

The new Sydney Fish Market
The new Sydney Fish Market - CPTED (Crime Prevention through Environmental
Design) Assessment
Commercial-in-Confidence

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CPTED (Crime Prevention through Environmental Design) Assessment

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Quality Information

The new Sydney Fish Market - CPTED (Crime Prevention through Document

Environmental Design) Assessment

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Executive Summary

AECOM have been engaged by UrbanGrowth NSW Development Corporation (UrbanGrowth NSW) to undertake a Crime Prevention through Environmental Design (CPTED) assessment for the proposed new Sydney Fish Market development at Glebe, Sydney bounded by Bridge Road and Blackwattle Bay to the north.

The key findings from the CPTED assessment include:

- City of Sydney Council has a range of community safety and crime prevention programs and strategies in place, particularly education and prevention strategies. Priority community safety issues within the city of Sydney include personal safety, domestic violence, assault, malicious damage, harassment and anti- social behaviour, steal from and theft of motor vehicle, and break and enter offences. City of Sydney Council places a strong emphasis on the requirement for new developments to comply with its Crime Prevention through Environmental Design.
- CPTED principles that will be particularly important to consider include signage to show
 separation of public and private areas, and assist with legibility of the site given its retail use nature;
 landscaping to deter malicious damage, provide amenity and show ownership of all elements of
 the site; lighting to deter opportunistic crime and provide safety for tenants and pedestrians at all
 times; active surveillance at access points to the development and areas that are unlikely to
 receive passive surveillance and increased activation of open spaces to encourage resident
 community activity.
- Further recommendations include ensuring that all external and relevant internal areas of the
 development are well lit to the relevant Australian Standards. Lighting is particularly important at all
 access and entry points including lifts and stairwells, pedestrian pathways and car parking areas
 and these should comply with AS/NZS 1158 to increase surveillance opportunities during the
 hours of darkness.
- It is recommended that landscaping does not interrupt sightlines and is used on external surfaces
 to deter malicious damage, show ownership and improve aesthetics. Landscaping will be
 particularly important surrounding the development. It will also be important to ensure that
 landscaped areas do not provide opportunities for concealment or entrapment.
- Opportunities for passive surveillance should be provided where possible, particularly around promenade areas.
- Safety along Bridge Road site entrance should be considered.
- The design of the site demonstrates that consideration for passive surveillance has been included, particularly in areas overlooking Promenades; safe car parking for tenants and patrons of the development; safe and secure service access: and an activated frontage and pedestrian access to the Promenades.
- There are a number of key recommendations in this report to assist in the design of the
 development and landscaped areas. These recommendations should be considered and
 implemented where possible in the final architectural and landscape plans and as part of the
 overall management of the proposed development.

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Introduction and Overview

1.1 Background

Sydney Fish Market is the largest of its kind in the Southern Hemisphere and among the three largest seafood markets in terms of variety in the world. The market sources product both nationally and internationally and trades approximately 14,500 tonnes of seafood annually with up to one hundred sustainable seafood species traded every day and approximately 500 species traded annually. The site attracts over 3 million visits each year.

In November 2016 the NSW Premier announced The new Sydney Fish Market would be built at the head of Blackwattle Bay, adjacent to the existing Fish Market.

In June 2017 the Premier of NSW announced the appointment of Danish architects 3XN to lead the design team that includes Sydney firms BVN and Aspect Studios. They have been working with key stakeholders, including UrbanGrowth NSW and Sydney Fish Market Pty Ltd (SFM), to develop the design for the new Sydney Fish Market. As announced by the NSW Premier, works are planned to commence in 2019.

1.2 Site and context

The site is located at the head of Blackwattle Bay between the Pyrmont Peninsula and the foreshore of Glebe, situated less than 2km west of Sydney's CBD and is partially within the City of Sydney Local Government Area.

The land to which the development application relates comprises Lots 3 - 5 in DP 1064339 part of lot 107 in DP 1076596 and part Lot 1 in DP835794. Works to connect to the existing waterfront promenade to the west of the site are located on Lot 3 in DP1018801. The development footprint is irregular in shape and has an area of approximately 36,800m2. The site is partly on land above mean high water mark and partly on water below mean high water mark.

The site has a frontage to Bridge Road to the south and Blackwattle Bay to the north. Pyrmont Bridge Road is an arterial road that links to the Anzac Bridge to the north west of the site. Sydney Secondary College Blackwattle Bay Campus is immediately south west of the site and the existing Fish Market immediately north east. Located directly opposite the site to the south is Wentworth Park, separated by Bridge Road.

Located approximately 400m walking distance from the site are the existing Fish Market, Wentworth Park, and Glebe Light Rail stops which are serviced by the Dulwich Hill Line which is a 23 stop, 12.8-kilometre route running from Dulwich Hill to Central station via Pyrmont.

The site contains one heritage item being the heritage stormwater culvert. The site is also near a number of heritage items.

The site's current uses include a concrete batching plant at the Western end and concrete hardstand and wharf area at the Eastern end, which is currently vacant. The site includes wharves and land-based structures. Part of the site is the water of Blackwattle Bay. Works will be undertaken on Bridge Road and its intersections with Wattle Street and Wentworth Park Road.

1.3 Approval strategy

Pursuant to the provisions of the *Environmental Planning and Assessment Act 1979* and *State Environmental Planning Policy (State and Regional Development) 2011* ("SEPP SRD") The new Sydney Fish Market development is State Significant Development and the Minister for Planning is the consent authority.

To deliver The new Sydney Fish Market, the following applications will be lodged:

 A concept development application seeking approval for concept proposals for the new Sydney Fish Market. This is to meet the requirements for a master plan contained in clause 40 of SREP26. This concept development application will also set out details of the first stage of the development being the demolition of land and water-based structures on the site including removal of marine piles and any resulting repairs to the existing sea wall;

- 2. A development application for the construction of The new Sydney Fish Market;
- 3. An application to amend the planning controls applying to the site to enable the proposed development to be a permissible use on all of the site. This is to be achieved by an amendment to Sydney Regional Environmental Plan No 26—City West ("SREP26").

These applications are lodged concurrently.

1.4 Summary of the development

The proposal is to build The new Sydney Fish Market with a contemporary urban design, provide unique experiences for visitors and world-class auction and wholesale facilities. The new facility will be set within an improved public domain including the creation of a waterfront promenade with improved access to Blackwattle Bay and linking to surrounding areas and to public transport.

The development will expand and improve the functions of the existing in a new setting designed to achieve design excellence, functional performance and environmental sustainability.

The new Sydney Fish Market will include retail and food and beverage premises, wholesale facilities and auction rooms, offices and commercial space, Sydney Seafood Schools, back-of-house facilities and car, truck and coach parking spaces. The new facility is to include a new foreshore promenade and wharves. The new Sydney Fish Market will be purpose built and will be supported by a state of the art back-of-house plant and recycling/waste management facilities.

1.4.1 Concept development application

The Concept development application seeks approval for:

- 1. The use of the site for the fish market including waterfront commercial and tourist facilities and ancillary uses and the distribution of uses;
- 2. A gross floor area of up to 30,000m² contained within a defined building envelope;
- 3. Waterfront structures such as wharves;
- 4. Concepts for improvements to the public domain including promenades, access to Blackwattle Bay and landscaping;
- 5. Pedestrian cycle and road access and circulation principles;
- 6. Principles for infrastructure provision and waste management.

This concept development application will also set out details of the first stage of the development being the demolition of land and water-based structures on the site including removal of marine piles and any resulting repairs to the existing sea wall, and related services relocations.

1.4.2 Main Works development application

The Main Works development application seeks approval for:

- 1. the construction of The new Sydney Fish Market including land and water-based structures;
- 2. the use of the site for The new Fish Market including waterfront commercial and tourist facilities and ancillary uses and the distribution of uses;
- 3. a gross floor area of approximately 26,000m² as calculated according to the definition of GFA under SREP 26 (approximately 25,600m² as calculated according to the definition of GFA under the Standard Instrument);
- 4. public domain works including promenades access to Blackwattle Bay and landscaping;
- 5. pedestrian, cycle and road access and circulation;
- 6. infrastructure provision and waste management; and
- 7. associated works as required.

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The proposed uses comprise:

Below Ground Level

- Parking for service and delivery, and private vehicles up to approximately 417 vehicles;
- Plant and storage;
- · Waste Management facilities; and
- · End of journey facilities.

Ground Level - Outside of Building Envelope

- Up to three operational wharves for fishing fleet servicing and product unloading/loading, multipurpose wharf space, private-operated ferry stop, recreational vehicles and the like;
- Vehicular access driveways; and
- Publicly accessible promenade.

Ground Level - Within Building Envelope

- Wholesale services space including product storage and processing;
- Auction floor and associated refrigeration and handling space;
- Loading dock including time-limited delivery and service vehicle parking area;
- Waste management facilities;
- Office space including buyers room; and
- Staff amenities, plant and storage.

Upper Ground Level (L1)

- Retail premises including fresh food retail, food and drink premises including harbour side dining;
- External/shared dining space;
- · Ancillary back of house space and staff amenities; and
- Circulation areas.

Upper Level 2 (Mezzanine)

- · Catering space;
- The Sydney Seafood School;
- Tenant and subtenant office space; and
- Plant and storage space.

1.5 Purpose of this Report

The purpose of this report is to address the Crime Prevention through Environmental Design (CPTED) assessment.

CPTED is a crime prevention strategy that focuses on the planning, design and structure of neighbourhoods to reduce opportunities for crime or antisocial behaviour.

This CPTED assessment will identify and report on potential issues associated with the proposed development and will consider principles and issues such as accessibility, lighting, design, pedestrian safety and impacts on local amenity.

Where negative impacts are identified, prospective mitigation measures and recommendations will be provided in accordance with professional standards and statutory obligations.

2. Reference Documents

The following relevant safety and crime prevention documents were reviewed as part of this CPTED assessment:

- City of Sydney Council's Safety Plan 2014-2018;
- The new Sydney Fish Market early design briefs and drawings prepared by 3XN, BVN;
- Crime Prevention through Environmental Design Development Control Plan; and
- Site and Urban Design for Security FEMA 430.

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Crime Prevention through Environmental Design Principles 3.

3.1 General

Available plans of the proposed development at The new Sydney Fish Market, including the preliminary drawings, have been assessed in accordance with CPTED principles and the appropriate regulations adopted as recommended by NSW Police. Areas that require specific attention to ensure maximum safety within the proposed development have been identified and recommendations proposed to mitigate any issues.

Crime Prevention through Environmental Design (CPTED) is the use of design and space management principles in order to manipulate human behaviour. The design of a particular space has to ensure that the intended activity can function properly, as well as directly supporting the control of behaviour, in order to reduce the opportunity for crime.

It should be noted that design is only one component to ensure a safe and secure environment. The level of actual or perceived crime is determined through the combination of design principles and ongoing management of the development. Design should support and accommodate good management practices.

The design of The new Sydney Fish Market precinct will strive to incorporate the three overlaying **CPTED** strategies:

- Territoriality:
- Natural Surveillance: and
- Natural Access Control.

Overall, the proposed development includes considerations for CPTED principles within its design. However, a number of measures can be undertaken to further improve safety across the development. These are further discussed below.

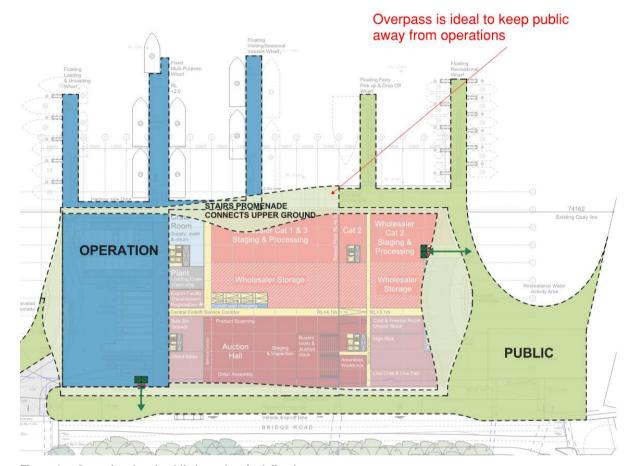
3.2 Territoriality

Territoriality clearly defines an area physically or psychologically utilising physical element to create an environment with a sense of ownership where abnormal behaviour, such as unusual loitering or other unauthorised activities, is easily recognised. For example, a clean, well-lit, attractive area will present an environment that encourages intended site users to feel safe and tolerate only acceptable behaviour. This same environment has the opposite effect on criminals, as it is easy to observe, identify and report abnormal behaviour. This means intended users are more likely to notice and report someone doing something inappropriate.

By creating this sense of ownership, approved users of a space develop a vested interest in that space and are then more likely to challenge intruders and report them to the onsite security presence. This sense of owned space also creates an environment where 'unauthorised users' or 'intruders' stand out which creates a perceived increase in the risk of detection.

A major component of territoriality is way finding, which is a concept where architectural and landscape features are designed with visual clues and signage to direct people or allow them to easily identify where they are and where they should go.

Figure 1 below demonstrates ideal separation from the operation and public areas.



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Figure 1 Operational and public boundary is defined

3.3 Natural Surveillance

Natural surveillance supports good visibility in and around the buildings to limit concealment of criminal activities. The concept is to see and be seen; criminals do not like to be seen and legitimate users feel safer when they are seen. Offenders are often deterred from committing a crime within an area that is open and under natural surveillance.

A compartmentalised facility with many small out-of-the-way places or obscure corners combined with a lack of windows and glazing greatly inhibits the ability for people to see and identify abnormal behaviour, which increases the intended users' sense of fear.

Coordination of interior design, adjacencies, corridors, windows and doors with the layouts of walkway and parking can support natural surveillance.

3.4 Natural Access Control

Natural access control is about using layout and design elements to easily direct site users in an orderly fashion from one location to another while reinforcing territoriality and aiding natural surveillance. It also attempts to achieve this intent by delineating between public and private space by using the surrounds to limit or control the natural movement of persons throughout an area. By denying access to targets and creating a perception of risk for offenders this concept decreases the opportunity for criminal activity.

The mainstay of natural access control is limiting the number of intended access points to the greatest extent possible without negatively affecting operations as well as to guide people through a space by strategic design. This aids natural surveillance by increasing traffic flow at each of those locations therefore increasing the opportunities for surveillance. Although difficult with the required intent and design of The new Sydney Fish Market site, channelling all users through a limited number of

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entrances increases the ability to see and be seen as well as reduces the number of electronic access control and CCTV cameras required. The number of entrances also makes it harder for criminals to avoid detection or escape. These design elements are also useful tools to clearly indicate public routes and discourage access to private areas.

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4. Design Assessment

4.1 General

AECOM has reviewed the current design documentation against the CPTED principles and generally the design meets the requirements.

It is noted that there is further design development to occur and this is further discussed in our assessment findings and recommendations below.

4.2 Territoriality

4.2.1 Assessment Findings

The key objectives for territoriality are to ensure that:

- The boundaries of The new Sydney Fish Market development are clearly defined to reduce justification of and crime opportunities. Aiming to reduce the ability of offenders making excuses about being in the wrong place i.e. didn't realise that it was private / public realm or restricted areas.
- Integrated signage provides guidance to users of the development and reduces ability for trespassers or offenders to defend themselves for being in locations or conducting activities that are prohibited.

On review of the current design documentation, the layouts show evidence of territoriality by way of definition between public and private areas of the site such as at public lift lobby areas being located adjacent to publicly accessible spaces. There are limited pedestrian and vehicle entry points and where these are provided; they are noted on the drawing as being for retail or other purposes.

Active ownership of the space will contribute greatly to showing territoriality and the proposed Promenade areas and Public Domain are examples of how this will be achieved at the site.

Signage is yet to be fully developed so AECOM is unable to comment on whether the current design meets the territoriality principle.

AECOM note that the landscaping design is not yet fully developed so further comments on it meeting appropriate CPTED principles are unable to be made at this point.

4.2.2 Recommendations

AECOM make the following recommendations related to territoriality for further consideration in design development:

- Provide a defined boundary around The new Sydney Fish Market development. A formidable barrier is not required but the boundary should provide visual cues as to what is private space and what is public space;
- Select pavement patterns, vegetation, low walls, or site features to form physical or psychological separation of areas around The new Sydney Fish Market precinct;
- Develop a suitable wayfinding and signage strategy to reinforce or establish territoriality for the site;
 - Wayfinding is an important function of design that illustrates the importance of coordination among practitioners and community planning, public works, transportation, law enforcement, and fire-rescue organisations.
 - Signs are an important element of security. Confusion over site circulation, parking, and entrance locations can contribute to a loss of site security. There should be on-site directional, parking, and cautionary signs for tenants and visitors at the site.
 - Provide appropriate signage for warnings and wayfinding (site entry, delivery traffic, visitor parking, and drop-off).
- Provide waste bins in areas of intended pedestrian use (such as along the Shared Pedestrian Walkway to the south and the Promenade areas to the north, east and west) to encourage a clean and well maintained environment;

- Apply appropriate demarcation from front of house and back of house areas at all levels of the building with barriers, signage and electronic access control; and
- Consider trees planted along the edge of the Shared Pedestrian Walkway on Bridge Road which can serve dual aesthetic and barrier purposes.

4.3 Natural Surveillance

4.3.1 Assessment Findings

The key objectives for natural surveillance are to ensure that:

- There is adequate surveillance to, from and throughout the development to reduce opportunities for crime.
- Lighting in and around the development complies with the Australian Standard AS/NZS 1158 –
 Lighting to increase surveillance opportunities during the hours of darkness.
- Lighting in and around the development is commensurate with the Closed Circuit Television requirements.

The current design has feature stairs at both the western and eastern sides of the site. These activate the area by encouraging active passive surveillance of the Promenade areas (see Figure 2) and promoting the legitimate use of the public area.

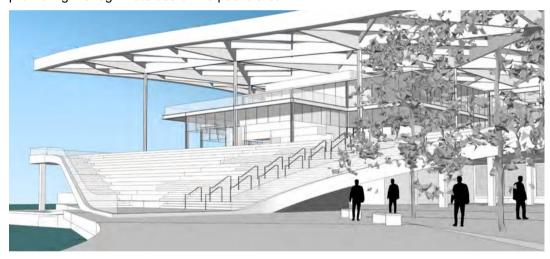


Figure 2 Western Feature Stairs Promenade

However, the current design has some open areas under the stairs (see Figure 3) which will require consideration for appropriate lighting and CCTV cameras in order to reduce opportunities for concealment of unauthorised users or criminal activity.

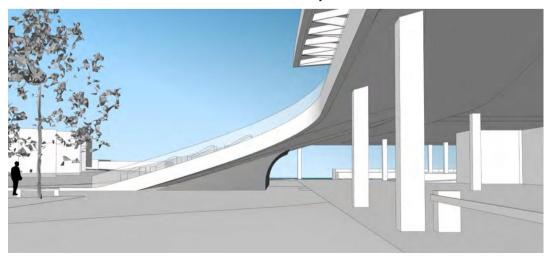


Figure 3 Undercroft area of Western Feature Stairs Promenade

The Public Domain area appears to be relatively open with no large fixed obstructions currently proposed. The Controlled Water Features are lower than the Eastern Promenade space so this allows increased passive surveillance. The Shared Pedestrian Walkway has clear sight lines shown along the entire length which is highly effective in allowing people to be seen in this space.

Glazing is incorporated throughout the architectural scheme and this promotes active visual surveillance of public areas such as the Promenade (see Figure 4).

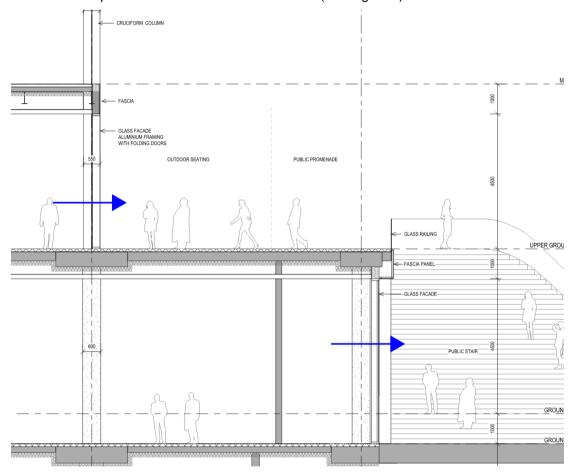


Figure 4 Glazing promotes active surveillance of pedestrian areas

AECOM note that the landscaping design is not yet fully developed so further comments on it meeting appropriate CPTED principles are unable to be made at this stage.

4.3.2 Recommendations

AECOM make the following recommendations related to natural surveillance for further consideration in design development:

- Develop pedestrian pathways and corridors with clear lines of sight, particularly along the Promenade areas;
- Landscape architecture to support security requires a design that integrates natural surveillance, video surveillance, and natural access control. Site furnishing selection should meet the following functional requirements:
 - Control access to critical and sensitive areas by planning suitable;
 - Consider the 10-year growth canopies of trees to avoid conflicts with lighting, CCTV cameras, and any emergency call stations/posts;
 - Select plantings and establish maintenance schedules to keep shrubs and other low vegetation below prescribed height (1200mm or less) and tree canopies with higher undergrowth to provide clear lines of sight and limit hiding places;
 - Footpaths should have a clear space on either side to provide clear lines of sight and reaction time;

- Utilise barrier plants (thorny or raised etc.) in areas where pedestrian traffic is undesirable;
- Light coloured surfaces provide better light reflection for enhanced visual and video surveillance;
- Avoid dense vegetation in close proximity to a building as it can screen illicit behaviour;
- Select and maintain vegetation with eliminating concealment opportunities in mind;
- Select measures to screen visually detractive components such as utility kiosks and condensing units while still minimising concealment opportunities for people;
- Evaluate the long-term growth plan when developing landscape designs such as ensuring vegetation will not interfere with natural surveillance, create hiding spots, or interfere with CCTV cameras and lighting.
- Avoid constructing large blank walls that limit visibility that can become targets for graffiti; instead
 encourage the use of walls with windows, architectural details, foliage or public art/murals;
- Include intended gathering areas where practical to increase legitimate use of corridors and lobbies therefore increasing natural surveillance;
- Keep the Western and Eastern Stair undercroft areas as open as possible to promote increased natural surveillance; and
- Consider additional seating along the Shared Pedestrian Walkway and Promenade areas to encourage greater natural surveillance of people and activities (see Figure 5).

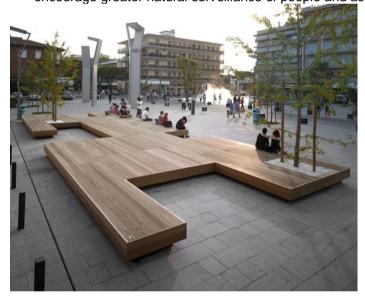


Figure 5 Example seating that allows for greater natural surveillance of pedestrian areas

4.4 Natural Access Control

4.4.1 Assessment Findings

The key objectives for natural access control are to ensure that:

- Access to the property is controlled to reduce opportunities for crime.
- Access to restricted areas within the property is controlled to reduce opportunities for crime.

The current drawings indicate only a limited number of entry/exit points which is a positive point in channelling legitimate users to the approved access portals. This will lessen the chance of potential offenders accessing back of house or private areas.

The connection between the Public Realm and Eastern Feature Stairs provides a clear access. Safe and secure access using unobstructed sight lines, lighting, CCTV surveillance, integrated signage to be considered during detailed design for the staff and visitors.

AECOM note that the landscaping design is not yet fully developed so further comments on it meeting appropriate CPTED principles are unable to be made at this stage.

The application of Hostile Vehicle Mitigation (HVM) measures adopts the "every metre counts" approach and should be followed to ensure that the operation of The new Sydney Fish Market site is a primary consideration when designing in the mitigation measures to counter the risks posed to the Precinct, its users and staff by hostile vehicles.

We have considered the following when determining what a hostile vehicle represents:

- A vehicle which can be used to deliver an improvised explosive device with a specific payload;
- A vehicle which can be used to deliver a CBR device which can be effectively dispersed using a medium such as a small improvised explosive device or alternative dispersal mode such as compressed gas and reservoir system; and
- A vehicle which can be used as a weapon against people or buildings, which is used to endanger
 life or compromise a building structure or envelope to effect a reaction which could result in
 endangerment to life and property.

Currently the drawings don't indicate proposed bollards, planter boxes or seating which could be used to counter hostile vehicles from accessing unauthorised areas of The new Sydney Fish Market precinct such as the bus drop-off area on Bridge Road and the Western and Eastern Promenade areas. A combination of different HVM rated products could be considered including bollards (retractable and fixed), planter boxes, seating, rubbish bins and information frames (see Figure 6).













Figure 6 HVM example products

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4.4.2 Recommendations

AECOM make the following recommendations related to natural access control for further consideration in design development:

- Make the limited entrance points to the site more symbolic and easily recognisable as the intended entrances:
- Provide clear definition of controlled space with boundaries, markings, and signage, and using lighting to limit access or control pedestrian traffic direction and flow;
- Develop pedestrian traffic corridors between high use areas, such as between wharf loading and unloading points, parking areas and main building entrances; and
- Develop a HVM strategy (in consultation with Project Stakeholders, Architect and Landscape Designer) for the bus drop-off area and both the Western and Eastern promenade areas while not inhibiting effective pedestrian movement.

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5. Conclusion

This assessment has considered the architectural drawings prepared by 3XN/BVN to accompany the Development Application for the proposed development at Glebe having regard to CPTED principles.

To improve the safety and potential crime outcomes for tenants, visitors and the broader community, recommendations have been made to ensure that appropriate measures are included and/or considered in the further detailed design development of the architectural and landscape plans.

The proposed development has incorporated design details generally consistent with CPTED principles.

The plans include good opportunities for passive surveillance in tenant areas, good legibility and a high standard of amenity for a diverse demographic that will access and use the development.

It is recommended ongoing consultation be undertaken in the design of external public areas to ensure seamless integration with the design of The new Sydney Fish Market facility itself. It will be important to consider CPTED principles as a whole at The new Sydney Fish Market precinct. In particular; it will be particularly important to include:

- Integrated signage to show segregation of public and private areas and restricted assist with legibility of the site given mixed use nature;
- Integrated and coordinated design of landscaping, lighting, public art, wayfinding and seating to direct legitimate site users and reinforce territoriality;
- To maximise activity during day and night periods in and around The new Sydney Fish Market to increase passive surveillance;
- Active promotion of public transport to clearly marked and signed access/exit points;
- Place management that ensures a clean, safe and actively utilised facility;
- Landscaping to deter malicious damage, provide amenity and define ownership of all elements of the site; and
- Sufficient lighting to deter opportunistic crime and provide safety for residents and pedestrians at all times.
- The design of the site already shows consideration has been given to:
- Maximising passive surveillance;
- Safe car parking areas for visitors and retail tenants of the development;
- Safe and secure service access;
- An integrated building frontage overlooking the wharfs and promenade; and
- An activated street frontage at the drop off/ pick up area on Bridge Road.

There are a number of key recommendations in this report to assist in design development. These recommendations should be considered and implemented where possible in the final architectural plans and as part of the overall management of the proposed development.

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