SKY BRIDGES POLICY
(POLICY NUMBER 10961)

APPROVED BY COUNCIL : 31 OCTOBER 2012
C41/10/12

SKY BRIDGES POLICY

CITY OF CAPE TOWN | ISIXEKO SASEKAPA | STAD KAAPSTAD

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AUGUST 2012

DIRECTORATE: ECONOMIC, ENVIRONMENTAL AND SPATIAL PLANNNG

SPATIAL PLANNING AND URBAN DESIGN DEPARTMENT

URBAN DESIGN BRANCH

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DEFINITIONS

SKY BRIDGE: An enclosed or covered walkway for pedestrians built to link one building with another over a public right-of-way or public space. They are usually built one or more levels above ground level. A sky bridge allows pedestrians to walk from one building to another without having to cross at ground level, and without being exposed to inclement weather. Sky bridges are common in central business districts.

PEDESTRIAN BRIDGE: A structure built over a roadway, railway or watercourse to provide a crossing for pedestrians. Stairs or ramps generally lead up to the pedestrian bridge. In some cases, however, the road is depressed and the approaches to the pedestrian bridge are therefore at ground level.

GRADE SEPARATION: Separation of the levels at which roads, railways, paths, etc. cross one another in order to prevent conflicting flows of traffic and to reduce the likelihood of accidents.

RIGHT-OF-WAY: A strip of land acquired for or devoted to transportation purposes.

AIR RIGHTS: The development of a defined space above a public street, open space, railway line or another transport usage, and the allocation of use rights for such purpose.

UNIVERSAL ACCESSIBILITY: Giving access to everyone who wishes to use the facility.

DESIRE LINE: An informal path or line that is likely to be taken by pedestrians finding the shortest route between two points.

1. INTRODUCTION, BACKGROUND AND PROBLEM STATEMENT

Sky bridges are generally built to provide convenience for pedestrians and to connect private developments together above public streets. Whilst they may provide convenience for private users, these structures can conflict directly with the City of Cape Town's objective of encouraging pedestrians and commercial activity in the public realm, at street level.

Over the years, there has been an increase in the construction of sky bridges in the city of Cape Town. Sky bridges can have an enormous impact on the urban environment. By raising foot traffic to a higher level, they can create a negative separation of pedestrians from the bustle of street life, which leads to a decline in pedestrian movement and interaction at street level. Reduced activity, as well as reduced shared economic opportunity on the street results in empty public spaces, and consequently cities can become places to pass through, rather than live in.

These structures can also become spatial barriers, turning buildings inwards and promoting segregation and social exclusion. As highly visible elements in the landscape, they can block views of significant landscapes and street vistas. From a heritage standpoint, they can also obscure views of significant buildings and historic facades, and can undermine the city's traditional street grid pattern, thus destroying the city's fabric and blocking out sunlight from the streets.

Bridges can also undermine safety at street level. Removing people from the street takes away "eyes on the street", thus increasing opportunities for crime. In addition, motorists are less likely to watch out for pedestrians if they aren't expecting to see them, further reducing safety.

For these reasons it was necessary to compile a principle-based policy to provide guidance on when, where and how sky bridges should preferably be constructed. The policy will inform the context and define appropriate conditions for the planning and design of crossings so that they support the City's objective of creating a walkable city with lively, vibrant streets and public spaces where the sidewalks remain the principal place of pedestrian movement and casual social interaction.

It is not the City's view that all sky bridges are undesirable. On the contrary, the City recognises that there may well be a limited role for them in cases where they provide an obvious broader public benefit or promote public health and safety.

2. LEGISLATIVE CONTEXT AND LEGAL MANDATE

The Sky Bridges Policy does not seek to introduce or take away any existing development rights. The right to develop a bridge over a public street is determined by the City of Cape Town Zoning Scheme Regulations (CTZS), where Council may approve a Consent use application for Air or Underground Rights within a Transport Zone. Should the Consent use be approved, building plan approval in terms of the National Building Regulations and

Building Standards Act is required before construction of the bridge is permitted. The property rights, by way of air-rights, are put into place by the City's Property Management Department, through a servitude or lease agreement, upon approval of the consent use in terms of the Zoning scheme regulations.

In some cases, depending on the context, other authorities, such as Heritage Western Cape or the Provincial Department of Environmental Affairs and Development Planning, may also need to be involved.

This policy aims to provide more clarity to the development and assessment of sky bridges, so that, where deemed appropriate, a high quality design and positive public benefit are achieved.

- **Land use and Planning Ordinance (LUPO)** general provisions (s.36) sets out the basis for refusal of applications in terms of their desirability in cases of non-compliance with guidelines in structure plans, the effect on existing rights, their impact on community safety and welfare, and conservation of the natural and built environment.
- **City of Cape Town Zoning Scheme Regulations** *(final draft).*
- Section 108 of the **City of Cape Town Zoning Scheme: Scheme Regulations** 1990. These regulations list the areas listed as Urban Conservation Areas as well as certain conditions that apply to them. The aim of the regulations is to protect and/or maintain the architectural, aesthetic and/ or historical significance of the Urban Conservation Area.
- **National Building Regulations and Building Standards Act** (s.7) relating to the basis for refusal to grant building approvals. This relates to disfiguration of an area, unsightly or objectionable characteristics that reduce the value of adjoining properties or constitute a danger to life or property.
- City of Cape Town Outdoor Advertising and Signage Bylaw.
- **Municipal Systems Act** (s.4) places a duty on the Council to promote safe and healthy environments within the municipality.
- **Municipal Finance Management Act**, No. 56 of 2003 (MFMA).
- **Municipal Asset Transfer Regulations**, R878 of 2008 (MATR).
- **National Environmental Management Act, Act 107 of 1998** which obliges the City to exercise powers concerning environmental issues.
- **Roads Ordinance**, No. 19 of 1976.
- **Pedestrian and Bicycle Facility Guidelines** as specified by the National Department of Transport in 2003.
- **Policy on the Management of Certain of the City of Cape Town's Immovable Properties**, 2010.
- **Bylaw relating to the management and administration of the City of Cape Town's immovable property**, 2003.
- **National Heritage Resources Act**, 1999.

3. SCOPE AND APPLICATION

This policy applies to development applications specifically involving sky bridge proposals, including both private and public structures connecting buildings over a public right-of-way or public space. Other pedestrian bridges, such as street to street bridges, as well as other grade separated crossings, such as subways, will not be covered in this policy. The policy will apply city-wide to all areas under the jurisdiction of the City of Cape Town.

Internally, the policy will assist City officials in assessing sky bridge applications. This would include officials of the Transport, Roads and Stormwater (TR&S) Directorate, the Property Management Department and the Economic, Environmental and Spatial Planning (EESP) Directorate. It will also be used to formulate appropriate conditions of approval in this regard. Externally, developers will need to comply with the policy when considering construction of sky bridges connecting buildings over public space or a public right-of-way.

The policy will assist professionals within the built environment, including architects, urban planners, urban designers, engineers and landscape architects to understand what is desirable and acceptable to the City of Cape Town. The policy should be consulted by applicants in both the initial planning phase and prior to submission of applications for planning approval of pedestrian bridges. Compliance with the Policy will reduce the likelihood of ill-conceived applications being submitted to the City, and will minimise delays in the subsequent assessment and determination of applications. Consultation with the various line departments before the application is submitted is the favoured route since it will hasten the planning process once the application is submitted.

In terms of its application, this is a principle-based urban design policy in support of the development control function of Planning and Building Development, the protection of natural and heritage resources assigned to Environmental Resource Management, the promotion of Non-Motorised Transport (NMT) by the TR&S Directorate as well as general accessibility, the promotion of safety for road users, and the Property Management Department’s management of City-owned property.

Council must ensure that the policy guidelines, requirements and assessment criteria set out in the Policy are used in the assessment of applications for sky bridges. Each application will be considered on its own merits in conjunction with the assessment criteria specified in the Policy.

4. OUTCOMES AND OBJECTIVES

The Sky Bridges Policy aims to provide guidelines on the desirability, planning and design of sky bridges, so that, where considered appropriate, they support a mixed-use, accessible, safe and pedestrian-focused environment. It will assist decision-makers in assessing applications, as well as provide guidance to developers and applicants on submission of proposals and assessment thereof.

It is intended that the Policy will achieve the following specific objectives:

- To promote safe, accessible and mixed-use streets.
- To encourage increased volume of people walking on sidewalks and hence foster social interaction at street level.
- To encourage positive surveillance onto streets through ground level activity.
- To preserve important views.
- To protect and enhance the aesthetic appeal of streets.
- To ensure that the design of bridges reduces opportunities for crime through the provision of elements such as adequate lighting and signage.
- To avoid the use of sky bridges in instances where alternatives are available.

This is to be achieved by promoting sky bridges only where they serve a public benefit and comply with the requirements and criteria set out in the policy.

5. THE POLICY

5.1 POLICY STATEMENTS

The City of Cape Town promotes, encourages and supports increased street level activity as well as the preservation of important views and heritage fabric. Always sensitive to the potential adverse impacts on urban form and function, the City therefore adopts a cautious approach in dealing with proposals involving sky bridges that might impede or interfere with the life, energy and vitality of the City's streets and public spaces.

When considering sky bridges, it is important to remember that many pedestrians will not use a bridge if they can cross at street level in about the same time, or if a more direct route is available. They will use a bridge more often if the elevation change can be minimised or worked into the normal path of pedestrian movement.

It is usually more appropriate to use alternative traffic calming measures or to install a pedestrian activated signal rather than opting for costly grade separated crossings that should only be used sparingly and as a last resort.

P1. Proposals for sky bridges will only be allowed in exceptional circumstances.

Proposals of this nature shall only be considered in exceptional circumstances and subject to strict criteria designed to address adverse impacts.

Exceptions

- Where the proposal promotes public health and safety by connecting one public building to another or to a public space.
- Typically at crossings where the conflict between pedestrians and motor vehicles is unacceptably high and/or where the crossing is extremely hazardous for pedestrians; and where other possible solutions have been discounted.
- Adding connections across otherwise unbridgeable divides or obstacles such as freeways, railways or watercourses.

P2. Sky bridges must provide a public benefit.

In general, the City of Cape Town does not promote pedestrian bridges, except in instances where they serve a public purpose or where a broader public benefit can be clearly shown.

A sky bridge shall be determined to provide a public benefit when it meets the following criteria:

- Bridge does not detract from street level activity.
- Bridge functions as part of public realm.
- Bridge improves pedestrian mobility between public buildings or major public infrastructure.

P3. Protect key views to significant natural, heritage or cultural resources.

Sky bridges shall not obstruct key views in the city. Where permitted, impacts on key views shall be minimised.

In the central city, the views and view corridors as identified in the Central City Development Strategy (CCDS) must be protected and enhanced. In other areas, where view corridors are not identified, bridges shall generally not obstruct views of visually prominent features such as key historic buildings and landmarks, or culturally and environmentally significant landscapes such as sea or mountain views.

P4. Development proposals for sky bridges must meet assessment criteria, submission requirements and guidelines.

Where sky bridges are permitted, they must comply with the requirements, criteria and guidelines prescribed in this Policy. The Policy sets out assessment criteria which, if used to assess all applications, will establish a fair and equitable mechanism for assessing each application on its own merits and in a manner that balances the pedestrian accessibility needs with the quality of public spaces.

5.2 ASSESSMENT CRITERIA

Sky bridges will be considered on their own merits, in conjunction with the assessment criteria specified hereunder. In particular, they will be assessed with regard to how well they serve the public interest and their relationship to the cityscape.

The Council acknowledges that in some exceptional cases there is a need for these structures, specifically when they promote public health and safety or provide a clear public benefit.

The following criteria are proposed to inform the assessment of all applications submitted to the City:

a) Motivation

- Role, vision and need for sky bridge.
- How it contributes to improving the quality of the public realm.

- Who and how many people will directly benefit from the sky bridge.

b) Exploration of alternatives

Sky bridges will only be considered once it has been demonstrated that all alternatives have been explored and found unviable.

c) Relationship to context

The aesthetic value of a bridge is dependent on its context. A bridge may be acceptable or beautiful in one location but unacceptable in another.

The designer must understand the context of the site in which the sky bridge will be built. In natural areas, an understanding is required regarding the topography and natural features of the site and, in urban areas, there should be an appreciation of community patterns in the vicinity of the bridge.

Attention should be given to:

- Appropriateness of location in relation to public spaces, existing buildings, landscape features, important views and urban conservation areas.
- Other bridges in the area and along the road corridor.
- Topography, water bodies, water courses, biodiversity, soils and geology.
- Local vernacular architecture.
- Landscape and built character, including how well the bridge responds to locally distinctive patterns of development (urban grain and streetscape).

d) Impacts on the public realm

This concerns the impact and contribution that the sky bridge has on surrounding public streets and spaces. In particular:

- How the proposal delivers broader public benefits.
- How the design of the structure has been integrated into the broader public realm and surrounding pedestrian environment, and contributes to the vitality and vibrancy of the surrounding streets and spaces.
- The impact upon street level retail trading operations.
- The impact on general amenity of nearby occupiers and users of public space, as well as on climatic conditions around the structure. This includes impacts on light and air circulation below, above and near the structure, as well as visibility in and out of the structure.
- Impact on natural features and landmarks.

e) Economic viability

The use of sky bridges to support economic viability and facilitate the re-use of existing buildings, or complexes of buildings will be assessed, on balance, with respect to their impact on the public realm.

Where these are proposed, the City will require a strong motivation which will need to demonstrate that:

- Alternatives were considered, that a sky bridge is the most desirable and cost effective solution, and that the public at large stands to benefit from the sky bridge.
- Sufficient numbers of people will be using the sky bridge.
- Notwithstanding the above, the City will seek physical improvements to the public realm at street level to ensure a pleasant environment and attractive and vibrant public realm is retained or created.

f) Impact upon pedestrian and traffic movement at ground level

- Data collection of pedestrian counts and traffic surveys are to be used to justify the need for proposed sky bridge.
- Assessment of contribution to universal access.
- Impact on pedestrian safety.

g) Impact upon views and vistas

Impact of the bridge on important and significant views should be taken into account. This includes view corridors, views to landmark buildings, areas and settings including backdrops, important local views and panoramas.

Also to be considered:

- Views or vantages offered by the elevation of the bridge.
- Impacts on the topography of the city.
- Possible obstruction of views from key vantage points.

h) Impact upon historic and cultural environment

Proposals will need to demonstrate how an understanding of the historical context has informed the design of the bridge.

- An understanding is required of the historical development of an area, of the underlying block patterns, historic routes and plot sizes, and of the local architecture.
- Impacts must be assessed on listed heritage resources including buildings, conservation areas, historic parks, gardens and landscapes.

5.3 SUBMISSION REQUIREMENTS

Pre-submission consultation with relevant departments is encouraged, especially with the Spatial Planning and Urban Design Department, as well as the Heritage Resources section of the Environmental Resource Management Department. This is in order to guide the applicant on the desirability of the proposal, on the submission criteria and requirements, as well as to hasten the planning process once the application is submitted.

The applicant is required to submit the information set out below to motivate the proposal and to indicate how it responds to the local context and informants.

a) Motivational statement

Statement of reasons for the necessity of the proposed sky bridge and its intended use. This should include whether the facility is intended for general public use or more limited private use, and how the bridge will provide a public benefit.

b) Investigations to be undertaken

- Pedestrian and traffic studies of the proposed bridge vicinity.

c) Urban design contextual analysis

- Urban design appraisal/statement.
- Photographs of the site location and immediately surrounding area.

d) Drawings

Conceptual drawings of the proposed bridge, which shall include its location, size, height above ground level and cost estimate.

- **Location Plan** to be at 1:50 000 or 1:10 000.
- **Site Plan** to be at 1:200 or 1:100, showing:
  - Location, alignment and dimensions of proposed bridge.
  - Boundary line, road reserve line, carriageway, sidewalk and landscaping dimensions.
  - Location of existing services (lamp posts, electrical boxes, manholes, etc.).
- **Cross section** of proposed bridge to be at 1:100 or 1:50.
- **Elevations** of the bridge, illustrated with background context.
- **Artist's illustrations and photomontages** of the bridge structure as seen from the roadway and surrounding key viewpoints.

e) Views assessment

Accurate visual representations, view analysis and assessment to be undertaken. Should a full visual impact assessment be called for, one should refer to the Provincial Government of the Western Cape: Department of Environmental Affairs and Development Planning "Guidelines for involving visual and aesthetic specialists in EIA processes", 2005.

f) Heritage indicators

Within Heritage areas, the City will assess proposals independently, through S108 requirements of the Zoning Scheme. Heritage approval may be also be required by Heritage Western Cape, if adjoining structures are older than 60 years old.

g) Public support and consultation

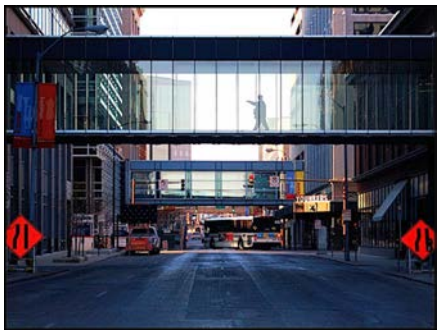
This would include consultation, for example, with the Cape Institute for Architects: Habitat Committee, and where required, Heritage Western Cape.

5.4 GUIDELINES

The guidelines set out below should inform any application for a sky bridge in order to determine where and how these facilities should be designed, constructed and maintained.

a) General

- Any owner of property abutting any public street or public place, who desires to construct a pedestrian sky bridge over and above a public right-of-way or public space must apply to the City to construct, maintain and operate a sky bridge.
- Sky bridges should not have a negative impact on ground level activity in any way. Applicants must demonstrate that the proposed design allows for a pedestrian friendly environment at ground level.
- Ground level activity should be provided through opportunities for public or semi-public uses (e.g. commercial or retail) and elements that excite public interest, such as street furniture, architectural features or public art.
- Sky bridges will not be supported where they would intrude over public spaces or into pedestrian priority zones (e.g. St George's Mall or Waterkant Street).
- Tighter controls will be exercised in Urban Conservation Areas.
- No more than one sky bridge may be located within any city block.
- The height of sky bridges over public right of way will be assessed on merit.
- There should preferably be no supports obstructing the public right-of-way.
- Sky bridges should reinforce the predominant street pattern and connect in a perpendicular line to the right-of-way below, avoiding unnecessary diagonal connections.
- Sky bridges should be designed to complement the character of adjoining structures.
- Transparent openings are strongly advised onto the public right-of-way below a bridge. At least 70 per cent of the side walls should be open, glass or transparent material with a high light transmission.



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No more than one bridge per block, either horizontally or vertically.

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Sky bridges can disfigure buildings and obstruct views.

✓

Ensure that the proposed design allows for a pedestrian friendly, vibrant public realm at street level.

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✓

Transparent side walls allow for visual access in and out of structures.

b) Integration and Accessibility

- Proposals should integrate bridges within the wider urban fabric and context. This includes relating the structures to the character and scale of the surrounding urban form or landscape to ensure that the design fits appropriately. Pedestrian bridge access shall be as short and direct as practicable and follow the desire line of the main pedestrian flow wherever possible, avoiding long detours and unnecessary climbing. This will ensure maximum use of the bridge. Isolated locations should be avoided. The natural topography should also be considered in determining suitable locations for pedestrian bridges.
- Connections should be designed to be convenient, comfortable, safe, easily navigable, continuous and barrier-free.
- Bridges should improve accessibility for pedestrians, cyclists and the mobility impaired as far as possible.
- Visual access shall be provided from the sidewalk and street into the bridge.
- Approach ramps should be designed as part of the bridge composition and integrated into the landform and landscape. Where possible, the proposal should minimise the length of ramps and staircases by taking advantage of the topography or by using embankments and earth mounds as landings.

Positive bridges offer integration and accessibility.

c) Design

Contextual influence

Designing a suitable bridge requires that the designer pay careful attention to the details, starting with an understanding of the setting in which the structure will be built and ending with the detailing of the structure itself.

An understanding of the context includes an appreciation of the constraints and opportunities offered by the immediate setting, such as landform, landscape, and near and distant views.

Aesthetics

The appearance of a bridge should be appropriate for its site. It should be aesthetically pleasing, enhance the environment and encourage people to use the bridge.
Sky bridges provide a great opportunity to create an interesting experience for users, who naturally travel more slowly and spend more time on the bridge. These opportunities include maximising or framing views outward and through the structure.

The visual quality of bridges can vary widely, based on the type of structure, location, materials used and other details. If a bridge is to be aesthetically successful, it must be attractive at the following three levels at which members of the public experience the bridge:

- The entire bridge and how it relates to its setting.
- The human experience of a pedestrian or cyclist travelling over, under or beside the bridge.
- The driver-level experience of a person driving under the bridge.

Depending on context, each bridge will be evaluated on its own merits on a case by case basis. In some cases, the design methodology may blend into the surrounding environment while, in other situations, it may be appropriate to build the bridge as a distinct landscape element or landmark of architectural excellence.

The role of the bridge in the built environment should be determined during the project development process with input from a broad range of interested individuals and groups.

- The designer should consult the City's Economic, Environmental and Spatial Planning Directorate about the appearance and location of bridges.
- The appearance of a bridge, from all viewpoints, should be considered.

✓

Bridge relates to its setting, offers visual permeability and a human-scaled experience for users of the bridge and those at street level.

✓

Bridge offers an interesting experience for users.

Form and scale

- Lighter pedestrian loadings allow more flexibility in the form of the bridge and choice of materials, thereby encouraging sleeker, more elegant structures.
- Whether the bridge form is simple or complex, it should be expressed with clarity, simplicity and elegance, and should complement the landscape.
- The scale of the bridge should be in keeping with its surrounding context.
- The approaches, handrails, detailing and close-up effects should be designed to satisfy those who will appreciate the bridge at close quarters and at a slower pace.
- Barriers and handrails perform an important safety function, but care should be taken to ensure that they are not visually dominant.
- With the exception of navigation signs and name plates, exterior signage should be kept to a minimum. They add clutter and complexity and detract from the structure, as well as obstructing views to and from the bridge.
- Outdoor advertising on sky bridges will not be allowed. Proposals must adhere to the Outdoor Signage Bylaw.

Lighting

- Bespoke lighting can be used as a design feature but care must be taken to avoid light spilling into the surrounding environment.
- Proposals should take into consideration the protection of lighting from vandalism, either through the design itself or through the use of protective boxing.

Colour

Choice of colour can cause a bridge to relate to its setting or contrast with it. Colour of a bridge can play an important role in highlighting all or part of its form, or can provide an opportunity to give consistency to adjoining structures.

- As bridges tend to be highly visible elements in the townscape, the use of colour should be carefully considered.
- When used to highlight particular elements, colour should form part of a coherent, ordered composition.

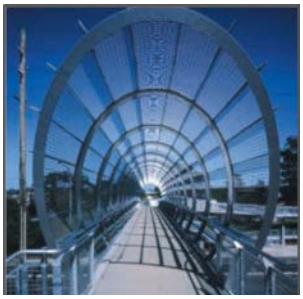
d) Safety and Security

Safety and security of users should be considered in the bridge location and design.

Particular attention should be given to the aspects below.

- Design connections for continuous visibility of any area 20 metres ahead.
- Eliminate hidden or recessed areas that could be used for hiding.
- Ensure that bridges are well lit so that users will feel safe.
- Use laminated glass window walls for transparency inside and outside. Alternatives to glass must be considered (e.g. polycarbonate) where the risk of vandalism is high.
- When possible, provide commercial kiosks, public telephones, news-stands or public art at or near grade separated linkages to generate activities that would help to curtail crime and other unwanted anti-social activity. This should be considered in conjunction with Crime Prevention Through Environmental Design (CPTED) principles.

- Crossings should be free of safety hazards such as slippery surfaces and obstacles.
- Where safety of road users is a prime consideration, the bridge may need to be screened or enclosed to prevent stones and other objects being thrown onto the roadway below. Safety screens should be integrated in the overall bridge design, minimising the cage effect. If a closed system is required, the design of the cage should ensure that the experience of crossing the bridge is positive.
- Building regulation requirements pertaining to ramps and stairs must be observed as far as possible.



e) Construction, Maintenance and Management

- The resources required to maintain these assets are considerable. For reasons of cost and sustainability, it is incumbent on designers to address the maintenance burden placed on the future custodians of the bridge. This aspect need not frustrate the creation of a beautiful bridge.
- Designers must select durable materials and finishes that do not deteriorate in appearance over time.
- Where required, anti-graffiti coating should be applied, as part of the bridge construction phase, to the full extent of the piers and barriers to prevent patchy application and appearance at later stages.
- The whole life cycle of a bridge must be considered upfront, looking at the interrelationship between cost and aesthetics. This helps to ensure that materials are used wisely with consequent refinement and elegance.
- In the event of a public sky bridge being proposed, careful consideration of possible unregulated informal trading on the bridge will need to be considered upfront in the design, and subsequently managed by the relevant authority.

6. COMMENCEMENT AND IMPLEMENTATION OF POLICY

Application of this policy commences on the date of its adoption by Council, and is therefore not applied retrospectively. Council may determine the level of decision-making required and the extent of any deviation from the policy that could be permitted in certain circumstances.