP policy EN 12.
- 6.41. The Council will reasonably expect the fabric and the operation of tall buildings to achieve

higher energy efficiency standards than the norm due to their landmark nature, their density, and the need to future-proof a building type which is expected to have a significant lifespan. Planning Policy Wales and the WG Guidance document: *Planning for Sustainable Buildings*, should be referred to. Tall buildings in particular are likely to require innovative solutions to issues to optimise solar energy, natural lighting and heating, whilst also reducing solar glare through orientation and appropriate glazing. Explanation on these matters have been addressed can be referred to in the Design and Access Statement.

- 6.42. Measures which could be integrated into the design of the building include improved insulation levels, efficient heating and ventilation systems and energy-efficient illumination. Comfort conditions both internally and externally need to be considered as part of the environmental strategy in relation to daylight, ventilation, solar gain and possible overheating.
- 6.43. The sourcing of locally sustainable materials is encouraged by reducing waste and energy in the production stages. Waste minimisation at the design, demolition and construction stage of the development should be taken into account.

7. Affordable Housing Guidance and Design for Living



Quirky design can aid legibility,
Iglu Brisbane, 26 Mary Street, Bates Smart Architects

7.0 Affordable Housing Design and Design for Living

- 7.1. Any residential tall building proposal needs to demonstrate how it will result in the creation of good places to live, through the quality of internal living spaces, amenity space and through adherence to principles relating to access, security, legibility and quality.
- 7.2. The location and type of affordable housing will be determined by the particular circumstances and characteristics of the site and the development, and the economics of affordable housing provision in line with current LDP policies. Applications for a tall building(s) do not preclude the provision of affordable housing. Proposals should make reference to the current LDP policies on affordable housing and the forthcoming Planning Obligations SPG.

8. Open Space Requirements



Integrating ground floor activity, water and open space into new development.
Hammarby Sjostad, Stockholm, Urban Initiative Studios

8.0 Open Space Requirements

- 8.1. Given the high population-density of tall buildings, adequate provision needs to be made for public and private open spaces. The types of appropriate spaces will need to be site specific and in accordance with the LDP policy C4 and C5, Open Space SPG (to be superseded), forthcoming Planning Obligations SPG and forthcoming Green Infrastructure SPG.

Public green spaces, hard landscaping, parks and waterfronts

- 8.2. Tall buildings, particularly when grouped together, need to be complemented with a network of high quality open spaces, easily accessible by short walking distance for the occupiers. This provision will be secured through S106 agreement in accordance with the Council's open space guidance.
- 8.3. All waterfronts should be publically accessible and contribute to the local pedestrian network. The waterside promenades should provide an opportunity for active recreation, walking, jogging and cycling, good accessibility and intermittent seating in places where the microclimate and views are preferable.

Shared private and semi-private spaces and roof gardens

- 8.4. Shared private outdoor circulation spaces around the building should be designed for dwelling in and quiet contemplation, rather than simply moving through, where possible.
- 8.5. Where family accommodation is proposed, shared courtyards must provide for quality informal recreation and relaxation in a mainly soft landscaped environment.
- 8.6. It can be useful to include practicalities for private open spaces where appropriate, such as washing lines.

Individual private courtyards and balconies

- 8.7. The amenity value of individual private outdoor space such as balconies, roof terraces and small ground floor courtyard areas to public spaces are often valued and can become an important design consideration.

9. Pre-application Discussions



Left: Comcast Innovation and Technology Centre, dbox/ Foster and Partners,
Right: High density city living can be an attractive housing choice
Collins House, Melbourne, Bates Smart Architects

9.0 Pre-application Discussions

- 9.1. The Local Authority encourages applicants to submit pre-application proposals on any proposal for a tall building in Cardiff. A demonstration of the design vision for the proposal in addition to the key impacts of the proposal through appropriate modelling and visual material can greatly assist pre-application discussion.

Design Commission for Wales

- 9.2. The Design Commission for Wales (DCfW) offers a design review which can be requested by the developer or may be undertaken at the request of the Local Planning Authority. The Commission welcomes consultation on proposals at the earliest stage before planning applications are submitted in order to provide advice on achieving design quality in development.
- 9.3. The DCfW set out the material that they seek from applicants when presenting proposals in their Designing for Tall Buildings guidance. Materials to convey the design proposals and rationale should include:
- Plans clearly showing how the building relates to the surrounding area;
 - Sections to demonstrate street width to building height ratio;
 - Elevations to show how the building meets the ground and relates to adjacent buildings
 - Clear, unambiguous verifiable three dimensional studies;
 - Models to show the massing and impact of the proposed building on the surrounding area
 - Illustrations of the scheme at pedestrian eye level from the adjacent street(s) and from the strategic locations identified;
 - Attention to the top of the building including how plant will be accommodated;
 - The nature of the impact, at ground level, of servicing the building;
 - Materials and, at the appropriate stage, detailing of facade treatment.
- 9.4. The DCfW and Welsh Government have produced a Site and Context Analysis Guide: Capturing the Value of a Site, which can help guide an appropriate site analysis.

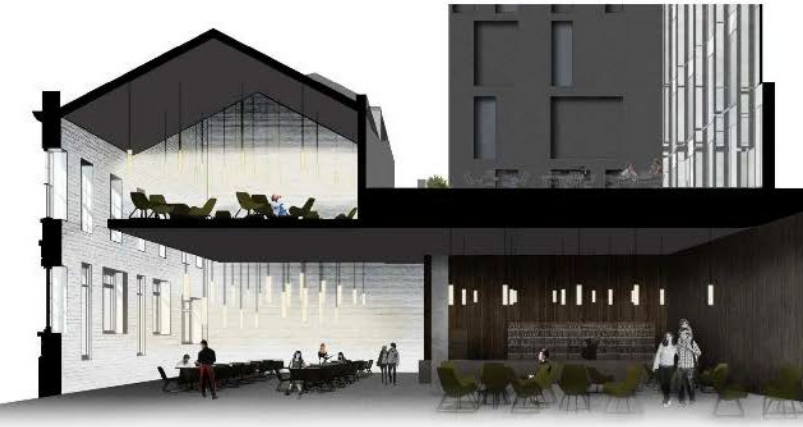
Guidelines regarding outline applications

- 9.5. The submission of an outline application for a tall building will not normally be appropriate given the requirement for detailed information to allow the application to be adequately assessed. Proposals for tall buildings may be considered at an outline stage as part of a wider masterplan proposal subject to sufficient information regarding this element of the scheme being provided to the satisfaction of the authority.

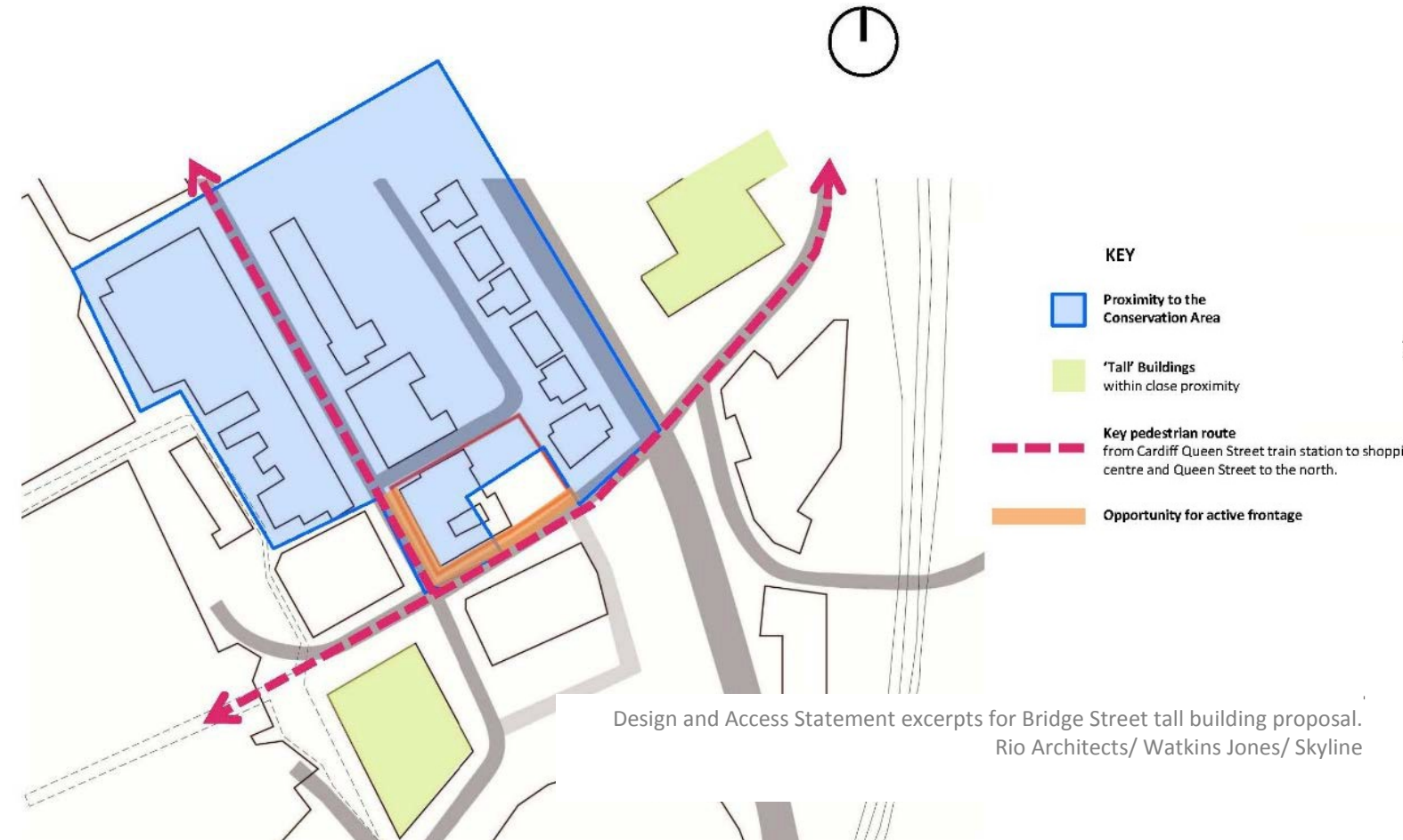
10. Design and Access Statements



Open retail unit occupying Lettable Unit A



Possible Mezzanine level within Lettable Unit A to create additional commercial floor



Design and Access Statement excerpts for Bridge Street tall building proposal. Rio Architects/ Watkins Jones/ Skyline

10.0 Design and Access Statements (DAS)

- 10.1. The scope of Design and Access Statements should be agreed with the Local Authority at the pre-application stage to ensure all site specific issues are covered in line with WG Guidance on Development Management Procedures.
- 10.2. An indication of the scope of design information required as part of the planning application is indicated below. Some of this detailed information may be in separate studies or reports, but should all be referenced in the DAS in summary form. Information to be included in the DAS following discussion would include:

1. Vision

2. A contextual analysis of the immediate area and wider area:

- Character and context, architectural, materials and historic character appraisal;
- Wider strategic context, city centre or city scale;
- Pedestrian cycling and transport access and amenities;
- Development constraints;
- Development opportunities;
- Justification of location in line with locational criteria;
- Topography;
- Urban grain;
- Significant existing views of the skyline. Include any other tall building proposals;
- Scale, height and massing;
- Streetscape and landscape;
- Landmark buildings and areas and their settings;
- Open space or waterfront network and sequence of spaces;
- Microclimate summary.

3. Design strategy

- How the concept has evolved and explanation of options explored during the design process;
- Any consultation or community engagement;
- Design narrative / story;
- Precedent studies and why / which aspects are relevant;
- Summarise with a coherent architectural concept being put forward with engineering strategy.

4. Proposal

- How the proposed building relates to the surrounding area;
- Access and movement diagrams;
- Materials including precedents;
- Visual impact. A visual appraisal and 3-dimensional modelling of the proposal demonstrating how it responds to this context and that of the wider city skyline. This should include key views including recent approvals;
- Audited key views;
- Sections to demonstrate street width to building height ratio;
- Elevations to show how the building meets the ground and relates to adjacent buildings;
- Illustrations of the scheme at pedestrian eye level from the adjacent street(s) and from

- the strategic locations identified;
- Street interface detail;
- Attention to the top of the building including how plant will be accommodated;
- Inclusive design within the building;
- A summary of any structural, health and safety issues overcome;
- Evidence of wind testing and shading diagrams with an explanation as to how these have influenced design.

5. Landscape, public realm design, safety and security

- Proposed paving, landscaping, public space, circulation space, art, building interface, and street furniture, Public Realm Manual;
- Inclusive design and access.

6. A security statement

- Details of any advice sought from the police authority including impact on public realm, nearby uses and the building itself.

7. Sustainability

- Carbon reduction, energy efficiency, sustainable construction methods, use of recycled aggregates, waste management, recycling measures.

8. A physical model

- At an appropriate scale to integrate with the Council's city model.

Appendix A: Diagram: City Centre and Cardiff Bay Aerial Photo



Area of very high sensitivity: includes Cardiff Castle, Bute Park, Civic Centre and Park Place

Appendix B: Consultation Representations and Responses

Public consultation was undertaken between 8th September and the 20th October 2016. A press notice was placed in a local newspaper on Wednesday 7th September 2016. Copies of the draft guidance was placed in all Cardiff libraries and at County Hall Reception. The draft guidance was also published on the Council website. Letters notifying that consultation was being undertaken on the draft guidance were sent to all Councillors, the Welsh Government, Community Councils in Cardiff and any interested persons and the following organisations known to have general interest in planning in Cardiff or a potential interest in this guidance.

Comments specifically or generally relevant to the draft guidance were received from the below consultees indicated *** in addition to members of the public:

Alder King	Cardiff Heliport
Alternatives for Transport	Cardiff International Airport Ltd.
AMEC Environment & Infrastructure UK Limited	Cardiff Local Access Forum
Arts Council of Wales	Cardiff Metropolitan University
Arup	Cardiff Naturalists
Asbri Planning Ltd	Cardiff Pedestrian Liberation
Associated British Ports	Cardiff Transition
Association of Inland Navigation Authorities	Cardiff University
Atkins	Cardiff West Communities First
Austin-Smith: Lord	Carolyn Jones Planning Services
Baker Associates	CDN Planning
Barton Willmore	Celsa Manufacturing (UK) LTD
Bellway Homes (Wales Division) Ltd	Cemex Uk Operations Ltd
Biffa	CFW Architects
Bilfinger GVA	CGMS Consulting
Black Environment Network	Chartered Institute of Housing in Wales
Blake Morgan LLP	Chichester Nunns Partnership
BNP Paribas Real Estate	Chris Morgan
Bovis Homes	Chwarae Teg
Boyer Planning	Civil Aviation Authority
Bristol City Council	Coal Authority
Bryant Homes (South West)	Coleg Glan Hafren
BT Group plc	Communities First Adamsdown
Business in the Community Wales	Community Housing Cymru
C2J	Community Land Advisory Service Cymru
Cadwyn Housing Association	Confederation of British Industry
Caerau and Ely Communities First	Confederation of Passenger Transport
Caerphilly County Borough Council	Connections Design
Campaign for the Protection of Rural Wales	Country Land and Business Association
Cardiff & Vale Parents Federation	CSJ Planning Consultants
Cardiff & Vale University Health Board (UHB)	Danescourt Community Association
Cardiff Access Group	David Lock Associates
Cardiff Against the Incinerator	Davies Sutton Architects
Cardiff Bus	Davis Meade Agricultural
Cardiff Bus Users	Derek Prosser Associates
Cardiff Civic Society	Design Circle RSAW South
Cardiff Community Housing Association	Design Commission for Wales
Cardiff Cycling Campaign	Development, Land & Planning Consultants Ltd
Cardiff Ethnic Minority Elders	Disability Wales
Cardiff Greenpeace	Disability Arts Cymru

DLP Consultants
 DPP Cardiff
 Drivers Jonas
 DTB Design
 DTZ
 Dwr Cymru Welsh Water
 Edenstone Homes
 Equality and Human Rights Commission
 Ethnic Business Support Project
 Federation of Small Businesses
 First City Limited
 FirstGroup plc
 Firstplan
 Forestry Commission Wales
 Freight Transport Association
 Friends of Nantfawr Community Woodland
 Fulfords Land & Planning
 G L Hearn
 G Powys Jones MSc FRTPi
 Garden History Society
 Geraint John Planning Ltd
 GL Hearn Ltd
 Glamorgan - Gwent Archaeological Trust Ltd
 Glamorgan Gwent Housing Association
 GMA Planning
 Graig Community Council
 Graig Protection Society
 Great Western Trains Company Limited
 Grosvenor Waterside
 GVA
 GVA Grimley
 H O W Commercial Planning Advisors
 Hafod Housing Association Limited/ Hafod Care
 Association Limited
 Halcrow
 Hammonds Yates
 Harmers
 Heath Residents Association
 Herbert R Thomas LLP
 Home Builders Federation
 Hutchinson 3G UK
 Hyland Edgar Driver
 Hywel Davies
 Interfaith Wales
 Jacobs Babbie
 Jeremy Peter Associates
 JLL
 John Robinson Planning & Design
 John Wotton Architects
 Jones Lang LaSalle
 Keep Wales Tidy
 Kelly Taylor & Associates
 Kingsmead Assets Limited
 Knight Frank
 Landscape Institute Wales
 Level Ltd
 Linc-Cymru
 Lisvane Community Council
 Llandaff Conservation Group
 Llandaff Society
 Lovell Partnership
 Loyn & Co Architects
 LUC
 Madley Construction
 Mango Planning and Development Limited
 Marshfield Community Council
 Martin Robeson Planning Practice
 McCarthy & Stone (plc)
 McCarthy and Stone (Western Region)
 Meadgate Homes Ltd
 Mineral Products Association
 Morgan Cole
 Mott MacDonald
 Nathaniel Lichfield and Partners
 National Youth Arts
 Natural Resources Wales
 Neame Sutton
 Network Rail
 Network Rail Infrastructure Ltd
 Newport City Council
 NFU Cymru
 North West Cardiff Group
 Novell Tullet
 O2 UK
 Oakgrove Nurseries
 Old St Mellons Community Council
 Orange
 Origin3
 Pantmawr Residents Association
 Peace Mala
 Peacock & Smith
 Pegasus
 Pentyrch Community Council
 Persimmon Homes
 Peterson Williams
 Peterstone Community Council
 Philippa Cole
 Planning Aid Wales
 Planning Potential
 Police & Crime Commissioner
 Powell Dobson
 Powergen
 Prospero Planning
 Quarry Products Association
 Quinco
 Race Equality First
 Radyr & Morganstown Association
 Radyr and Morganstown Community Council

Radyr and Morganstown Partnership and
Community Trust (PACT)
Radyr Farm
Radyr Golf Club
Rapleys
Redrow Homes (South Wales)
Reeves Retail Planning Consultancy Ltd
Renplan
Reservoir Action Group (RAG)
Rhiwbina Civic Society
Rhondda Cynon Taf County Borough Council
RICS Wales
Rio Architects
Riverside Communities First Team
Robert Turely Associates
Roberts Limbrick
Robertson Francis Partnership
Royal Commission on the Ancient & Historical
Monuments of Wales
Royal National Institute for the Blind
RPS Group Plc
RSPB Cymru
Save Creigiau Action Group
Savills
Savills (Cardiff)
Scope Cymru
Scott Brownrigg
Sellwood Planning
Shawn Cullen
SK Designs
SLR Consulting
South Wales Chamber of Commerce Cardiff
South Wales Police Crime Prevention Design
Adviser
South Wales WIN
Splott and Tremorfa Communities First
Sport Wales
SSE Energy Supply Ltd
St Fagans Community Council
Stedman Architectural
Stewart Ross Associates
Stonewall Cymru
Stride Treglown Town Planning
Stuart Coventry Scott Wilson
Sullivan Land & Planning

Sustrans Cymru
SWALEC
Taff Housing Association
Tanner & Tilley
Taylor Wimpey
Terry Nunns Architects
The 20th Century Society
The Boarding Centre Ltd
The Design Group 3
The Georgian Group
The Institute of Cemetery and Crematorium
Management
The Land Mark Practice
The Planning Bureau
The Royal Town Planning Institute
The urbanists
The Victorian Society
The Wildlife Trust of South & West Wales
Theatres Trust
T-Mobile (UK) Ltd
Tongwynlais Community Council
Torfaen County Borough Council
Turley Associates
United Welsh Housing Association
Urban City Ltd
Urdd Youth Group
Velindre NHS Trust Corporate Headquarters
Virgin Media
Vodafone
Wales & West Housing Association
Wales Council for Voluntary Action
Wales Women's Aid
Watts Morgan
Welsh Ambulance Services NHS Trust - South
East Region
Welsh Government
Welsh Government - Economy Skills and
Transport Division
Welsh Language Commissioner
Welsh Language Society
Welsh Tenants Federation Ltd
Wentlooge Community Council
White Young Green Planning
Wimpey Homes
Wyevale Garden Centres Ltd

Chapter	Comment	Response
General	We welcome the updating of the SPG, which seeks to ensure that Cardiff, (“the City”) continues to develop as “The most liveable city”	Agree
General	Recommend more images of Cardiff tall buildings are included and referenced clearly, including good and poor examples.	The SPG is illustrated with images to show how a particular principle is met and includes good examples of future tall buildings in Cardiff. Examples of any poor tall buildings are not considered to be relevant.
General	We would expect to see more plans, diagrams and images to support the text. For example there is no plan identifying the boundaries of the city centre and bay areas.	A clearer description of the definition of the City Centre and Bay areas has been added to 1.13. The boundary is undergoing review in line with the LDP KP10.
General	Recommend the inclusion of plans and views showing opportunity areas for tall buildings.	Each site put forward by developers needs to be assessed on its own merits to judge the site's appropriateness for a tall building. The planning application process can fully take account of the design analysis including views, clusters, amenity issues and the site's opportunities and constraints.
General; 10. Design and Access Statements	Recommend that additional text is provided in the SPG to encourage Applicants to provide further information in Design and Access Statements on public realm.	Section 10 references the public realm in Design and Access Statements and has been expanded to include additional items. It is considered that there is sufficient reference to the public realm throughout the document.
General	The conservation area around Cardiff Castle, and the Civic Centre is classified as being of very high sensitivity. High rise buildings in the immediate vicinity of this area would damage the perception of the City as a whole. The skyline of the City Centre is at an acceptable height of around eight storeys.	The impact of any tall buildings on the skyline of Cardiff city centre as viewed from strategic points and its impact on the zone of very high sensitivity will be considered. It is not considered appropriate to set a height limit on storeys.
General	Beware of overuse of the word innovative – solutions do not necessarily need to be innovative but well thought through and may potentially use latest technology.	Noted and replaced with more appropriate wording in specific places
General	If the document is going to be electronic it may be helpful to include links to other documents.	Electronic links added
General	Reference should be made to the Site & Context Analysis Guide produced by DCFW for WG	Reference to document added to Section 9, Design Commission for Wales.
General	A note of caution on using too many images from one architect which could be seen as promotion.	Whilst it is recognised there are images used from a handful of architectural practices, this is not intended to be promotion. All images are selected because they demonstrate in some way, application of principles in the SPG.

Chapter	Comment	Response
General	This is an important document for the future shape of the city, whilst the design principles and considerations are covered in the document there is a lack of local analysis and interpretation to make the guidance specific to Cardiff. E.g. what are the key views, what are the important existing tall buildings, what buildings need to remain stand alone and where might clusters of tall buildings be appropriate? We would expect to see more plans, diagrams and images to support the text. For example there is no plan identifying the boundaries of the city centre and bay are.	Some analysis has been done by the Council to inform the SPG, but it is considered that it is not directly relevant for inclusion. Most of the important features are mentioned in the text. It is considered that the applicants need to make a thorough design analysis through their application, in discussion with the Planning department. There are other planning documents that outline the approximate boundaries of the city centre and Bay, the general area is shown in Appendix A.
1. Introduction	Liveable City - Cardiff seek to be the most Liveable City...in the UK/World?	Addition made to say 'in Europe'
1. Introduction	City Centre and Cardiff Bay: it would have been appropriate to update the 2009 audit and analysis in the preparation of this guidance as this is out of date. What is the strategy and vision for tall buildings in these areas? Have examples of other cities of a comparable size been looked at? What are the important existing tall buildings in the city centre/bay?	Some analysis has been done by the Council to inform the SPG, but it is considered that it is not directly relevant for inclusion. Since the 2009 audit and analysis, there has not been a substantial amount of change to warrant a new analysis.
2. The location of tall buildings	Where are the core areas of the city? Where are the most important views?	See response as above. The DAS should highlight these details.
3. Sustainable Transport	The support of public transport, walking and cycling in the SPG is endorsed. However, there is a distinct shortage of cycling paths and indeed places to park cycles especially outside shops and official buildings. The provision of non-obtrusive parking for cars is valid. However to discourage illegal parking and to aid older people and the physically impaired, sufficient car parking spaces are needed.	The Council's transport team are working on introducing better cycle paths and cycle parking spaces throughout the city centre, bay and wider city. There is an SPG that covers parking. It is acknowledged that a balance needs to be struck between sustainable transport provision and providing for the private car.
3. Sustainable Transport	When discussing underground car parking (paragraph 4) we suggest the following wording: Developers need to adhere to Groundwater protection: Principles and practice (GP3) guidance and in particular (but not exhaustively) position statements N7, N8 and N9 relating to groundwater disruption. These may be relevant (depending on site location) should there be any groundwater pumping or disruption to local hydrogeological regime.	Technical groundwater issues do not fall within the scope of this SPG.
4. Skyline, Strategic Views and Vista; 5. Historic Environment Setting and Appendix A; City Centre and Cardiff Bay aerial photo	The proposed conservation area in Cardiff Bay, is one of equal importance to the City Centre. Due to the tight delineation of the conservation area, there is a stronger likelihood of high rise buildings encroaching and affecting the waterfront area in particular. The picture on page 12 demonstrates the reasonably low level of the skyline from the Wetherspoon Public House, round to the Atradius building. This includes the very important seat of the Welsh Assembly Government. However, it fails to extend the exclusion of the High Rise Tall Buildings to tie in the only green space of Britannia Park and the Norwegian Church. In other words a substantial area of the waterfront – probably 25% - is omitted from any sort of protection in terms of conservation.	The conservation area boundaries are the official boundaries that were drawn as part of the Conservation Area Appraisals. These were designated according to strict historical character criteria and any proposals affecting these areas need to preserve or enhance the Conservation Area. Outside of these areas, the general character and appearance will be considered as part of the urban design considerations outlined in the SPG.

Chapter	Comment	Response
4. Skyline, Strategic Views and Vista; 5. Historic Environment Setting and Appendix A; City Centre and Cardiff Bay aerial photo	The vistas and views associated with the bay and the waterfront are photographed in your document. This is an attractive view and should not be impeded by future tall buildings, especially as you go on to cite the need to preserve the Mermaid Quay and Barrage views. Tall buildings along the waterfront should consider the first impressions of visitors to the Bay, including from Plas Roald Dhal and the National Assembly. The wide views of the bay from standing on the steps of the Senedd building also need to be considered and not blocked.	SPG states that an urban design analysis is needed to illustrate how tall buildings are acceptable on a site. This would include an analysis of the skyline and impact on residential amenity. Reference to Senedd added to the Waterfront in section 6.
4. Skyline, Strategic Views and Vista; 5. Historic Environment Setting; Appendix A; City Centre and bay aerial photo	Please note photographs of Old State House in Boston. Here a wonderful iconic building is overshadowed by tall buildings. It is hoped that the buildings in the Bay, such as the Pier Head Building, The Assembly and the Norwegian Church will not be overwhelmed in any way at all. Could it be stated that buildings above 6 storeys would be discouraged, especially where they impede important vistas along the watersides and provide no public value?	The text will be strengthened to say that historic buildings of character need to be given sufficient breathing space and frame the buildings, not distract from them, section 4.
4. Skyline, Strategic Views and Vistas	Plans, photos and diagrams would help to explain the description in the skyline section. Which features are to be kept as distinguishable features e.g. castle keep, City Hall clock tower, Llandaff Cathedral spire... and which could become clusters? Nightscape - Lighting solutions don't necessarily need to be innovative, rather appropriate, well considered and potentially bold. Plans, diagrams and images are needed for Strategic Views and Clusters.	Text clarified accordingly in section 4. Some analysis has been done by the Council on strategic views and clusters to inform the wording in the SPG, but it is considered that it is not directly relevant for inclusion as this will form part of the DAS.
4. Skyline, Strategic Views and Vistas	Paragraph 2 - It is also important to consider the impact of a cluster of tall buildings at ground level. Continuity of street edge is important and tall buildings should not become isolated objects in a space.	Text added accordingly to Section 4.
6. Design of Tall Buildings	The landscape design of the public realm should include consideration of changes in level; planting, particularly trees; grass/wildflower areas; hard surfacing materials; walls & fences; street furniture & lighting; public art. Integrated building and landscape/public realm design should be included from the outset to achieve a holistic design of highest quality, both in the public realm and the architecture.	Agree in part, some additions made to 6. iii. Public Realm Impact
6. Design of Tall Buildings	Open spaces and walkways must be preserved have high priority in considering proposals, including their maintenance needs.	Agree and reinforced in Section 6, iv, Water Frontage
6. The Design of Tall Buildings	Section i. A Mixture of Land Uses - paragraph 2 - there are many other land uses than those mentioned such as hotels? Is a list necessary?	A list is considered helpful to spark ideas. List made more comprehensive

Chapter	Comment	Response
6. The Design of Tall Buildings	Section i. Adaptability/ Flexibility/ Future Proofing - Delete: Adaptability involves the design of buildings so that they are flexible and can be used for a variety of uses over time. Add: layout and modular forms can also help with future adaptability for example enabling an office building to be subdivided into smaller units either horizontally or vertically.	Original wording retained as considered still to be relevant. Additional text added
6. The Design of Tall Buildings	Section i. Materials - Materials should be of sufficient quality and richness when close to the building as well as at a distance from the building.	Text clarified accordingly
6. The Design of Tall Buildings	Section i. Water frontage - The section that says often a set-back with a small courtyard area with greenery and railings to a unit can provide such an environment. This seems a little specific, not all set-backs work well.	Text clarified accordingly
6. The Design of Tall Buildings	Section iv. Microclimate - Any adverse wind conditions....should be identified during the design process and the design amended accordingly to overcome the matter in an integrated way.	Text clarified accordingly
6. The Design of Tall Buildings	Section iv. Security - Second sentence - Clearly defined public and private spaces	Text clarified accordingly
6. The Design of Tall Buildings	Section i. - Deliveries to the building also need to be considered. Re-word 'innovative' for waste solutions	Text clarified accordingly
6. The Design of Tall Buildings	Section iv. Street interface - access to mixed use on floors above also important	Text clarified accordingly
6. The Design of Tall Buildings	Section v. Sustainable Building Design: Second paragraph, include 'an environmental strategy for the building should be based on analysis of the site and should inform early decisions such as building form and orientation'. Fifth paragraph - Comfort conditions both internally and externally need to be considered as part of the environmental strategy in relation to daylight, ventilation, solar gain and possible overheating. Image Baters Smart p.23 - I don't consider 'quirky' to be an appropriate term.	Text included Section 6, v, second and fifth paragraph. The word quirky is considered an acceptable description.
9. Pre-application discussion	Section 9. Pre-application discussion - include a link to our guide to design review http://dcfw.org/consulting-the-commission-through-the-design-review-service/	Electronic hyperlink included
10. Design and Access Statements	Section 10 - Where it says a physical model at an appropriate scale to integrate with the Council's city model - it would be helpful to provide the scale	To ensure that the correct scale is used for the correct model, applicants should contact the Council.

For further information, please contact:

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