3.0 THE DEVELOPMENT PROPOSAL

3.1 Masterplan Approval

In 2004, a Master Plan for the site was submitted to the former Department for Infrastructure Planning and Natural Resources in accordance with Clause 44 of Sydney Regional Environmental Plan No. 26 – *City West* for the redevelopment of the SFM site. The Sydney Fish Market was identified in SREP 26 as land subject to Masterplanning requirements, with adoption of the Master Plan by the Minister.

The Masterplan for the site was approved on 16th February 2005 by the former Department of Infrastructure Planning and Natural Resources with an attached Instrument of Adoption for the Master Plan for the Sydney Fish Market, Blackwattle Bay, Pyrmont.

The subject Development Proposal is generally in accordance with the Masterplan for the site.

3.2 Description of the Proposal

The Development Proposal is for the redevelopment of the Sydney Fish Market (SFM) and its foreshore area located at Blackwattle Bay, Pyrmont, sited west of the Western Distributor.

The existing single storey buildings sited along the northern, eastern and foreshore portions of the site the open car parking area and toll booths will be demolished. The existing Main Fish Market building, located at the southern portion of the SFM site will remain and will be refurbished at a later date.

The proposed development will provide additional retail outlets, wholesale trading areas and restaurants in new 2 and 3 storey buildings located at the central and northern portions of the site, north of the Main Fish Market building. A new revitalised public foreshore precinct comprising a harbourside urban plaza with kiosks, a water front park and promenade will be sited along the foreshore.

The total of approximately 622 car spaces will be accommodated within the site on the upper levels of the central building (Building A) and within the open car parking area west of Bank Street.

The redevelopment will improve the Sydney Fish Market's appearance, its functional performance, occupational health and safety and environmental impact. It will increase the public domain, improve access to and the pedestrian amenity of the foreshore and will upgrade this retail precinct to world class standards. The development will revitalise the SFM as a tourist, retail and dining precinct.

The following buildings and facilities are proposed to be erected to the north of the Main Fish Market building. These comprise Building A which will be centrally located within the site and Building B, located at the northern portion of the site.

3.2.1 Building A

A 3 storey building for retail, dining and wholesale uses with upper level and roof top parking will be located at the central portion of the site.

Ground floor Level (RL 3.60)

- The retail facilities access the Foreshore Urban Plaza which has external dining facilities, with fast food kiosks and an oyster bar.
- Retail facilities are located on the western side of the building fronting the Foreshore Urban Plaza.
- Wholesale facilities are located on the eastern (rear) side of the building.
- A service lane with parking servicing the facilities (88 spaces) is located between the retail and wholesale area. Access to the service lane is via the existing signalised SFM entrance at Bank Street, along the proposed internal road along the eastern boundary of the site, entering the loading area to the north of the Main Fish Market building, to the proposed service lane.
- Building B and the Stage 1 building (approved by Sydney City Council) adjoins Building A at this level.

Level 1 (RL 8.10)

- Restaurant and dining facilities are located on the western side of the building opening onto a terraced outdoor dining area and promenade. The promenade accesses outdoor dining facilities located above the kiosks.
- Car parking with 110 spaces is located to the rear of the restaurant facilities, on the eastern side of the building. Access to the parking area is via the existing signalised SFM entrance at Bank Street, through internal driveways.

Level 2 (RL 12.60)

- Car parking with 179 spaces. Access to the parking area is from the existing signalised SFM entrance at Bank Street, through internal driveways.

Level 3 – Roof (RL 15.60)

- Open roof top car parking with 179 spaces.

3.2.2 Building B

A 2 storey building located at the northern portion of the site within the approximate footprint of existing Buildings 34 and 35 which abuts the Stage 1 building (approved by Sydney City Council).

Ground Floor Level (RL 3.60)

- Retail facilities which adjoins and are sited at the same floor level as the Building A retail level.

Level 1 (RL 8.10)

- Tavern with dining facilities and an external terrace. The facilities are linked to the outdoor dining area of Building A level 2 via a pedestrian bridge.

3.2.3 Foreshore Urban Plaza

An urban plaza is located on the western side of Building A and fronts a Waterfront Park and Promenade along the foreshore of Blackwattle Bay. Fast food kiosks, an oyster bar and external dining facilities are located within the Foreshore Urban Plaza. Two external stairs link the Urban Plaza to the L1 restaurant area.

The Urban Plaza is approximately 2,100m^2.

The Urban Plaza is accessed from the Pedestrian Arrival Forecourt via a set of wide external stairs or lift.

3.2.4 Waterfront Park and Promenade

A waterfront park will be created between the Foreshore Urban Plaza and the Blackwattle Bay.

Key features of the park will be an outdoor dining area (approximately 764m^2), and a generous lawn of approximately 2,480m^2) sloping towards the bay. The dining area of the Waterfront Park is sited approximately 150mm above the Forecourt Urban Plaza and the Ground Level retail facilities. This will provide separation between the dining area and the busy plaza/ queuing areas for food outlets, while ensuring easy access between the two areas. The Waterfront Park will be flush with the Outdoor Dining Area and will continue at the same grade for a distance of 5m, before sloping down towards the waterfront. This will maximise the sense of prospect from the lawn, and viewing platform to Blackwattle Bay.

On the western side of the Main Fish Market Building, the existing dining area will be maintained and upgraded (approximately 670m^2) in its existing location. This will include the construction of a new structure to provide sun and weather protection to the outdoor dining area. The structure will also provide an undercover link to the western entrance to the retail arcade in the Main Fish Market Building.

Along the edge of the Bay, between the northern site boundary and the main wharf (to the north of the Main Fish Market Building) will be a paved waterfront promenade, providing continuous waterfront public access.

A boardwalk will run along the majority of the site's foreshore to Blackwattle Bay. In the southern portion of the site, a boardwalk over the Bay will provide a dedicated pedestrian and cyclist access along the foreshore, separate from the site's operational areas and routes. In the northern part of the site, the boardwalk will complement the paved promenade to provide a generous pedestrian link along the foreshore, consistent with the aims of various planning policies for the area.

Native tree planting within the foreshore precinct will provide shade and increased amenity, as well as visually link the site to the remainder of the Blackwattle Bay foreshore. It will also help to soften the appearance of the development from various vantage points around the Bay. This includes a row of trees proposed between the Foreshore Urban Plaza and the Waterfront Park, a small grove of trees connecting the northern jetty with the Foreshore Urban Plaza and main lawn, and signature tree planting at the southern end of the main lawn. The plant palette builds on the site's original endemic vegetation.

3.3 Design Concept

The existing SFM site comprises:

- the 2 storey Main Fish Market building located at the southern portion of the site flanking Pyrmont Bridge Road;
- an ad-hoc collection of single storey buildings of no specific architectural style or merit, located at the eastern, north-eastern and south-western (foreshore) portions of the site;
- an open asphalt car parking area servicing the SFM facilities located centrally within the site; and
- plant and storage structures sited along the Blackwattle Bay foreshore which prevent views and access from the site to the Bay.

The proposed development provides a revitalised tourist destination of a retail and dining precinct as well as an operational fish market. The proposed development will replace the ad-hoc single storey buildings, ancillary plant and car park area with a new 2 and 3 storey development with integrated upper level car parking facilities, located at the eastern and north-eastern portion of the site. The proposed buildings, along with the existing Main Fish Market building, will encircle a new large public domain pedestrian precinct on the eastern foreshore of Blackwattle Bay and provide views and access to the Bay. The complex of buildings will step from 2 storeys towards the foreshore to 3 storeys in height towards Bank Street.

The buildings will comprise glazed facades to the foreshore and Blackwattle Bay. The solid elements of the building of rear walls and access shafts will be of masonry construction.

The public domain will comprise a new Foreshore Urban Plaza with retail and dining kiosks, a landscaped Waterfront Park and a Waterfront Promenade which will link to Pyrmont Bridge Road. The Waterfront Promenade will contribute to the foreshore pedestrian promenade anticipated to link Glebe to Circular Quay, along the foreshore.

The waterfront precinct will provide access, improved pedestrian amenity and recreation function at the foreshore. Vehicular access, servicing, loading and parking facilities will be located to the rear (eastern) portion of the site adjacent to Bank Street.

Building A, of 3 storeys in height is located centrally towards the eastern portion of the site, is sited approximately 35m north of the Main Fish Market Building approximately 29m from its existing raised loading dock podium, and approximately 52m from the foreshore of Blackwattle Bay. The building is sited at the site's eastern boundary to Bank Street. The Building is fully glazed at its ground floor retail level and upper level (L1) dining level along its foreshore façade. A covered promenade abuts the retail frontage, opening onto the Foreshore Urban Plaza. The upper (L1) dining level, opens onto an outdoor dining area and public promenade that accesses the Foreshore Urban Plaza via external stairs or lifts located at the corners of the building.

To the rear of the retail facilities at L1 (Ground Floor level) are wholesale areas and an internal service road.

Parking for the development is located to the rear of the restaurants on L1, L2 and on L3 (roof). The parking levels are screened with light weight woven stainless steel fabric providing a translucent and decorative façade to the upper levels of the building.

Building A is flanked by egress stairs and lift shafts at the four corners of the building. The shafts, as turret-like structures, projecting above the building façade will be of reinforced concrete with off-form/ rendered finish.

The vehicular access ramps to upper level car parks are located on the eastern side of Building A. Its structural framework of concrete ramps, balustrades and supports provides a strong sinuous element to the eastern façade.

Building B, of 2 storeys in height with skillion roof forms is glazed at its retail (Ground Floor level) and dining (L1) storeys. The building abuts the Stage 1 building and will provide a roof top terrace for outdoor dining to the Stage 1 building. The terrace will be roofed with an openable roof system (Vergola). The integrated building will be set back 36m from the foreshore and approximately 21m from the northern boundary of the site. A service road and loading area for the Tavern is located on the northern side of the building.

2 storey retail (at Ground Floor level) and dining kiosks (at L1) are sited to the west of Building A and are located within the Foreshore Urban Plaza. These are retractable fabric roof structures.

3.4 Built Form and Heights

Proposed Building A, located centrally within the SFM site, is 3 storeys in height with roof top parking. The building is 15m in height from its Ground Floor level to the top of its stair well roofs and approximately 13.2m from Ground Floor level to the top of the car parking balustrade.

Proposed Building B is 2 storeys in height with a skillion roof at its north-eastern portion and a operable roof terrace at the north-west portion (on top of the stage 1 building) fronting the foreshore. The 2 storey portion of the building is 9m in height to its eave line and 12m in height to the ridge of its skillion roof.

The height of the development steps down from its Bank Street eastern boundary to the foreshore. 2 storey pavilion buildings for kiosks and outdoor dining are located within the Foreshore Urban Plaza.

The floor to floor height of the retail (Ground Floor Level) and dining (L1) storeys is 4.5m. The floor to floor height of the car parking storey (L2) is 3m.

The existing Main Fish Market building is 2 storeys approximately 9m in height.

The proposed 3 storey building of Building A, with its rooftop parking, flanked by the 2 storey buildings of Building B and the existing Main Fish Market building, integrates with its local surrounding urban form of 7 and 8 storey buildings on the eastern side of Bank Street and on the southern side of Pyrmont Bridge Road.

Refer to Figures 17-24 for architectural and foreshore drawings.

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Date	Description	Rev
02/09/10	Issue for Boundary coordination	C
06/09/10	Issue for Boundary coordination	D
08/09/10	Issue for SFM Board Meeting	E
13/09/10	Issue for boundary coordination	F
14/09/10	FINAL EA ISSUE	G

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	Sydney Fish Market Redevelopement	Title	Site Plan		
Project	Blackwattle Bay	Date	September 2010	Drn/Authorizer	
Client	Sydney Fish Market	Dwg No	10034 DA 001	Revision	G

Date	Description	Rev
30/08/10	Issue for draft DA submission	A
26/08/10	Issue for SFM Board Meeting	B
16/09/10	FINAL DA ISSUE	C

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Sydney Fish Market Redevelopement
Project Blackwattle Bay
Client Sydney Fish Market

Title Ground Floor Plan
Date September 2010 Drn/Ch Author/checker
Dwg No 10034 DA 101 Revision C

BANK STREET

Pedestrian Arrival Forecourt

Tavern
400 m²

Terrace
455 m²

Delivery Dock

Parking
110 B99 spaces
3052 m²

Restaurants 2
641 m²

Restaurants 3
642 m²

Outdoor Dining 2
363 m²

Outdoor Dining 3
364 m²

Promenade
594 m²

Outdoor Dining
123 m²

Outdoor Dining
133 m²

Outdoor Seating
91 m²

Existing Fish Market Building

Date	Description	Rev
30/08/10	Issue for draft DA submission	A1
28/09/10	Issue for SFM Board Meeting	
14/09/10	FINAL DA ISSUE	

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Sydney Fish Market Redevelopement
Project Blackwattle Bay
Client Sydney Fish Market

Title Floor Plan Level 1
Date September 2010 Drn/Authorised
Dwg No 10034 DA 102 Revision C

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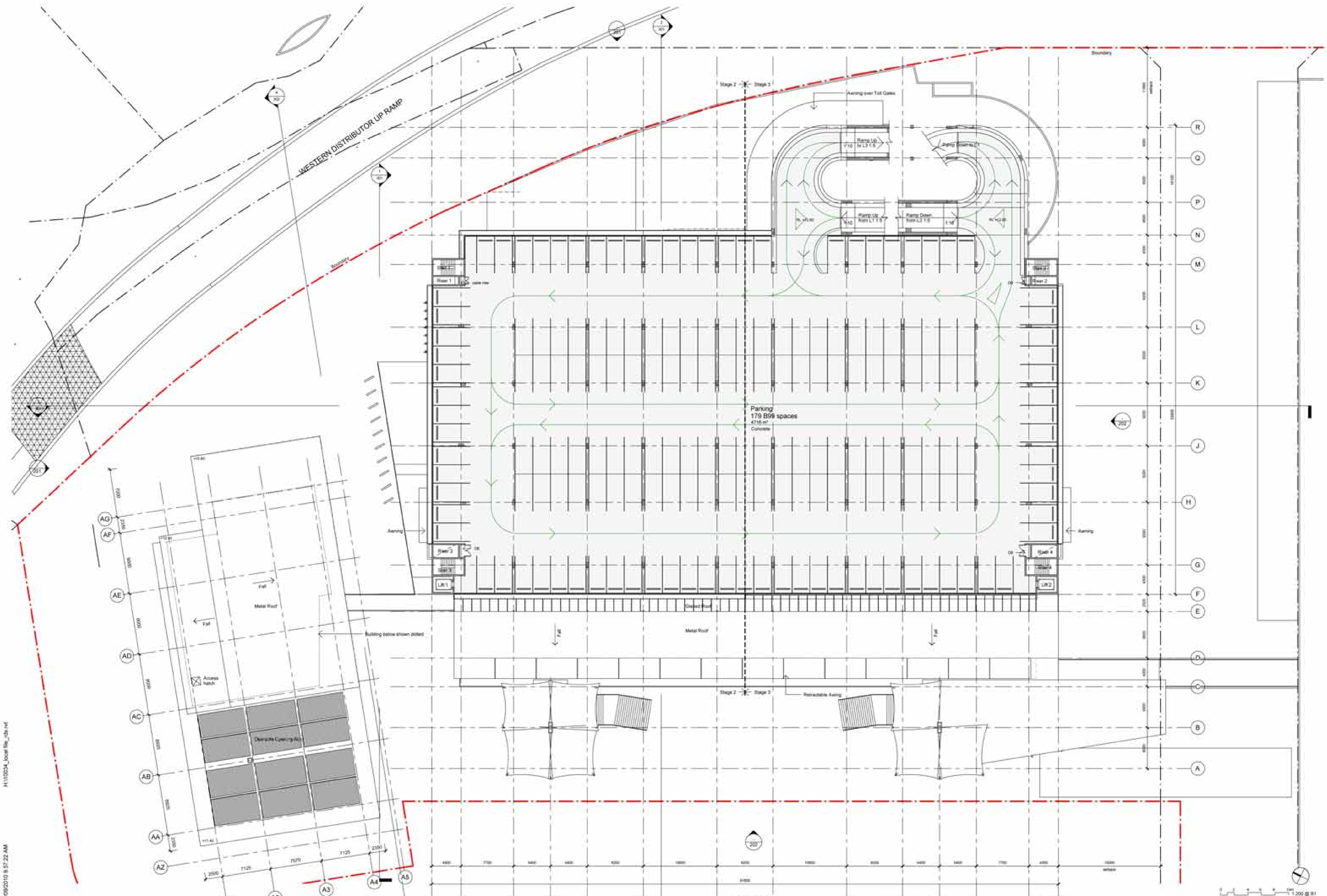

Date	Description	Rev
[illegible]	Issue for draft EA submission	A
[illegible]	Issue for SFM Board Meeting	B
[illegible]	FINAL EA ISSUE	C

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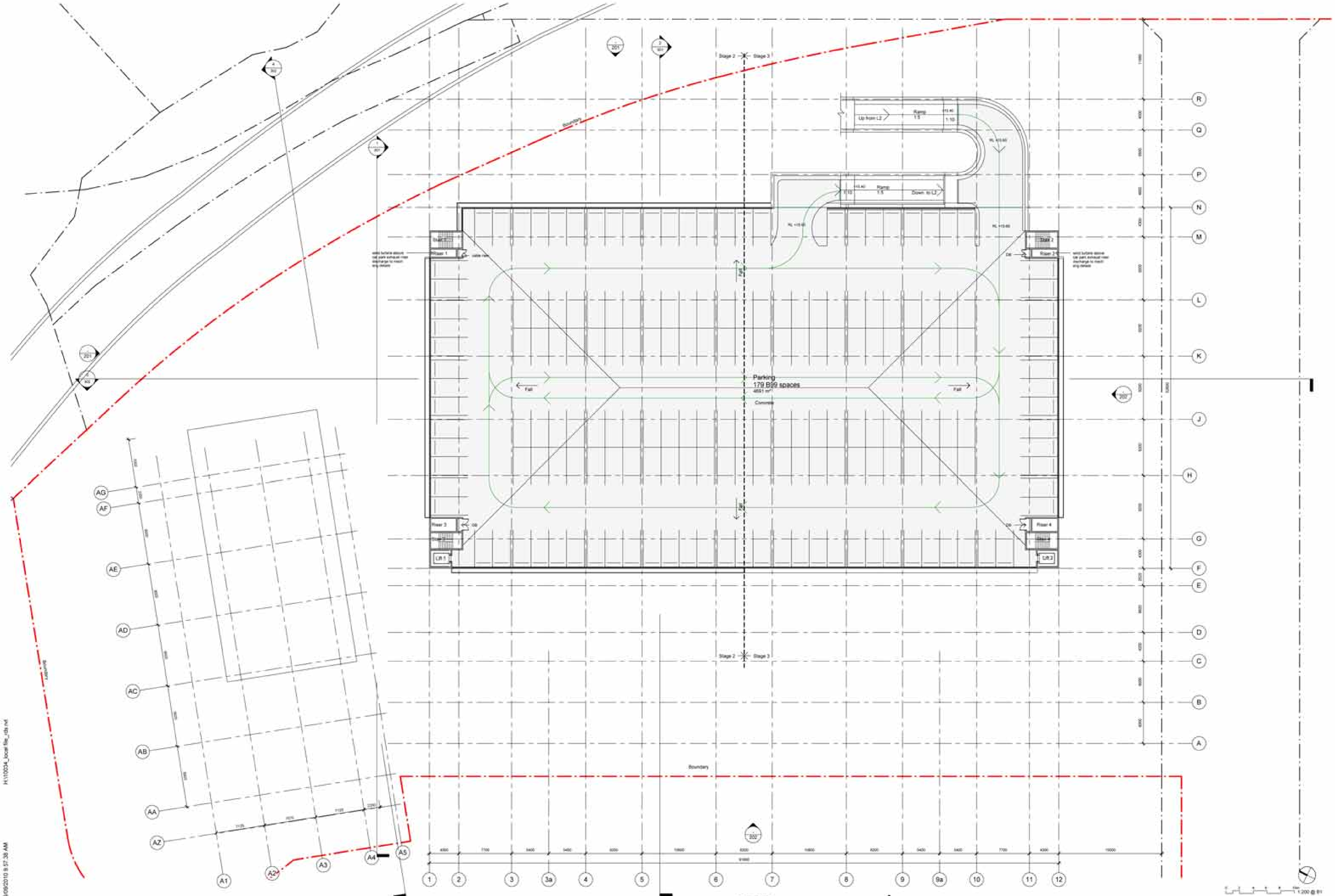
Sydney Fish Market Redevelopement
Project: Blackwattle Bay
Client: Sydney Fish Market

Title: Floor Plan Level 2
Date: September 2010
Dwg No: 10034 DA 103
Revision: C



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[illegible]	Issue for SFM Board Meeting	B
[illegible]	FINAL DA ISSUE	C

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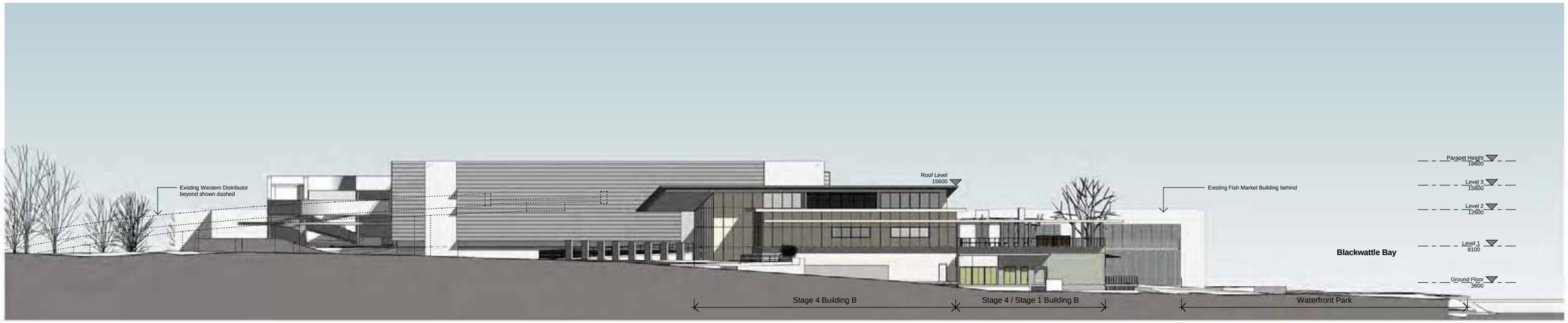
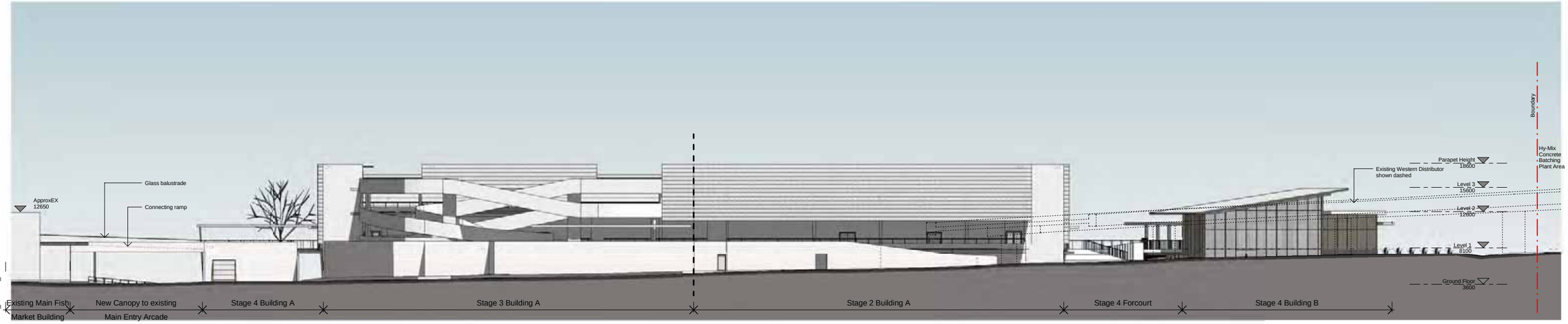
Sydney Fish Market Redevelopement
Project: Blackwattle Bay
Client: Sydney Fish Market

Title: Floor Plan Level 3
Date: September 2010
Drn/Authoriser
Dwg No: 10034 DA 104
Revision: C



North Elevation Building A



East Elevation

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FINISHES LEGEND

BT1	Balustrade Type 1 Galvanized steel balustrade with glazed panels
FCB	Honed Face Concrete Blockwork
FC	Polymerized Fibre Cement Sheeting
ML	Metal Louvre Screen
OFC	Off Form Concrete
SCF	Suspended Cable Facade System - stainless steel mesh on cables (50% open area) with LED colour backlight

Date	Description	Rev
30/08/10	Issue for draft EA submission	A
06/09/10	Issue for SFM Board Meeting	B
14/09/10	FINAL EA ISSUE	C

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Sydney Fish Market Redevelopement
Project Blackwattle Bay
Client Sydney Fish Market

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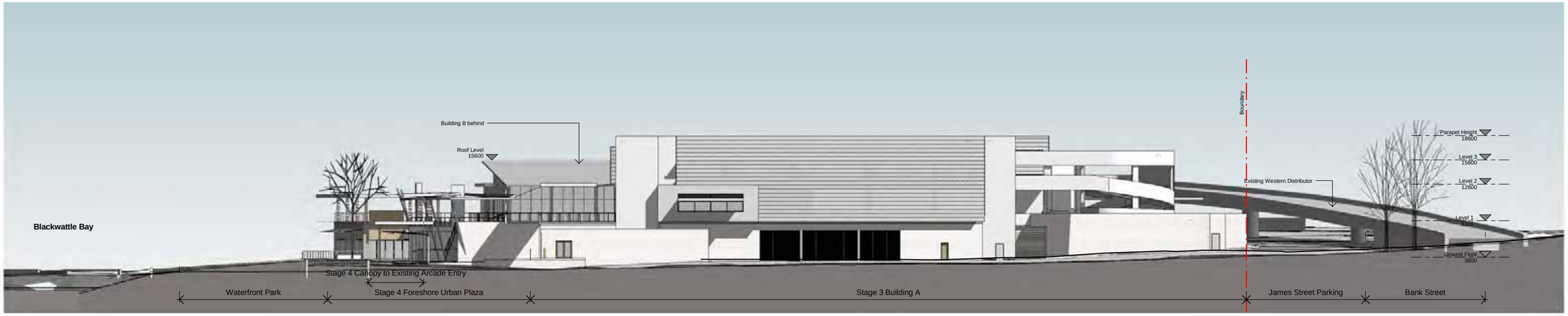
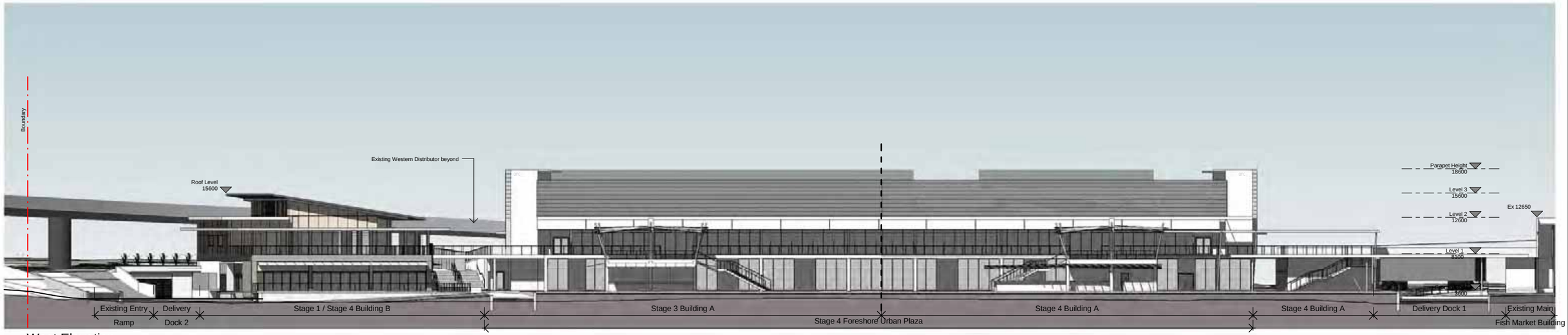
Title Elevations
Date September 2010 Dn/CAuthorcker
Dwg No 10034 DA 201 Revision C



South Elevation



West Elevation

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FINISHES LEGEND

BT1	Balustrade Type 1 Galvanized steel balustrade with glazed panels
FCB	Honed Face Concrete Blockwork
FC	Polymerized Fibre Cement Sheeting
ML	Metal Louvre Screen
OFC	Off Form Concrete
SCF	Suspended Cable Facade System - stainless steel mesh on cables (50% open area) with LED colour backlight

Date	Description	Rev
30/08/10	Issue for draft EA submission	A
06/09/10	Issue for SFM Board Meeting	B
14/09/10	FINAL EA ISSUE	C

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Project Blackwattle Bay
Client Sydney Fish Market

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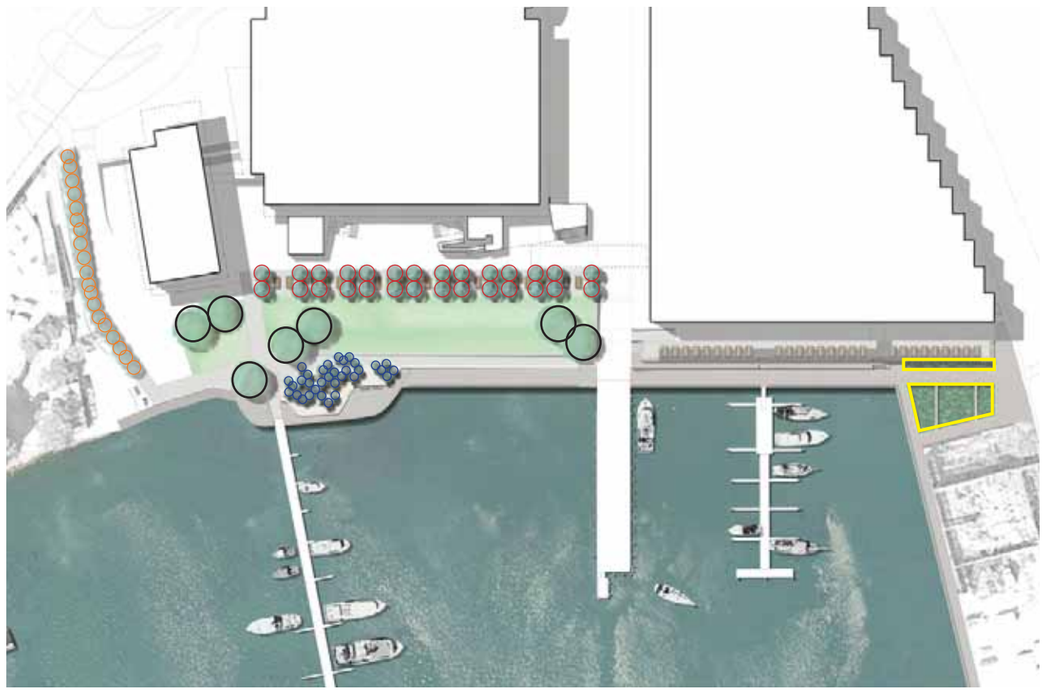
Title Elevations
Date September 2010 Dn/CAuthorcker
Dwg No 10034 DA 202 Revision C



Proposed Tree Planting

Symbol	Botanical Name	Common Name	Number
	Ficus rubiginosa	Port Jackson Fig	7
	Casuarina glauca	She Oak	33
	Eucalyptus microcorys	Tallowood	28
	Eucalyptus robusta	Swamp Gum	19
	Isolepis nodosa	Knobbly Club Rush	2,000

OUTDOOR DINING AREA

Eucalyptus microcorys

PYRMONT LINK

Eucalyptus robusta

SIGNATURE TREES

Ficus rubiginosa

THE PROMONTORY

Casuarina glauca

FILTRATION GARDEN

Isolepis nodosa

3.5 Accommodation and Development Area

The proposed development comprises the following internal accommodation and respective development area:

	Gd Floor (m^2)	**Level 1** (m^2)	**Level 2** (m^2)	**Level 3** (m^2)	**Total** (m^2)
Building A					
Retail:	2,318				2,318
Wholesale:	2532				2,532
Restaurants:		1,283			1,283
Services and Plant:	798	206	79	79	1,162
Amenities:	104	120			224
Parking and Service Lane:	2,656	3,052	4,797	4,797	15,302
Car parking ramps		1,390	352	304	2,046
Outdoor dining and Plaza:	430	1,025			1455
Kiosk:	306				306
Building B					
Retail:	1,038				1,038
Restaurant/Tavern:		490			490
Services and Plant:	83	11			94
Outdoor dining:	93	455			548

Total accommodation and floor area for Buildings A and B and existing SFM premises:

- Retail: 5,918m^2
- Wholesale: 2,532m^2
- Restaurants: 2,656m^2
- Outdoor dining and kiosks: 3,366m^2
- Services and plant: 1,256m^2
- Amenities: 224m^2
- Parking area: 15,302m^2
- Car parking ramps: 2,046m^2

3.6 Vehicular and Service Access

The existing signalised SFM entrance at the junction of Bank Street and Miller Street will be reconfigured to create a more pedestrian friendly access. The modifications to the intersection are designed to improve the safety and amenity for pedestrians and cyclists accessing the SFM site and Blackwattle Bay. The pedestrian crossing across Bank Street is proposed to be relocated from the southern side of the intersection to the northern side. The reconfiguration will provide:

- A more direct entrance for pedestrians and public transport users arriving from Miller Street, bus stops and the Fish Market light rail station;
- Significant reduction in pedestrian/ vehicle conflict by separating pedestrians from the main service vehicle access and car park access; and
- Improvement to traffic signal operations by reducing delays for vehicles through the relocation of the marked foot crossing at the intersection.

The existing internal access road at the northern boundary of the site will be retained for service to the Tavern's loading area, the foreshore area and for emergency vehicles.

The existing car parking area on the western side of Bank Street will be retained and will connect to the SFM's internal access road to parking and service areas at Jones Street. Jones Street will predominantly be a two-way carriageway vehicular lane with a roundabout sited at the southern end of the Street.

3.6.1 Vehicular access

Vehicular access to the SFM will be via a signalised entry/ exit point located at the north-eastern corner of the SFM site, adjacent to the Bank Street/ Miller Street intersection. From the entrance into the site, vehicular access to the car parks located within Building A is via a new internal roadway (the Jones Street alignment). This internal roadway diverges into the parking areas with ticket barriers will be located at the entry and exit from the circular access ramp.

Vehicles entering L1 car parking area will be via the circular access roadway to the left of the entry. Vehicular circulation within the L1 and upper car parking levels (L2 and L3) is one way in and out, via the circular vehicular ramp carriageways. Egress from the Building A car parking areas is through toll gates located near the base of the circular ramped carriageway.

Vehicular access to the Bank Street car parking area is via the existing vehicular entrance located at the southern side of this parking area.

Taxis will access the taxi rank via a dedicated taxi lane to a drop-off area at the Pedestrian Arrival Forecourt. Coaches will access the internal roadway to the dedicated coach bay via the roundabout at the southern end of the roadway.

3.6.2 Service access

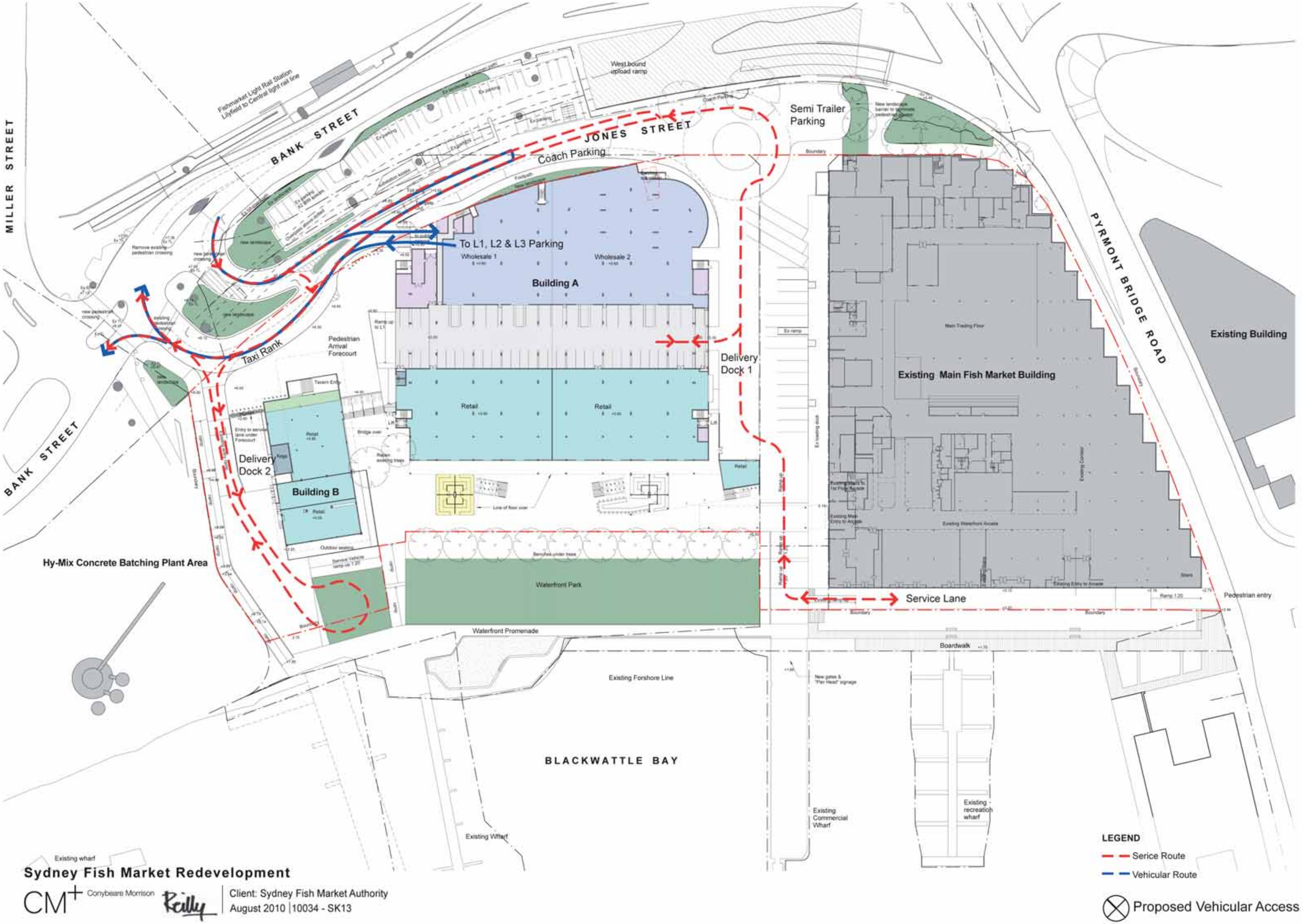
Service access will utilise the signalised SFM entrance at the junction of Bank Street and Jones Street, travel along the new internal roadway to the roundabout at the southern end of Jones Street and enter the loading and service areas of the site at the northern side of the Main Fish Market Building. This service road will also access the southern foreshore area and wharf.

The existing service lane and loading areas at the northern side of the Main Fish Market Building will be retained. The service lane located at Ground Floor level of Building A will be accessed from the loading area. The loading area is of adequate width to enable service vehicles to enter, manoeuvre and to leave in a forward direction. The existing service road on the western side of the Main Fish Market Building which services the building will be retained.

Small vans and light commercial vehicles (up to 6.4m) will also be able to use the Ground Level car park within Building A and the Bank Street car park for loading of small boxes of processed fish.

The existing service road at the northern boundary of the site will be retained. This road will access the service area to the north of Building B and the northern foreshore area and wharf.

Refer to Figure 25: Proposed vehicular access.



Sydney Fish Market Redevelopment

CM+ Conybeare Morrison | Reilly

Client: Sydney Fish Market Authority
August 2010 | 10034 - SK13

3.7 Emergency Access

Emergency access is available within the internal roadway along the eastern side of the site.

Emergency access is available:

- within the internal roadway along the eastern side of the site;
- to the service lane on L1 via the Delivery Dock;
- to the L2 parking level accessing the rear of the restaurant areas;
- to the northern foreshore area and wharf via the service road along the northern boundary of the site;
- to the southern foreshore area and wharf via the service road north of the Main Fish Market building;
- to the Main Fish Market building via Pyrmont Bridge Road; and
- along the existing service road on the western side of the Main Fish Market Building.

3.8 On-site Parking

The development provides on-site parking for 622 vehicles (510 car spaces and 112 service vehicle spaces) within the site's ground floor level, external areas, 3 levels of parking at Building A and the western side of Bank Street, with:

- 88 parking spaces (for tenant, loading and service vehicles) – on the Ground Floor level of Building A. These parking spaces will be used for customer parking during peak weekend and pre-holiday trading periods.
- 110 parking spaces – on L1 of Building A (inclusive of 11 disabled parking spaces located on this level);
- 179 parking spaces – on L2 of Building A;
- 179 parking spaces – on L3 of Building A;
- 16 loading spaces – in the loading area north of the Main Fish Market building; with:
  - 10 spaces for medium rigid vans;
  - 3 spaces for heavy rigid vans; and
  - 3 spaces for semitrailers.
- 4 semi-trailer parking spaces at the southern end of the internal roadway;
- 4 coach spaces along the eastern side of Building A.
- 42 parking spaces – in parking area on the western side of Bank Street.

The design of the car park will comply with AS 2890.1 – *Off-street car parking* and AS 2890.6 – Parking *for people with disabilities*.

3.9 Loading Areas

Loading facilities to the Main Fish Market Building will remain at the northern side of this building, accessed via a raised loading dock and roller doors to the existing fish market trading floors, auction, and storage and service areas. Adjacent to the loading facilities will be parking for service vehicles. Loading provision for shops along the western side of the main Fish Market Building will also be retained.

The new service area to Buildings A and B will comprise a dedicated service laneway to the rear of the Ground Floor level retail and wholesale areas. The service lane will be accessed from the existing loading area, north of the Main Fish Market Building.

A service dock for the Tavern in Building B is located north of this building. Access to the service dock is from the service road along the northern boundary of the site.

Access from the loading and service area to restaurant level (L1) will be via the two lifts located at the north-western and south-west corners of Building A.

3.10 Coach Parking

Coach parking will be located within a dedicated parking bay sited at the eastern side of Building A. Coaches will enter the site onto the internal access road (Jones Street), turn at the roundabout at the southern end of the street, and set down/ pick up passengers at the coach parking bay located adjacent to the outbound vehicular lane.

3.11 Taxi Rank

A taxi rank will be located adjacent to the Pedestrian Entry Forecourt, adjacent to the outbound vehicular lane.

3.12 Site Linkages and Connections

The redevelopment of the SFM site will reinforce and improve existing pedestrian connections to the site from the significant pedestrian crossings at the intersection of:

- Bank Street and Miller Street located north-east of the site;
- Bank Street and Pyrmont Bridge Road located south-east of the site; and
- Pyrmont Bridge Road and Wattle Street located south-west of the site.

The new development will provide:

- A relocated and safer pedestrian crossing at the northern side of the intersection of Miller and Banks Streets, linking the Fish Market light rail station at this intersection to the Pedestrian Arrival Forecourt.
- A Pedestrian Arrival Forecourt sited at the north-eastern side of Building A, adjacent to the proposed Tavern at Building B. The Forecourt provides a central pedestrian arrival point to the development. From the Forecourt, pedestrians can access the retail level (Ground Floor level) and the foreshore precinct below via a broad external stairs or the restaurant level (L1) above via a ramp with an accessible gradient of 1 in 20. The Tavern is directly accessed from the Pedestrian Forecourt.
- A 3.6m wide shared path along the northern boundary of the site from the Pedestrian Arrival Forecourt to the Blackwattle Bay foreshore.
- Continuous north-south access within the site at the Foreshore Urban Plaza, the Waterfront Park and the Waterfront Promenade.
- Continuous foreshore promenade along the foreshore of the site accessing the retail and dining facilities along the southern side of the Main Fish Market building and the foreshore recreation precinct. The new foreshore promenade will revitalise the Fish Market foreshore precinct and will contribute to continuous future foreshore promenade that is being incrementally implemented between Glebe and the Royal

Botanic Gardens. Access to the Foreshore Promenade will be provided from the intersection of Pyrmont Bridge Road/ Wattle Street and via the northern pathway.

- A pedestrian arrival deck opposite the pedestrian crossing on Pyrmont Bridge Road, opposite Wattle Street.
- Adjustments to the existing signalised pedestrian crossing on Pyrmont Bridge Road, opposite Wattle Street, adjusting the eastern crossing line to meet the kerb edge at a perpendicular angle.
- A foreshore path link to the Coal Loader site.
- A pedestrian cycle link between the foreshore and the Bank and Miller Street intersection.
- A 2m wide footpath along the eastern side of Building A from the proposed coach parking area to the Pedestrian Arrival Forecourt and taxi rank.
- A new pedestrian access from the Pyrmont Bridge Road and Bank Street intersection to a new entrance to the Main Fish Market Building.
- External stairs on the western side of Building A for access between the retail (Ground Floor level) and restaurant facilities (L1).
- Stairs and lifts located at the four corners of Building A for access between the retail (Ground Floor level), restaurant (L1) and car parking (L1, L2 and L3) levels.

The new improved footpaths along the eastern perimeter of the SFM site will link the site to:

- Pyrmont Bridge Road, Bank Street and the residential and light industrial precinct to the south and south-east of the site; and
- Miller Street, Bank Street and the residential and commercial precinct to the north and north-east of the site.

3.13 Pedestrian Access

Pedestrian access to the SFM site will be significantly improved with the redevelopment of the site. Improvements include:

- A safer pedestrian access at the Bank Street/ Miller Street intersection;
- A new foreshore promenade along the western portion of the site fronting Blackwattle Bay to Pyrmont Bridge Road;
- New pedestrian access from the site entrance at the Pedestrian Arrival Forecourt to the foreshore:
  - along the northern perimeter of the site; and
  - within the site between Buildings A and B;
- Internal access within the development; and
- Separation of pedestrians from public, delivery and seafood distribution vehicles.

At Bank Street and Miller Street intersection

The development proposes to relocate the existing pedestrian crossing located at the signalised entrance to the SFM site at the junction of Bank Street and Miller Street. The new signalised pedestrian crossing will be located north of the existing pedestrian crossing. The new crossing will connect the Fish Market light rail station to the existing footpath at the north-east corner of the SFM site. From this corner pedestrian access to the site is via a 3.6m wide footpath, which crosses the Tavern service access road, to the

Pedestrian Arrival Forecourt. The 3.6m wide footpath continues along the northern boundary of the site to the foreshore, providing 24 hour at grade universal access.

At Pyrmont Bridge Road and Wattle Street intersection

The existing pedestrian crossing at Pyrmont Bridge Road from Wattle Street will be retained, with a slight widening of the crossing to accommodate the pedestrian desire line into the site. A new formal arrival area will be provided with a deck over the inlet at the south-eastern corner of the Bay, between the Main Fish Market Building and the Coal Loader site at the southern end of Blackwattle Bay. From here, a 6m wide boardwalk will provide a new dedicated pedestrian route into the site. This will separate pedestrians from operational/ service vehicle movements along the western side of the Main Fish Market building. The pedestrian boardwalk will involve widening of the existing boardwalk structure to align with the lease boundary from NSW Maritime. The existing boardwalk will be raised to be above tidal fluctuations, wave action and to accommodate rise in sea level due to global warming.

At Bank Street and Pyrmont Bridge Road intersection

Another pedestrian arrival point is at the intersection of Bank Street and Pyrmont Bridge Road to the new entrance at the eastern side of the Main Fish Market Building.

The existing footpath (2.5m wide) along the western side of Bank Street, from the Pyrmont Bridge Rd/ Bank Street intersection will be retained.

Within the SFM site

A 2m wide footpath is located adjacent to the coach parking area. From the coach parking area, pedestrians will traverse a marked pedestrian crossing located at the entry to Building A's car parking levels, to access the Pedestrian Arrival Forecourt.

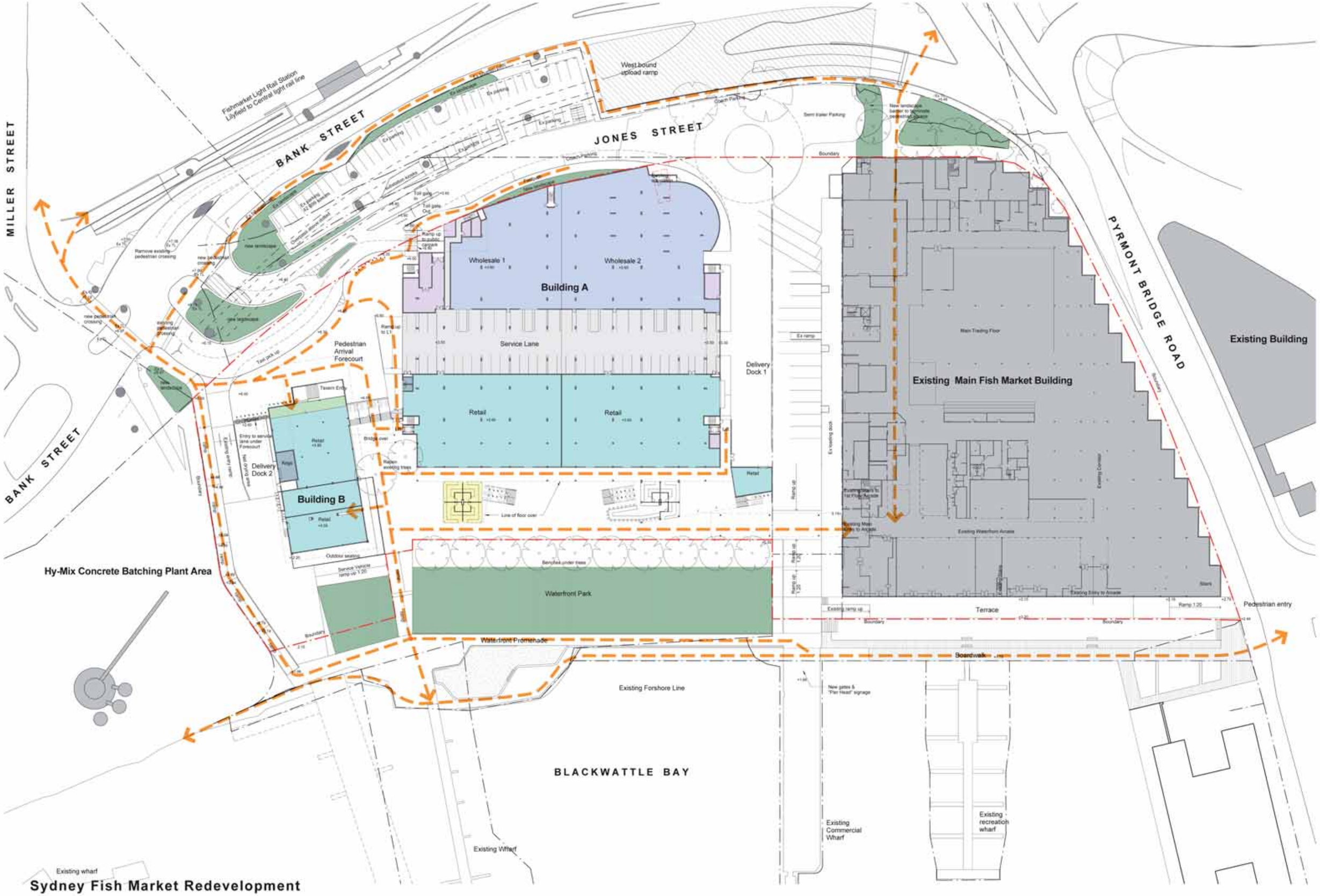
The Pedestrian Arrival Forecourt located at the north-eastern portion of the SFM site marks the main pedestrian entry point to the SFM site for pedestrians, coach and taxis.

Access to Ground Level retail facilities and Foreshore Urban Plaza will be via wide steps located between Buildings A and B. Access from the Forecourt to the restaurants at L1 will be via a wide ramp at a 1 in 20 gradient.

Two lifts are proposed at the north-west and south-west corners of Building A. The lifts provide access to all levels of the building, including upper level (L2) and roof top (L3) parking areas.

Fire stairs will be located within "turret" structures at the 4 corners of Building A. These stairs provide the means of egress from car parking, wholesale, retail and dining areas of the building.

Refer to Figure 26: Proposed pedestrian access.



Sydney Fish Market Redevelopment

CM+ Conybeare Morrison | Reilly

Client: Sydney Fish Market Authority

August 2010 | 10034 - SK12

⊗ Proposed Pedestrian Access

3.14 Bicycle Access and Parking

The site forms part of the City of Sydney's bicycle network and is earmarked for the provision of shared paths both along the foreshore and around the perimeter of the site along Pyrmont Bridge Road and Jones Street. While the latter is beyond the scope of the proposed development, the development makes provision for on-grade access from Pyrmont Bridge Road to the intersection of Bank and Miller Streets, along the boardwalk and paved Waterfront Promenade. However, due to expected high pedestrian volumes, the constrained nature of the site (in particular the southern waterfront) and the need to manage/ minimise the potential for user conflicts, cyclists would be expected to dismount along the waterfront.

3.14.1 Bicycle routes

The development provides:

- A new 2.5m shared path along Bank Street from the corner of Pyrmont Bridge Road to Miller Street. This route will be designated for commuters who wish to access the Miller/ Union Street corridors, approved and to be provided by the City of Sydney Council; and
- A new shared path for access along the Blackwattle Bay to the new promenade park and via the proposed pathway along the northern boundary of the site to Bank Street connecting to Pyrmont and its foreshore, to the western foreshore of Blackwattle Bay and Glebe, and via Miller Street and Pyrmont Bridge Road to Darling Harbour. City's proposed network.

3.14.2 Bicycle parking

An estimated 121 bicycle parking spaces are to be provided within the development:

- 31 spaces for staff; and
- 90 spaces for visitors.

Bicycle parking is located on the site for staff and visitors, with:

Staff bicycle parking at:

▪ Ground Floor Level Service Lane:	17 secure bike spaces;
▪ Jones Street parking area:	14 secure bike spaces.
Total:	**31 secure bike spaces**.

Public bicycle parking at:

▪ Pedestrian Arrival Forecourt (L1):	54 bike spaces;
▪ Foreshore Urban Plaza, under external stairs:	36 bike spaces.
Total:	**90 bike spaces.**

The number of bicycle parking spaces provided is in compliance with and exceeds the number required in Halcrow's *Transport and Accessibility Impact Assessment*.

3.15 Mobility/ Disabled Access and Facilities

The Commonwealth Disability and Discrimination Act 1992 (DDA 1992) is a Federal anti-discrimination law that requires any premises legally accessible to the public to be accessible to people with a disability. Section 23 of the Disability Discrimination Act makes it unlawful to discriminate on the grounds of disability in providing access to or use of premises that the public can enter or use.

"Premises" as defined in the DDA extends to the whole of the built environment which includes existing and new buildings, heritage buildings, and the public domain of pathways, public parks, gardens and car parking areas.

The Building Code of Australia (BCA) contains provisions for access to and within buildings for people with a disability. The BCA applies to building work on both new and existing buildings.

The Disability (Access to Premises – Buildings) Standards 2010 was launched on 15 March 2010. The Premises Standard is a legislative instrument which will commence operation on 1 May 2011 in line with the 2011 edition of the BCA which will be revised to align with the Access Code in the Premises Standards.

An objective of the *Disability (Access to premises – Buildings) Standards 2010* is:

> *"To ensure that dignified, equitable, cost-effective and reasonably achievable access to buildings, and facilities and services within buildings, is provided for people with a disability."*

The premises standards apply to a new building with the following uses:

- Retail – Class 6 (BCA);
- Dining/restaurant – Class 6 (BCA);
- Wholesale – Class 7b (BCA);
- Car parking – Class 7a (BCA).

3.15.1 Access

An accessible path of travel is available for the Fish Market light rail station to the SFM site.

From the Bank Street entry to the site, accessible paths of travel are provided from:

- the Pedestrian Arrival Forecourt to L1 (restaurant) level of the building via a 3-8m wide ramp, with gradient of 1 in 20;
- to the Ground Floor level (retail), access is via a lift at L1, located adjacent to the accessible ramp;
- a coach setdown area, located along the eastern side of Building A, a 2m footpath of accessible gradient connects to the Pedestrian Arrival Forecourt;
- a taxi rank located along the eastern side of the Pedestrian Arrival Forecourt; and
- a 3.6m wide accessible footpath, with gradient of 1 in 20, along the northern site boundary from the Bank Street intersection to the foreshore areas of the site.

Other accessible paths of travel area are provided:

- from Wentworth Park, via the existing pedestrian crossing and the new timber entry deck and reconstructed boardwalk west of the Main Fish Market Building;
- along the foreshore, including the boardwalks and paved waterfront promenade;
- between the Foreshore Urban Plaza and the Waterfront Promenade, via 1 in 20 ramps between the Tavern and the northern wharf, and on approach to the main wharf, north of the Main Fish Market Building;
- between the Foreshore Urban Plaza and the dining area within the waterfront park, via a series of kerb ramps;

- between the retail arcade in the Main Fish Market Building and the footpath along Pyrmont Bridge Road, via a reconstructed ramp at the end of the existing concrete service road; and
- to the Coal Loader site/ future development, via a boardwalk link.

Within the buildings, accessible paths of travel and lifts (located at the north-west and south-west corner of Building A) are provided for universal access to all areas of the building.

All passageway and doorway widths are designed to comply with AS 1428.1 – *Design for Access and Mobility* (2009).

3.15.2 Disabled parking

11 disabled parking spaces are provided on L1 (restaurant) level of the building, adjacent to lifts and rear entrances to restaurants which comply with the amount required (10 spaces).

3.15.3 Sanitary facilities

2 disabled toilets are provided within the development, within Ground Floor and L1 of Building A.

Signage and tactile indicators will be installed to comply.

For detached assessment of compliance of the development, refer additionally to Section 5.13 – *Disability (Access to premises – Buildings) Standards 2010* of the report.

3.16 Public Domain and Landscape Design

The proposed development comprises the redevelopment of the SFM site with new facilities and open space areas for outdoor dining, maritime activities, and passive recreation and site connections.

New buildings for retail, dining and wholesale activities are to be located at the eastern and northern portions of the site. The existing Main Fish Market building at the southern end of the site is to be retained.

Public domain and open space areas within this proposed development comprise:

3.16.1 Pedestrian Arrival Forecourt

The Pedestrian Arrival Forecourt, located at the north-eastern portion of the SFM site, marks the arrival point for pedestrians, coach and taxis to the SFM facilities.

The Bank Street approach under the Freeway will be reconfigured, resulting in new landscaping and improved pedestrian access from Pyrmont Ultimo and the light rail stop. Low native shrubs and ground covers will be planted on the pedestrian island under the freeway, subject to further discussions with the RTA.

The arrival forecourt will be a hard paved distinctive and welcoming orientation space, enhanced by lighting, signage and interpretive artworks. A clear vista will be maintained towards the Foreshore Urban Plaza and Waterfront Park, framed by a

proposed Port Jackson fig (*Ficus rubiginosa*) in a planter to one side of the forecourt. Climbers are proposed along the walls of the Fish Market building and Tavern.

The Tavern (at L1), located at the north-eastern portion of the site is directly accessed from the Pedestrian Arrival Forecourt.

From the Pedestrian Arrival Forecourt, a broad set of stairs (approximately 12m in width) leads patrons down to the retail facilities (located at Ground Floor level) or a broad ramp to the dining facilities at First Floor level (L1). Retail facilities are sited approximately 2.8m lower than the Forecourt.

3.16.2 Northern pathway

A 3.6m wide shared accessible path for pedestrian and cycle access through the site is proposed along the northern perimeter of the site connecting the Bank Street and Miller Street signalised intersection to the Blackwattle Bay foreshore.

Due to the level changes between waterfront and the Bank and Miller Street intersection, the path will be constructed at a gradient of 1:20 with landings at every 15m. The path will be supported by retaining walls on either side, due to the topographical difference between the path, the adjoining vehicle ramp and the Hymix property to the north.

The northern side of the path will planted with a continuous row of Swamp Gums (*Eucalyptus robusta*), from Bank Street to the foreshore, to provide shade and partial screening of the concrete batching plant to the north.

3.16.3 Foreshore Urban Plaza

The Foreshore Urban Plaza will be a paved outdoor dining area from which the retail areas open onto. Two open pavilions containing fast food kiosks at Ground Level and outdoor dining above extend from Building A into the Plaza. An oyster bar is centrally located between the pavilions. External stairs link the plaza to the upper restaurant level (L1) of the building.

The Foreshore Urban Plaza interfaces with and overlooks the Waterfront Park, the Waterfront Promenade and Blackwattle Bay.

An outdoor dining area will be provided at the interface of the Foreshore Urban Plaza and the Waterfront Park and will form a transition space between the active retail centre and the Waterfront Park. It is designed to cater for the increased demand in outdoor dining generated by the new development. Formal table and bench seating will provide a seating capacity of up to 270 people, catering for groups up to ten people at each table.

The interface area will be planted with Eucalypts (*Eucalyptus sp.*), with clumps spaced 9m apart. The trees will provide an attractive, light and continuous canopy over the dining area and along the upper promenade, as well as a perforated shield against the western sun. The pavement of the dining area will be concrete with shell aggregate elements that make reference to the site's history of oyster-collection, as well as the current Fish Market. The pavement will be perforated by the tree planted in a stormwater collection and infiltration trench below the finished surface. Tree grates will provide a safe walking surface as well as ease of access for maintenance.

3.16.4 Waterfront Park

Adjoining the Foreshore Urban Plaza and the alignment of trees is the Waterfront Park with its central feature lawn. The lawn will provide an opportunity for picnicking and passive recreation. The eastern edge of the lawn is lightly raised above the Foreshore Urban Plaza. From here, the lawn will be graded to maximise the level change between the Plaza and the waterfront, to create the feeling of an amphitheatre sloping to the water which will provide good prospect from all areas of the lawn.

On the northern portion of the Waterfront Park opposite the northern wharf, a pedestrian walkway provides universal ramped access across the main lawn and to the waterfront promenade. Planting of Port Jackson figs (*Ficus rubiginosa*) will frame the Waterfront Park and link the two portions of the lawn together, as well as provide shade on the lawn. The figs will frame views towards the northern wharf from the Pedestrian Arrival Forecourt and Foreshore Urban Plaza. They have been placed to balance the need for shade with the provision of views from Level 1 of Building A towards the Anzac Bridge.

3.16.5 The Promontory

The Promontory is situated on the distinct part of the land where the seawall alignment bulges as it follows the original shoreline. It can be accessed from the walkway down from the Foreshore Urban Plaza and from the Waterfront Promenade.

The existing sandstone seawall is in a serious state of disrepair and will be reconstructed around the edge of the Promontory, in an alignment closely following the existing seawall alignment. Along the water's edge, a timber deck at a low level is proposed to allow people to be in close proximity to the water. A second wall will separate the timber deck from a higher level which will be paved with decomposed granite and planted with a grove of endemic She Oaks (*Casuarina glauca*), in a contemporary interpretation of the Sydney Bush School of landscape design. This area will provide a sense of prospect and refuge, being removed from the major centres of activities of the Foreshore Urban Plaza and along the Waterfront Promenade. Both the lower and higher level will provide formal bench seating. A number of tables will also be provided, offering additional dining facilities for up to 32 people.

3.16.6 Waterfront Promenade

Adjacent to and immediately west of the Waterfront Park is the Waterfront Promenade. The Promenade will extend for the full length of the waterfront, including a link to Pyrmont Bridge Road and the Coal Loader site. It will be constructed to provide the opportunity for future extension to the north and to integrate with the larger foreshore walk between Glebe and the CBD. (This will be pending on landowner's consent to extend the public foreshore walk and is beyond the scope of this project).

Due to the constrained nature of the site between the Main Fish Market Building and the water's edge, the Promenade will vary in width and character between the northern and southern portions of the waterfront.

Between the Pyrmont Bridge entrance and the main wharf, construction of the Waterfront Promenade will involve replacing the existing timber boardwalk with a new modified structure. This will be a dedicated pedestrian route and will remove the need

for pedestrians and vehicles to share the existing concrete service road on the western side of the Main Fish Market building.

Modifications will include:

- Extending the boardwalk south to Pyrmont Bridge Road where it will widen into a new entrance area;
- Raising the level of the boardwalk to ensure safe access during all weather conditions, including extreme tides;
- Widening of the boardwalk to the existing NSW Maritime lease boundary, resulting in a width of 6m.

Widening of the boardwalk represents an encroachment over the water of an additional 3.4m in width, compared to the current boardwalk alignment. A lesser boardwalk width would not be considered adequate to cater for the large volumes of pedestrians expected in the area. The width is recommended in the City of Sydney's *Urban Development Plan – City West*, or the recommended 4m path width for 24hour access paths identified in the *Master Plan – Rozelle and Blackwattle Bay Maritime Precincts* prepared by Waterways (now NSW Maritime).

Further, a lesser path width would not achieve the aim of maximising separation between pedestrian and service vehicles movements between the Main Fish Market Building and Blackwattle Bay.

Between the main wharf, north of the Main Fish Market Building, and the Promontory, the Waterfront Promenade will comprise a 3.5m wide concrete path behind the reconstructed seawall. This will be complemented by a 6m wide boardwalk on the same alignment as the boardwalk outside the Main Fish Market Building. A boardwalk in this location is consistent with the *Fish Markets Master Plan* approved by the then Department of Planning, Infrastructure and Natural Resources (DIPNR) in 2005. Together, the boardwalk and the path will provide a generous foreshore path system that is comparable in scale to the Glebe Foreshore Walk and that will be able to accommodate large numbers of people.

Where the Waterfront Promenade meets the Promontory, the boardwalk will separate from the concrete foreshore path. The concrete path will continue on essentially the same alignment towards the northern site boundary where it will widen to 5m. The boardwalk will integrate seamlessly with a timber deck around the lower level of the Promontory and pedestrians will be able to rejoin the concrete path in the area opposite the northern wharf.

New board walk structures would be constructed using steel piles and steel beams supporting either a concrete of timber sub-structure, over which would be placed timber decking.

3.16.7 Outdoor Dining Area west of the Main Fish Market Building

Adjoining the service road on the western side of the Main Fish Market Building, the existing outdoor dining area will be rebuilt with removal of the existing artificial turf. A new weather protection structure will be provided. The existing Canary Island Date Palms (*Phoenix canariensis*) would be removed and transplanted to an external site.

The Outdoor Dining Area will comprise a new concrete slab at the same level as the existing service road. This will facilitate ease of access from the retail arcade, as well as maximise the prospect over Blackwattle Bay. The Dining Area will provide dining facilities for over 200 people.

The proposed structure will be a new linear pavilion or series of pavilions. The defining element will be a tracery roofing plane floating over the retail concourse along the western façade of the Main Fish Market Building. The structure will provide filtered shading to the concourse and weather protected dining zones, including adjacent to the entries along the façade. It will be constructed using a composite concrete/ timber/ protected steel frame supporting a perforated and/ or battened roof with a rhythm of inset closed roof elements.

Mitigating the level change from the Outdoor Dining Area to the Waterfront Promenade will be two 500mm high timber steps (bleachers). These will provide informal dining opportunities for up to 270 people, as well as the potential to sit and enjoy views of the Bay. Steps will be set into the bleachers opposite the entrance from the retail arcade and opposite the floating pontoon, as a means to provide direct access to the waterfront. At grade access between the dining area and the Waterfront Promenade will be via existing ramps at the northern and southern end of the existing concrete service road. These ramps will be amended to achieve compliance for accessibility.

3.16.8 Pyrmont Bridge Road Entrance

A new deck over the small inlet at the head of the Bay and adjoining Pyrmont Bridge Road will mark the arrival point for pedestrians and cyclists entering the site from Wentworth Park. The deck be level with the existing footpath and will provide a widened entry to the site. The boardwalk/ Waterfront Promenade will seamlessly transition into this deck and line up with the existing pedestrian crossing, thereby channelling pedestrian traffic along the waterfront and away from the operational edge of the Main Fish Market building.

The entrance deck will be a distinctive and welcoming space, enhanced by lighting, signage and an interpretive feature. The feature will be in the form of a stormwater filtration reed bed that evokes the original swamp vegetation of Blackwattle Bay, while cleansing site stormwater prior to release into the harbour. The deck and reed bed will be elevated above the existing stormwater outlet and designed to not interfere with stormwater flows into Blackwattle Bay. The deck will enhance the vista from Wattle Street/ Pyrmont Bridge Road and Wentworth Park into Blackwattle Bay and provide a clear sense of destination and arrival.

The northern edge of the deck will provide a foreshore link to the Coal Loader site.

3.16.9 Other Land-Water Interface Works

Additional proposed works along the foreshore include:

- New rip rap stone revetments to protect the exposed embankments at the northern and southern ends of the site, north of the northern wharf and near the stormwater channel outlet at Pyrmont Bridge Road;
- Remedial works to the existing concrete wharf and surrounding timber fendering;

- New seawalls between the main wharf and the Promontory and north of the northern wharf. The walls would be constructed using steel sheet piling of precast concrete elements supported on piles. Between the main wharf and the Promontory, the top sections of the wall above the timber boardwalk would be of sandstone salvaged from the existing seawall, as an interpretation of the existing seawall alignment; and
- Reconstruction of the existing sandstone seawall around the edge of the Promontory.

3.16.10 Entry footpaths at Jones Street and Bank Street car park

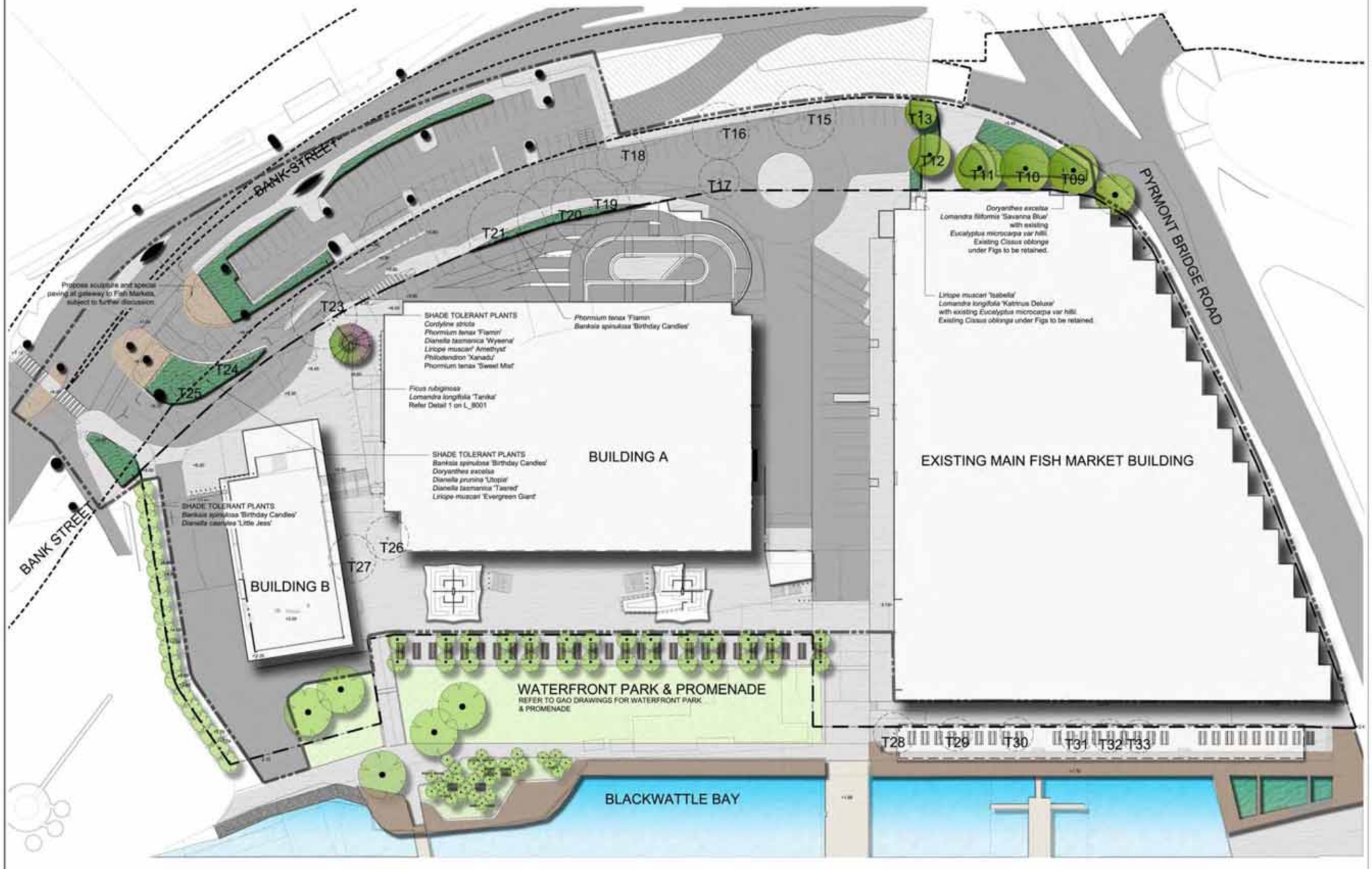
Jones Street will remain as a landscaped circulation zone for Fish Market trucks and vehicles, tourist buses, and pedestrians and cyclists travelling to and through the Fish Markets to other nearby routes and destinations.

The majority of the existing mature figs along the proposed entry roadway at Jones Street will be removed (Tree Nos. 16-25) as well as a Bush Cherry near the loading dock north of the Main Fish Market Building. The trees will be replaced by a group of New Zealand flax (*Phormium tenax "Flamin")* and Hairpin Banksia (*Banksia spinulosa "Birthday candles"*) providing a distinctive setting for the bus set down area. Tree Nos. 8-13 (*Ficus hilli)* at the proposed eastern entrance to the Main Fish Market Building will be retained with new ground cover planting at the base of the figs.

A new path will be provided near the entrance to the Pyrmont Bridge Road/ Bank Street intersection.

The existing landscaping at the Bank Street car parking area will be augmented and refurbished with low shade tolerant plants and ground covers.

Refer to Figures 27 and 28 for Landscape Concept Plans for the Sydney Fish Market and the foreshore precinct.



LEGEND

- EXISTING TREE TO BE RETAINED REFER TREE INVENTORY
- EXISTING TREE TO BE REMOVE REFER TREE INVENTORY
- PROPOSED TREE
- TREE BY OTHERS REFER GAO DRAWINGS
- PROPOSED PLANTING REFER PLANT SCHEDULE
- DECORATIVE PAVING
- TABLE AND BENCH REFER TO GAO DRAWINGS
- OVERPASS
- SITE BOUNDARY
- FISH MARKET EXTENT OF WORKS

LANDSCAPE CONCEPT PLAN

SCALE 1:500 @ A1

NOTE:
VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. REPORT ALL DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DRAWINGS. DRAWINGS MADE TO LARGER SCALES AND THOSE BEARING PARTICULAR PARTS OF THE WORKS SHALL TAKE PRECEDENCE OVER DRAWINGS MADE TO SMALLER SCALE AND THOSE FOR GENERAL PURPOSES. ALL WORK IS TO CONFORM TO RELEVANT AUSTRALIAN STANDARDS AND OTHER CODES AS APPLICABLE, TOGETHER WITH OTHER AUTHORITIES' REQUIREMENTS AND REGULATIONS. THIS DRAWING AND DESIGN IS SUBJECT TO COPYRIGHT AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT. © ACN 085 972 249

ISSUE	AMENDMENT	APPROVED	DATE
A	DRAFT DA FOR REVIEW	DC	27.06.13
B	FOR DA	DC	19.08.13

0 5 10 20 40m

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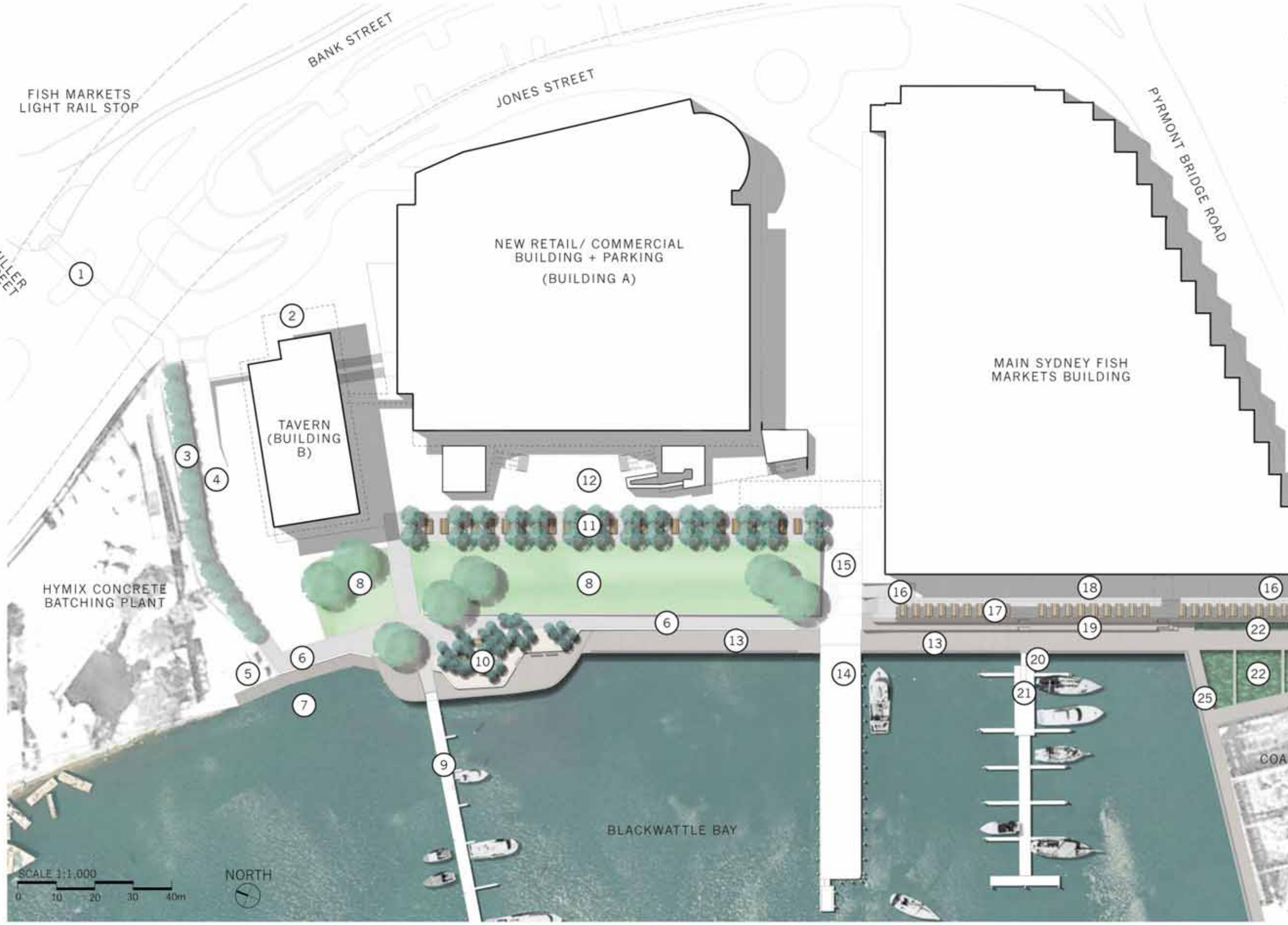
PROJECT
SYDNEY FISH MARKET - PART 3A

DRAWING TITLE
LANDSCAPE CONCEPT PLAN

DRAWN	CHECKED	DATE CREATED	SCALE
JL	DC	AUG 2013	1:500 @ A1

PROJECT NUMBER	DRAWING NUMBER	ISSUE
10583	L_1002	B

CONCEPT PLAN



KEY

1. Bank Street pedestrian crossing from Fish Market Light Rail Stop
2. Pedestrian Arrival Forecourt
3. Miller Street Link (1:20 graded walkway)
4. Service vehicle access
5. Hymix truck exit/ egress
6. Waterfront promenade - paved
7. Potential location of future wharf
8. Waterfront Park/ Main Lawn
9. Northern wharf
10. The Promontory
11. Outdoor Dining Area
12. Foreshore Urban Plaza
13. Waterfront Promenade - boardwalk
14. Main wharf
15. Regraded ramp to main wharf
16. Regraded ramp to service road
17. All-weather covered dining area
18. Service road (existing)
19. Timber bleachers
20. Kayak berthing to pontoon
21. Floating pontoon (existing)
22. Biofiltration Reed Bed
23. Pymont Bridge Road Entrance Deck
24. Existing signalised pedestrian crossing
25. Boardwalk link to Coal Loader

3.17 Site Operation

The Sydney Fish Market is a major inner city tourist attraction and active market. It currently operates as a seafood distribution and retail premises. It features several commercial premises which include retail, wholesale and restaurants in addition to car parking facilities for visitors. It also features loading bays for delivery trucks, a jetty for trawlers with associated loading facilities, processing and storage facilities for seafood.

The proposed development will provide additional retail and restaurant facilities on the site.

Wholesale trading will be relocated from the Main Fish Market building to the Ground Floor level of new Building A. There will be no increase in wholesale trading.

The Auction Hall will continue to operate in the Main Fish Market building.

3.17.1 Hours of operation

Deliveries and trawlers operate on a 24 hour basis. Market activity peaks before 9.30am in the early morning with external traders and wholesalers attending the market.

Heavy trucks, including semi-trailers arrive during the night from the arterial road network. These trucks unload in the hours prior to commencement of the seafood auction at 5:30am. From 4:30am onwards, distribution trucks begin to arrive to collect seafood for distribution to restaurants and retail shops. The inbound activity peaks at 5:30am at the beginning of the auction.

Following commencement of the auction, laden vehicles (either refrigerated or following ice purchase) commence leaving the site. In addition, other vehicles will arrive to collect processed fish from the on-site wholesale operations. Service vehicles exits peak at 8am on a Wednesday and 11am on a Friday.

The wholesale operations trade predominantly early in the morning due to the auction function of the SFM commencing at 5:30am each day. Peak wholesale operations occur before 9:30am and will continue during the day with deliveries moving from holding cool rooms. There will be no increase or change in wholesale operations as a result of the proposed development.

The retail premises operate normal working hours between 9.00am and 5.00pm after the auctions are completed. Delivery vehicles start diminishing from this period to accommodate retail trading.

Tourists contribute to the trading success of the SFM. Tourist bus trade arrives on site throughout the day in addition to non wholesale customers. Tourists generally arrive in coaches (either 54 seat coaches or mini coaches) in a well organised system. The proposed development allows for improved coach facilities with the provision of a dedicated coach parking area. Smaller coaches are also able to be accommodated within the parking levels.

A peak in retail customers occurs during the middle of the day on Sunday, approximately between 12.00 and 2.00pm. The redevelopment will increase the number of restaurants present on site. At present not all of the restaurants operate

during the evening. It is expected that restaurant visitor activity will increase due to the redevelopment, with restaurants operating for both lunch and dinner. Tourists will predominantly utilise the dining and retail facilities during the Monday to Friday daytime period in organised coach arrangements. Evening dining is anticipated to be predominantly catering to locals and Sydneysiders usage utilising parking facilities provided on site.

The new development proposes a tavern predominantly for dining, which will be expected to open until 12.00am. The tavern will have an outdoor seating area.

Seasonal peaks at Christmas time and around New Year and Easter significantly increase activity. However they do not represent typical operation.

3.17.2 Modes of delivery

The retail and restaurant operations will generally require small truck deliveries during the day. These delivery vehicles will be accommodated within the service lane parking area located to the rear of the retail precinct in Building A.

The existing loading area north of the Main Fish Market building will accommodate larger delivery vehicles.

3.18 Safety and Security Measures

The proposed development has been assessed against the principles of Crime Prevention through Environmental Design (CPTED) measures. The application of CPTED in the built environment has been found to reduce opportunity for and the likelihood of crime.

There are 4 principles used in the assessment of developments to minimise the opportunity for crime:

- Surveillance, with:
  - clear sightlines and way-finding measures;
  - avoidance of design of potential entrapment; and
  - lighting of public places;

- Access control, with:
  - physical and symbolic barriers to minimise opportunities for crime;
  - provision of public spaces which attract, rather than discourage people from gathering; and
  - restricted access to internal areas or high-risk areas

- Territorial reinforcement, with:
  - design of well used public spaces that reduce opportunities for crime;
  - clear transitions and boundaries between public and private space;

- Space management, with:
  - the design of spaces that are appropriately utilised and cared for.

The development provides clear delineation of public paths and spaces from surrounding roadways into the site.

External lighting will be provided to light external pathways, entries and public spaces.

The Pedestrian Arrival Forecourt is visible from Bank Street.

The public domain areas along the foreshore are fronted by active retail and dining uses on Ground Floor and L1 levels. Public spaces are designed to be active with the siting of food kiosks within these spaces. The foreshore public areas are lightly visible from the water and foreshore areas of Blackwattle Bay.

The building will be provided with electronic intruder detection, CCTV and access control systems. The existing site's IP CCTV system will be extended to the new development.

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4.0 ASSESSMENT OF IMPACTS

4.1 Traffic Impacts of the Proposal – Future Intersection Operations

The proposed development will have not have a significant impact on the operations of the surrounding road network. Changes to intersection operations are proposed to potentially provide significant operational benefits for the site.

In order to maintain traffic efficiency and minimise queuing and impact on the surrounding road network, two changes to the operations of traffic signals in the area are proposed by the Traffic Consultant. These comprise changes to:

- the layout and signal operations at the intersection of Bank and Miller Streets; and
- the lane markings and signal operations at the intersection of Pyrmont Bridge Road, Bank Street and the Western Distributor ramps.

4.1.1 Intersection of Bank and Miller Streets

The intersection of Bank and Miller Streets intersection is proposed to be modified in the following way by:

- Separating the Sydney Fish Markets entrances by a central island associated with the improved pedestrian access;
- Relocating the market foot crossing across Bank Street from the southern side of the Sydney Fish Markets entrance to the northern side of the entrance; and
- Modifying traffic signal operations in line with the above.

4.1.2 Intersection of Pyrmont Bridge Road, Bank Street and the Western Distributor ramps

The intersection of Pyrmont Bridge Road, Bank Street and the Western Distributor ramps is proposed to be modified in the following way by:

- Remarking the northbound off ramp lanes from Western Distributor to be a through lane plus one shared through and right turn lane; and
- Re-phasing the traffic signals to reconfigure which traffic movements operate at the same time.

4.1.3 Analysis of the existing network and proposed intersection operations

An analysis of the existing network and proposed intersection changes were undertaken. The analysis shows that the proposed development and arrangements will provide a significant improvement in traffic operations during the critical PM peak, with only the increase in delay of only 10-15 seconds at intersections during the Sunday midday peak.

Movements onto the Western Distributor during the weekday PM peak period are constrained by the prevailing speed and conditions on the Anzac Bridge, which contributes to congestion on Pyrmont Bridge Road, Wattle Street and Bank Street. With the changes to the signal arrangements, significant benefit is realised for the movement from the Western Distributor off ramp (away from the City) turning left into Pyrmont Bridge Road.

During the Sunday midday peak, the proposed signal arrangements assist flows into and out of the Sydney Fish Markets while improving overall operations.

(Refer additionally to **Appendix 6:** *Sydney Fish Market Redevelopment – Traffic and Accessibility Impact Assessment* (Rev 1, 2010) prepared by Halcrow).

4.2 Landscape Impacts of the Proposal

The landscape proposal for the Fish Markets development will add to the identity and character for the precinct, featuring a simple palette of indigenous trees and palms. The trees selected will provide markers within the development and their canopies will provide good shade and amenity for the patrons.

Redevelopment along the eastern edge of the SFM site will require changes to the current alignment of the main entry road and construction of a new roundabout adjacent to the auction building. The design indicates the removal of some of the smaller figs. Consideration should be given to the relocation of the smaller figs (no. 24 and 25). These trees exhibit good branch structure and would otherwise be suitable for retention if an alternative location can be found.

Assessment of trees was carried out by Garry Clubley, Arborist in August 2010 by ground based visual inspection only. Where trees are to be retained, a more thorough hazard assessment may be required to determine any other possible defects.

No significant or potentially hazardous deadwood was identified in the trees at this stage; however several trees did exhibit symptoms of declining condition. It is recommended that as the development proceeds, the retained trees should be reassessed for any changes in tree condition.

Whilst 18 existing trees are proposed to be removed from the site, approximately 88 additional trees of various species will be planted with the new development.

The landscape impacts of the proposed development are as follows:

4.2.1 Pedestrian Arrival Forecourt

Three *Ficus Hilli* (Tree Nos. 23, 24 25) will be removed as a result of the proposed access improvements. These figs have been assessed by the Arborist and their removal supported due to safety issues, compromised growth conditions and potential adverse root impacts.

Tree No. 23 has been found to have a structural defect which would compromise growth and safety in the longer term. The other three trees have the potential to be transplanted off site. Tree Nos. 24 and 25 may be suitable for relocation. The two existing Sydney Blue Gums (*Eucalyptus saligna)* (Tree Nos. 26 and 27) will be removed due to access and changes in levels around the base.

4.2.2 Jones Street precinct

The shallow underlying rock would make the transplantation of Fig No. 23 unfeasible.

Ten *Ficus hilli* trees in this area will be removed as a result of the proposal. The trees (Nos. 17, 19-25) will be removed as their canopies and invasive, raised root systems will be in the way of the proposed bus set down and pedestrian and cycle path. The figs continue to cause damage to pavement and other infrastructure. The figs continue to have defects that are of a low to moderate risk of failure over the medium to longer term. The other three figs (Tree Nos 16-18) will be removed because of the access requirements of the service road. They have also been identified in the arboricultural report as having poor branch structure and with potential hazard problems.

4.2.3 Waterfront Promenade

Six existing Canary Island Date Palms (*Phoenix canariensis*) will be removed as a result of the proposal. They have been assessed as suitable for transplanting elsewhere.

4.2.4 Recurrent assessment

It is recommended that a qualified Arborist should conduct a follow up assessment of the trees at least two years following completion of construction and redevelopment works, as part of a responsible tree management program and to fulfil risk management responsibilities on the part of the relevant Management Authority.

(Refer additionally to **Appendix 20:** *Sydney Fish Market Masterplan – Revised Arboricultural Assessment* (August 2010) prepared by Garry Clubley)

4.3 Views and Visual Assessment

The SFM site is visually prominent from the Blackwattle Bay waterway, from key publicly accessible vantage points located along the western foreshore of Blackwattle Bay and from the Western Distributor. The key vantage points are from:

- Blackwattle Bay Park, at the western peninsula of Blackwattle Bay (Location 1);
- The foreshore/ eastern end of Cook Street (Location 2);
- The jetty of the Sydney University Women's Rowing Club at the eastern end of Ferry Road (Location 3); and
- The northern and southern approach on the Western Distributor (Locations 4 and 6).

From **Location 1** (from Blackwattle Bay Park) and **Location 2** (from the eastern end of Cook Street) on the western side of Blackwattle Bay – the proposed development, of maximum 3 storeys in height, is seen against the backdrop of 7-8 storey buildings sited on the eastern side of Bank Street and the Western Distributor, and the CBD's skyline of city buildings. The proposed SFM buildings are compatible in scale with the existing 2 storey Main Fish Market building. The proposed buildings, with its glazed retail (Ground Floor) and restaurant (L1) levels, landscaped foreshore recreational area and promenade will provide activity and visual interest, both day and evening, to its foreshore setting. Once mature, the proposed planting along the foreshore and the dining area in the Waterfront Park will soften the appearance of the proposed development from these vantage points, and integrate the development with the character of existing plantings around Blackwattle Bay. The proposed all-weather structure will modulate the appearance of the existing Main Fish Market building by reducing the extent and height of existing building façade visible, thereby reducing its bulky appearance.

From **Location 3** (from the eastern end of Ferry Road) – the proposed development is seen against the backdrop of urban parkland located on residual land east of Bank Street and the Western Distributor, planted as a landscaped buffer to the existing precinct of terraces to the east of Bulwarra Street. The proposed development is lower in height than the backdrop canopy of trees within the landscaped reserve.

Location 4 is a view from the southern approach to the SFM precinct from the Western Distributor. From this vantage point, the roof top car parking level of Building A is prominently visible.

Location 5 is a view from Gipps Street/ Pyrmont Bridge Road East, north - westward towards the SFM site. The façade of proposed Building A to Bank Street can be seen between the structures of the elevated Western Distributor roadway.

Location 6 is a view from the northern approach to the SFM precinct from the Western Distributor. From this vantage point, the roof top car parking level of Building A is just visible and is approximately the height of the secondary railing. The Anzac Bridge is visible beyond.

Location 7 is taken from the southern wharf approach to the SFM site foreshore, illustrates a revitalised SFM precinct. The proposed buildings are not dominant elements along the foreshore and sensitively integrate with the existing Main Fish Market building to its south.

Locations 8 and 9 are views of the proposed development within the SFM site, from the foreshore eastwards towards proposed Building A. The existing car parking area will be replaced by new retail and restaurant facilities and an enriched foreshore public precinct.

Location 10 illustrates the experience for people viewing or entering the site from Pyrmont Bridge Road. From this vantage point, the proposed development (Buildings A and B) will not be visible. Instead, the view is characterised by the new entrance timber deck, the Waterfront Promenade, timber bleachers and the sheltered outdoor dining area. The deck and timber bleachers will soften and mitigate the level change to the water. The dining area and shade structure will visually break up and modulate the large façade of the existing Main Fish Market Building. The extensive use of timber will be visually consistent with the character and experience of working harbour/ waterfront sites. The proposed pedestrian entrance area at Pyrmont Bridge Road with reed planting in the elevated bio-filtration system will provide additional texture and interest. It will provide a visual connection to Wentworth Park on the other side of Pyrmont Bridge Road.

The trees within the Promontory and along the northern site boundary will be visible beyond the Waterfront Park, terminating the vista by screening some of the adjoining structures on the Hymix site as well as providing visual relief from built elements.

Location 11 illustrates the experience of walking along the Waterfront Promenade towards the Promontory, with the filtered views through tree planting on the Promontory towards the Anzac Bridge. The view will be characterised by the organic arrangement of spaces and tree planting on the Promontory which contrasts with the simplicity of the large open main lawn of the Waterfront Park. It demonstrates the positive visual contribution the development will make on the Blackwattle Bay foreshore, by transforming the foreshore from an area currently dominated by car parking to a landscape that visually links with the landscape on the southern side of the Bay.

From the Coal Loader site at Pyrmont Bridge Road and from Wentworth Park, existing low rise buildings and structures located along the southern foreshore of Blackwattle Bay (near Wentworth Park) prevent direct views of the Bay from this foreshore precinct.

The proposed 3 storey development with roof top parking (Building A) is sited west of a precinct of existing terraces located east of Bulwarra Road. The existing terraces are screened from the structures of the Western Distributor by a reserve of trees with no view available to the foreshore or Blackwattle Bay. The proposed development will therefore not impact on the existing views of these terraces.

The proposed development will impact on the north-eastern views to the water from upper level apartments located east of Bulwarra Road, between Pyrmont Bridge Road and Allen Street. The apartments will, however, maintain a view directly east to the southern end of the Bay.

Overall, the proposed development and its foreshore public domain improvements will visually enhance and provide a positive contribution to the aesthetic appearance, public and pedestrian amenity, and environmental quality of the eastern foreshore of Blackwattle Bay.

Refer to Figures 29-39: Visual analysis.

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Vantage Point 1 - Location Map

Vantage Point 1 - Existing

Vantage Point 1 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK16

Visual Analysis - Location 1

Vantage Point 2 - Location Map

Vantage Point 2 - Existing

Vantage Point 2 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK17

Visual Analysis - Location 2

Vantage Point 3 - Location Map

Vantage Point 3 - Proposed

Vantage Point 3 - Existing

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison | Reilly

Client: Sydney Fish Market Authority
September 2010 | 10034 - SK18

Visual Analysis - Location 3

Vantage Point 4 - Location Map

Vantage Point 4 - Proposed

Vantage Point 4 - Existing

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK19

Visual Analysis - Location 4

Vantage Point 5 - Location Map

Vantage Point 5 - Existing

Vantage Point 5 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK20

Visual Analysis - Location 5

Vantage Point 6 - Location Map

Vantage Point 6 - Existing

Vantage Point 6 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010|10034 - SK21

Visual Analysis - Location 6

Vantage Point 7 - Location Map

Vantage Point 7 - Existing

Vantage Point 7 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison | Reilly

Client: Sydney Fish Market Authority
September 2010 | 10034 - SK22

Visual Analysis - Location 7

Vantage Point 8 - Location Map

Vantage Point 8 - Existing

Vantage Point 8 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK23

Visual Analysis - Location 8

Vantage Point 9 - Location Map

Vantage Point 9 - Existing

Vantage Point 9 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison | Reilly | Client: Sydney Fish Market Authority
September 2010 | 10034 - SK24

Visual Analysis - Location 9

Vantage Point 10 - Location Map

Vantage Point 10 - Existing

Vantage Point 10 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010|10034 - SK28

Vantage Point 11 - Location Map

Vantage Point 11- Existing

Vantage Point 11 - Proposed

Sydney Fish Market Redevelopment

CM+ Conybeare Morrison Reilly | Client: Sydney Fish Market Authority
September 2010|10034 - SK29

Visual Analysis - Location 11

4.4 Environmental Amenity

4.4.1 Solar access and overshadowing

The buildings are oriented predominantly to the west towards the waterfront and Blackwattle Bay. The development is sited below the Western Distributor and will not overshadow surrounding buildings and private spaces.

Within the SFM site, solar access and overshadowing of the foreshore public domain by the development in the desired months for solar access (mid-winter) are evaluated as follows:

Mid-winter (June 21):

9am (9:00)	▪ Urban Foreshore Plaza will be overshadowed by Building A. ▪ Waterfront Park will be partially overshadowed by the projecting kiosks. ▪ Solar access to the Waterfront Promenade.
10am (10:00)	▪ The majority of the Urban Foreshore Plaza will be overshadowed by Building A. ▪ The majority Waterfront Park will be sunlit. ▪ Solar access to the Waterfront Promenade.
11am (11:00)	▪ The western portion of the Urban Foreshore Plaza will be sunlit ▪ The majority of the Waterfront Park will be sunlit
Noon (12:00)	▪ ¾ of the Foreshore Urban Plaza will be sunlit. ▪ The Waterfront Park will generally be sunlit. ▪ The Waterfront Promenade will be totally sunlit.
1pm (13:00)	▪ ¾ of the Foreshore Urban Plaza will be sunlit. ▪ The Waterfront Park will be totally sunlit. ▪ The Waterfront Promenade will be totally sunlit.
2pm (14:00)	▪ Half of the Foreshore Urban Plaza will be sunlit. ▪ The Waterfront Park will be totally sunlit. ▪ The Waterfront Promenade will be totally sunlit.
3pm (15:00)	▪ Half of the Foreshore Urban Plaza will be sunlit. ▪ The Waterfront Park will be totally sunlit. ▪ The Waterfront Promenade will be totally sunlit.

Within the SFM site, solar access and overshadowing of the foreshore public domain by the development in summer and mid-autumn/spring are evaluated as follows:

Mid-summer (Dec 21):

9am (9:00)	▪ Urban Foreshore Plaza will be predominantly sunlit. ▪ Waterfront Park will be sunlit. ▪ Waterfront Promenade will be sunlit.

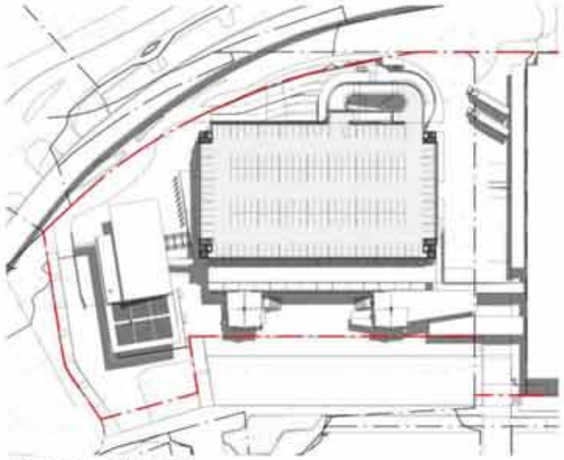
Noon (12:00)	▪ Urban Foreshore Plaza will be predominantly sunlit. ▪ Waterfront Park will be sunlit. ▪ Waterfront Promenade will be sunlit.
3pm (15:00)	▪ Urban Foreshore Plaza will be predominantly sunlit. ▪ Waterfront Park will be sunlit. ▪ Waterfront Promenade will be sunlit.

Mid-autumn/spring (March 21/Sept 21):

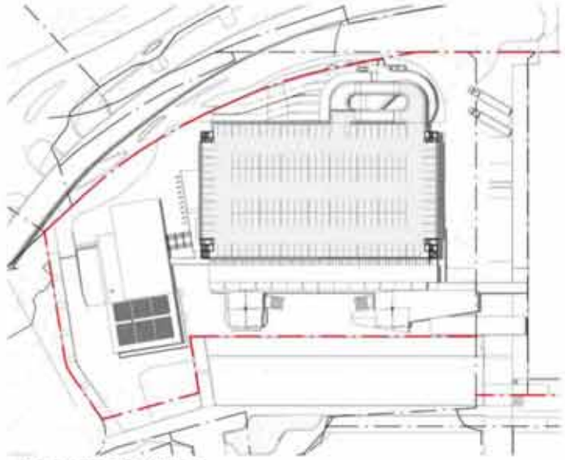
9am (9:00)	▪ Urban Foreshore Plaza will be partially shaded (2/3) at its eastern portion. ▪ Waterfront Park will be predominantly sunlit except for isolated areas of overshadowing by the 2 storey pavilions/kiosks. ▪ Water front Promenade will be sunlit
Noon (12:00)	▪ Urban Foreshore Plaza will be slightly shadowed. ▪ Waterfront Park will be sunlit. ▪ Waterfront Promenade will be sunlit.
3pm (15:00)	▪ Urban Foreshore Plaza will be slightly shadowed. ▪ Waterfront Park will be sunlit. ▪ Waterfront Promenade will be sunlit.

The foreshore public domain will receive solar access for the predominance of the year except for the Urban Foreshore Plaza in mid-winter (June 21) up to mid-morning.

Refer to Figure 40: Shadow diagrams.



December 21 9am



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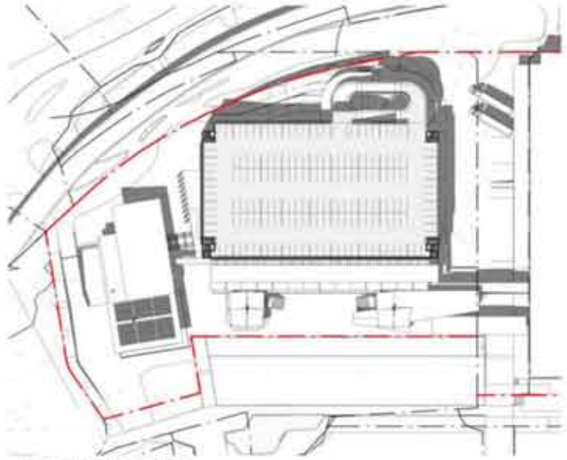
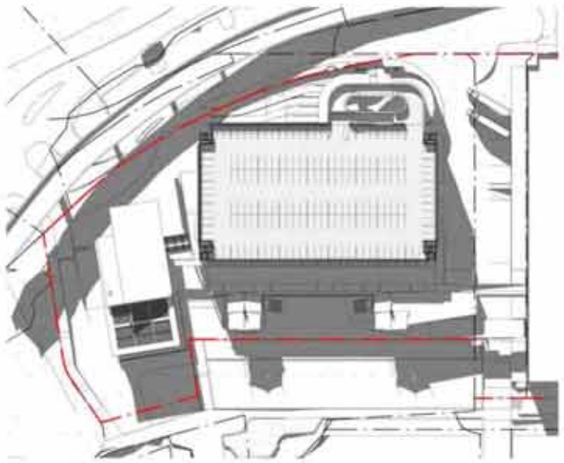
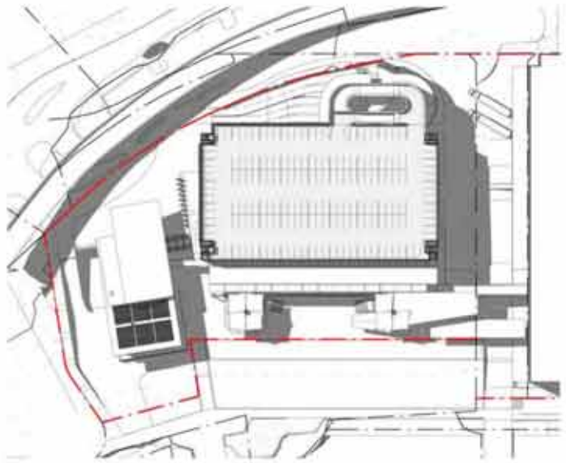


December 21 3pm



June 21 9am



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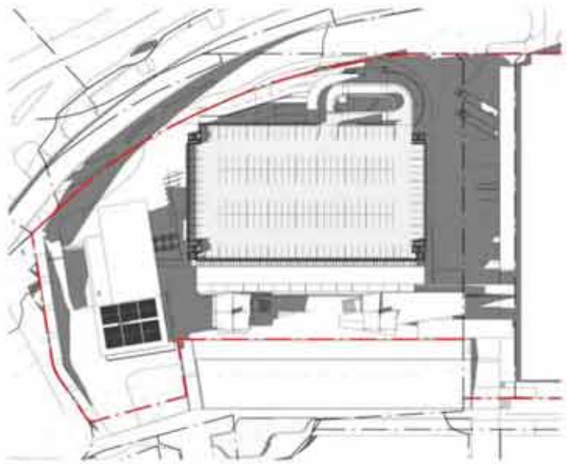

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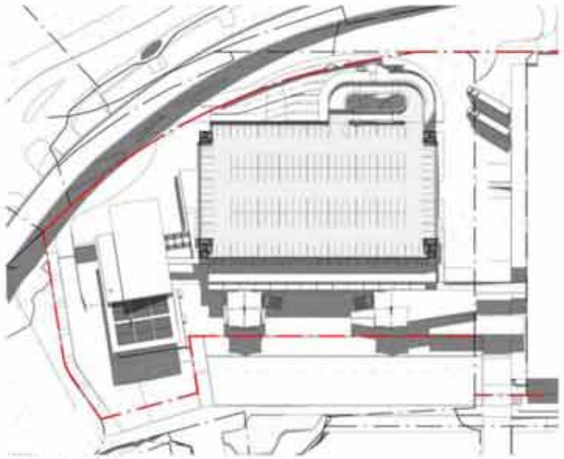
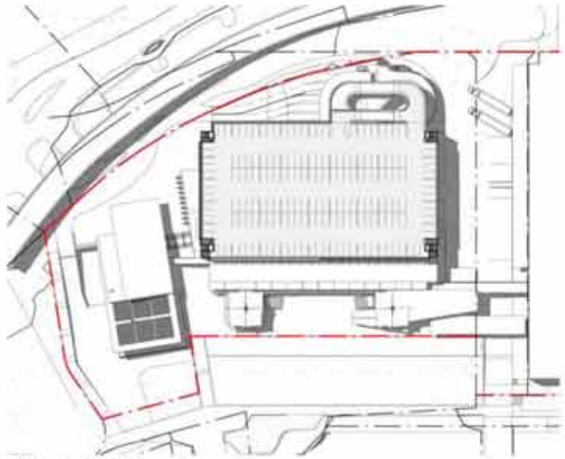


March 21 9am



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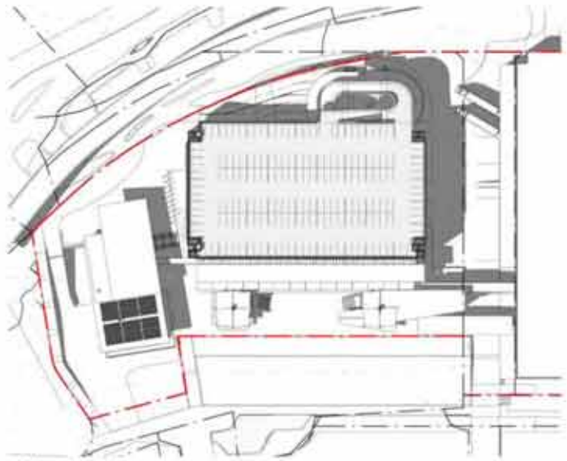

March 21 3pm

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Date	Description	Rev
30/08/10	Issue for draft EA submission	B
06/09/10	Issue for SFM Board Meeting	C
14/09/10	FINAL EA ISSUE	C

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Project: Sydney Fish Market Redevelopement
Blackwattle Bay
Client: Sydney Fish Market

Title: Shadow Diagrams
Date: September 2010 Drn/Ch/Authorised
Dwg No: 10034 DA 091 Revision: C

1:1000 @ B1

4.4.2 Noise and acoustic privacy

Acoustic consultants, Wilkinson Murray has carried out a noise assessment to evaluate the potential noise impacts on the surrounding area by the proposed redevelopment of the SFM. Criteria have been set and predicted noise levels have been assessed against them for amenity and intrusiveness. Sleep disturbance and noise arising from licensed premises has also been assessed.

Mechanical services plant

Assessment has been based on a preliminary mechanical services schedule provided by Umow Lai, Building Services Consultants for the Sydney Fish Market redevelopment.

It is assumed that the main building services will operate continuously during the day, evening and night periods, except for kitchen exhaust fans, which are assumed to be turned off at 12:00 midnight and will not operate until the following morning.

Truck movements

The assessment of truck movements over the daytime, evening and night time has been based upon typical levels for a semi-trailer truck. Truck movements are not expected to change as a result of the redevelopment, with:

- 483 movements during the daytime period;
- 32 movements during the evening period; and
- 360 movements during the night time period.

Visitor car activities

The visitor car activities are based upon predicted traffic movements. The visitor car activities assessment takes into account the entering and exiting of cars on to the site and their subsequent movements in the carpark. The predicted number of car movements is as follows:

- 4944 movements during the daytime;
- 491 movements during the evening and;
- 975 movements during the night time.

Car activity noise was modelled using a typical car noise level (sound power level 92dBA).

Noise from restaurant and tavern patrons

The new development will contain two restaurants with outdoor seating areas and a tavern which also has an outdoor seating area.

The assessment assumes one person per 1.5m^2 of the outdoor areas and one in three people talking. Each person talking has been assumed to be using a raised voice (sound power level 79dBA).

The Tavern will be open for six hours during the day, the whole of the evening period and two hours during the night time. It has been assumed that amplified music playing will play at a level of 90dBA inside the Tavern with a door open at all times onto the terrace.

The restaurants will be open until 12:00 midnight and operate for four hours during the daytime period, the whole of the evening and two hours during the night time period.

Outdoor music performances
The presence of occasional outdoor music performances are not expected to cause a noise disturbance provided that they are an infrequent occurrence and they are limited to daytime.

Results and mitigation measures
All of the predicted noise levels will comply with the noise assessment criteria, except mechanical noise at night.

The criteria are exceeded at Jones Street, Bulwarra Road and Wattle Crescent during the night time 9 hour period. It has been determined that the mechanical services noise emitted from the following plant are the most significant contributors. This plant should be attenuated in order to achieve compliance. Using silencers that give at least 10dBA attenuation either fitted directly to the fan or installed in the riser duct.

There are two attenuation options for the wholesalers' refrigeration condensers.

- Internally line the lightweight construction enclosures using 25mm acoustic insulation, e.g. 25mm polyester insulation (e.g. Tontine) of density 20-30kg/m^3 faced with perforated foil; or
- Install units which each have a total sound power level output less than or equal to 82.5dBA.

Sleep disturbance
Noise activity in the car park during the night time period arises as a result of patrons leaving the Tavern and restaurants. The activities include, cars leaving the car park, cars starting and accelerating away, door closes and patrons shouting or talking loudly.

Sleep disturbance noise levels have been assessed for trucks, Tavern balcony noise and patron activity in the car park.

Noise from large trucks exceeds the screening criteria at two locations. The difference between indoor and outdoor levels with a window open is approximately 10dBA. Maximum levels from trucks at Wattle Crescent are 61dBA inside the residences, are unlikely to affect health or well-being significantly and at Bulwarra Road are unlikely to cause sleep disturbance.

(Refer additionally to **Appendix 11**: *Sydney Fish Market Redevelopment – Noise Assessment* (August 2010) prepared by Wilkinson Murray).

4.4.3 Visual privacy
The proposed development is buffered to the south by the existing Fish Market Building.

The proposed development is oriented towards Blackwattle Bay. Public facilities of retail, restaurants and passive recreation areas front and open onto the foreshore precinct.

The overhead structures of the Western Distributor to the east of the SFM site buffer the development from residential developments to its east. Building B overlooks the Hymix concrete Plant located to the north of the site.

The proposed development will have no visual impact on the privacy of surrounding residential developments.

4.5 Site Infrastructure and Services

4.5.1 Mechanical services

The proposed location for the mechanical plant is adjacent the wholesalers on the ground floor north boundary. The plant room will be constructed as part of Stage 2 and integrated into the overall scheme. The chilled water plant is based on a load of 350kW for cooling. This would serve the back-of-house retail, restaurants and Tavern and provide 10% spare capacity. Plant room size will vary based on the air conditioning option selected.

Water cooled systems will be implemented as it provides the best long term benefit for the Sydney Fish Market in relation to plant space, water usage and energy savings. Life expectancy of both options is 25 years. The risk of Legionella is eliminated for the options.

The water cooled system will required less maintenance work and will reduce issues associated with corrosion from salt laden air.

A tenant supply air cooled refrigeration plant is proposed. The central refrigeration plant would provide a very high initial cost which would be paid back over time based on tenant usage. The main benefit for the central refrigerant plant is that it would require significantly less power to operate when compared with tenant supplied equipment.

Reticulated chilled, heating hot water and domestic hot water piping will be run hard up against soffits or trenched underground to serve the restaurants, retail and tavern. Piping shall be capped at each tenant and ready for connection based on the tenants cooling and heating requirements.

4.5.2 Ventilation systems

Toilets, car parking areas and kitchens will be fitted with exhaust ventilation with risers to discharge above roof level.

The wholesale area will receive filtered supply air at high level via a louvre and fan from the eastern façade of Building A. The fan will be located within a fan room.

4.5.3 Electrical services

The existing electrical supply and distribution within the area to be redeveloped generally must be upgraded and renewed. All major electrical loads and distribution boards will be sub-metered and connected to a remote metering system.

Substation

Application for supply has been made to the relevant authority, Energy Australia, for the provision of an upgraded electrical service to the proposed development. Additional substation requirements are subject to final determination by Energy Australia.

Main switchboard
New main switchboard(s) will be constructed to Form 3B AS/NZS 3439.1. Surge diversion will be provided to reduce the risk of damage resulting from lightning strikes and other transient over-voltages.

Connection terminals will be provided at each main switchboard for the connection of temporary standby generator(s) during supply failures.

Electricity retailer metering will be provided for each main switchboard.

Temporary electricity supplies will be provided to the proposed Stage 1 area, derived from the existing main switchroom, subject to Energy Australia approval.

Submains
Submains cables shall generally emanate directly from the main switchboard and meter panel to their respective distribution boards and mechanical control panels. Fire-rated cables shall be provided where necessary to comply with AS/NZS 3000 and the Building Code of Australia.

Distribution boards
Each landlord distribution board and substantive mechanical and hydraulic switchboard will be provided with kWh sub-metering.

Sub-metering will be interfaced to a remote meter reading system for ease of monitoring and billing.

Each restaurant, retail and small wholesale tenant will be provided with a 48-pole distribution board with a 250A three-phase supply.

Each large wholesale tenant will be provided with a 48-pole distribution board with a 400A three-phase supply.

Kiosks will be provided with 24-pole distribution boards with a 63A three-phase supply.

The tavern will be provided with a 48-pole distribution board and a 250A three-phase supply.

4.5.4 Lighting
General lighting
Lighting will incorporate energy-efficient fluorescent, compact fluorescent, metal halide and LED lamps. Automatic lighting controls and sensors will be adopted wherever practicable. Automatic switching in conjunction with daylight sensing will be employed wherever practicable to minimise energy consumption.

Internal and external lighting shall be provided to comply with the requirements of AS 1680 and AS/NZS 1158.3.1. Light sources shall be energy efficient and provided with the appropriate colour rendering. High-efficacy T16 linear fluorescent lamps will be installed within the building. Car park lighting will consist of T16 fluorescent luminaries with polycarbonate diffusers.

Security and access lighting will be installed at the building perimeter. External lighting will generally consist of high-efficacy light sources controlled by photoelectric cells and time locks. Feature lighting will be installed at main pedestrian entrances.

The Waterfront Promenade would be lit by a mix of post-top lighting and light fittings mounted to the proposed all-weather structure, to achieve Category P2 lighting level, in accordance with City of Sydney standards. Lighting to the All-weather Dining Area would be indirect, through light fittings mounted to the structure and pointing upwards, thereby reducing the potential for glare when seen from the waterway. Lighting for the dining area west of Building A would be integrated with lighting for the Foreshore Urban Plaza. Proposed feature lighting includes uplighting for signature trees and wall lighting.

Emergency lighting and exit signs
Emergency lighting and exit sign system will be provided to new areas to comply with the requirements of the BCA and AS/NZS 2293.

4.5.5 Telecommunications
Provision of communications to tenants will generally be similar to that provided for a retail complex. The existing IP CCTV camera system will be extended to the new development.

An Intent To Develop (ITD) application has been made to Telstra for the redevelopment. A 200-pair Telstra lead-in cable has been requested for an MDF located within a communications cupboard within the building. 20-pair voice-grade backbone cabling will be provided to an IDF adjacent to the distribution board in each wholesale and retail tenancy. 10-pair voice-grade backbone cabling will be provided to an IDF adjacent to the distribution board in each restaurant, kiosks and tavern.

A communications cabinet will be provided within a communications cupboard in the new building. Optic fibre backbone cabling will be provided from the main Fish Markets Building to the new rack. Category 6 and/or optic fibre cabling will be provided from the communications rack to CCTV cameras.

4.5.6 Lightning protection
A lightning protection system will be provided to cover the building as required to meet AS/NZS 1768:2007.

4.5.7 Water services
Cold water service
The cold water supply for the project will feed from the current 100mm water supply to the existing Fish Market Building located underneath Loading Dock 1. It is proposed that each tenant, restaurant and wholesale property has their own water meter that is data logged back to the main existing water meter at the site for reading.

Internal water supply pipe work will be located in ceiling spaces with droppers to amenities and wet areas below. Isolation valves will be located for easy access.

Non-food retail tenancy areas will be supplied with 20mm cold water provisions. Isolation valves will be located 300mm-450mm above finished floor levels of retail tenancies with individual water meter assemblies.

Food retail tenancies will be supplied with a 25mm cold water supply provision. Isolation valves will be located 300mm-450mm above finished floor levels of retail tenancies and be fitted with individual water meter assemblies complete with individual backflow prevention (RPZD).

Hot water service
It is proposed that the hot water shall be generated by a geothermal system for hot water pre-heat which uses the same principle as geothermal heat rejection, but with a refrigerant gas used for the ground loop instead of water.

Hot water meters will be located at branch take off points for each floor/ tenancy.

4.5.8 Fire services

Fire services will comprise:

- Fire hydrant system complete with Fire Brigade booster assembly, backflow prevention valves and a booster pump. Combined booster assembly for the Existing and New Fish Market building;
- Fire sprinkler system on Ground Floor Level and Level 1 of the building including Fire Brigade Booster assembly, backflow prevention valve and booster pump;
- An automatic fire alarm system utilising addressable smoke detectors will be installed on Levels 2 and 3 of the building and as part of the smoke hazard management system with the fire alarm panel located inside the proposed Fire Control Centre;
- A Sound System and Intercom Systems for Emergency Purposes (SSISEP) will be provided throughout the building;
- Hose reel service; and
- Portable fire extinguishers.

Hydrants
The hydrant service is to be fed from the existing 100mm fire hydrant connection currently serving the Fish Markets existing car park/wharf area. The existing fire hydrant booster assembly for the car park/ wharf area will need to be upgrading through the installation of a double detector check valve to achieve Backflow Prevention requirements as per AS 2419.1 – Fire hydrant Installations. This fire hydrant connection will be used to supply both the existing Sydney Fish Market fire hydrant system and the proposed redevelopment fire hydrant system.

Hydrants are located on the landing at each level within fire stairs for access by the Authorities (Fire Brigade).

Fire hose reels
FHR's will be provided in accordance with BCA E1.4 – Fire hose reels.

Fire sprinklers
A wet pipe sprinkler system will be provided throughout all areas of the project. The sprinkler system will be fed from the existing fire hydrant connection currently serving the main Fish Market building. The existing fire hydrant booster point located at the Jones Street entrance to the Fish Market will be replaced with a fire sprinkler booster that will be complete with a backflow prevention device and utilised only for the fire

sprinklers in the new Fish Market development. Flexible hoses will be used to connect below ceiling sprinklers to assist in cost reductions in high grind areas.

Fire detection and alarm systems
High sensitivity below ceiling smoke detectors, analogue/ addressable type are to be installed throughout the typical office levels, public areas and corridors, in the main electrical switch room and substation, in the lift motor room and as part of the mechanical smoke hazard management system.

An analogue/ addressable Fire Indicator Panel will be provided in the Fire Control Room.

The fire detection system will transmit to the Fire Indicator Panel, NSW Fire Brigades, and door closing control mechanisms, Emergency Warning System and mechanical air pressurisation systems.

4.5.9 Gas service
The gas supply to the new development is proposed to be fed via the existing natural gas supply to the site. The natural gas supply to the individual tenants will be complete with isolation valves and subsidiary meters that will be pulse emitting.

4.5.10 Rainwater reuse
The rainwater reuse system for the site will involve two systems including:
- clean rainwater run-off from the awnings and roofs of Level 1 of Buildings A and B; and
- a separate stormwater system which will capture the run-off from the roof top car park and driveway ramp.

The clean water will be stored in a 100,000 litre capacity tank located below the Stage 1 portion of Building B. This clean rainwater will be used for toilet flushing and for the wash down of wholesale areas. A Rocla Volume Filter will be provided before the tank inlet to ensure the quality of the stored water.

The stormwater captured will be stored in a tank with a capacity of 400,000 litres and will be used for the irrigation and hosing down of the public precinct of the Urban Plaza, Waterfront Park and Waterfront Promenade, service and loading areas and for the cooling of mechanical condensers.

4.5.11 Sanitary drainage
Sanitary drainage is proposed to gravitate from fixtures, stacks, etc. to the Authority's 300m sewer main located under the existing car park driveway in Jones Street.

4.5.12 Stormwater drainage
A complete system comprising gutters, downpipes, gross pollutant trap, first flush device, storage tank, overflow provision, will discharge to footpath or Blackwattle Bay. The discharge of stormwater to Blackwattle Bay is subject to the approval of the Sydney Harbour Foreshore Authority.

4.5.13 Trade waste

4 x 5000L grease arrestors are to be located at ground level. Two grease arrestors will be located in close proximity to the net storage and drying area and two grease arrestors will be located in the loading dock.

(Refer additionally to **Appendix 8:** *Sydney Fish Market Redevelopment – Building Services Concept Report* (July 2010) prepared by Umow Lai).

4.6 ESD Strategies

The following ESD strategies will be adopted for the proposed development:

4.6.1 Building fabric

The building is designed to predominantly face west, orientated towards the foreshore and Blackwattle Bay.

Due to the orientation of the building, horizontal standing will not be very effective on the western façade. Options available to mitigate the effects of high solar loads on the western façade are high preference glazing on vertical standing devices.

Due to the need to optimise views of the waterways from the building, high performance glazing to the western façade will be implemented. High preference glazing will additionally reduce the capital cost and energy consumption of the HVAC system.

Additional measures to provide optimal thermal performance to the building include the use of insulation to the roofs, walls, and floors of the buildings, with the following minimum performance levels:

- Roof: 3.2W/m^2K R-value;
- Walls: 2.8W/m^2K R-value;
- Floors: 2.0W/m^2K R-value.

4.6.2 Natural ventilation

Natural ventilation will be optimised with the use of an adaptive air conditioning system. This system involves the use of sliding glass panels for the retail tenancies, which will then be integrated with the air-conditioning system.

When the outside ambient conditions are favourable, the sliding glass panels can be opened to allow natural air to ventilate the tenancies, and switching off the air-conditioning system. Throughout the year, this will significantly reduce the energy consumption associated with the mechanical HVAC system.

4.6.3 Mechanical services

The most energy efficient option proposed for mechanical services is the water-cooled system, which involves the innovative use of geothermal technology for heat rejection.

Geothermal heat exchange systems use the relatively stable and moderate temperature of the ground as an energy source. The system involves the drilling of 30m boreholes and running insulated refrigerant pipe work to allow for a direct heat exchange with the ground. The system will be integrated with both the mechanical air conditioning and the domestic hot water supply system, providing substantial free tempering.

The design of an individual tenant air conditioning system is recommended over a central system, as the size of the site will require too long refrigerant runs, thereby reducing the system efficiency. Individual borehole, air-handling and hot water systems will be provided for each tenant, allowing for direct monitoring of the energy consumption of each tenant.

When combined with the natural ventilation system, the overall air-conditioning system has the potential to only use electrical energy during peak load, thereby greatly reducing the total energy consumption.

4.6.4 Lighting

The rooftop car park will be zoned to allow for photoelectric daylight sensors control of perimeter zones. This will allow the pertinent light fittings to be switched off when there are adequate levels of natural daylight, thus reducing the electrical energy consumption.

General area lighting will also be controlled by photoelectric daylight sensors, in conjunction with time clock and/or occupancy sensors. Occupancy detection controls will be used in car parking areas, corridors and toilets.

Luminaries will be light efficiency T16 linear fluorescent lamps which will reduce electrical energy consumption by up to 20%.

High energy efficient LED lighting is recommended for corridor and toilet areas, in coordination with the architectural design.

4.6.5 Water services

Water efficient fixtures and fittings will be used throughout the development, such as 5-star WELS-rated fixtures and fittings.

The use of natural gas hot water systems will be implemented for its greater environmental benefits over electric heating.

All major uses of water will be metered to monitor and improve rates of water consumption.

(Refer additionally to **Appendix 8:** *Sydney Fish Market Redevelopment – Building Services Concept Report* (July 2010) prepared by Umow Lai).

4.7 Stormwater Drainage Design

The overall site layout has been designed to minimise the number of discharge outlets into the Bay and maintain the existing drainage regimes at the Jones Street car park and Bank Street intersection.

The public domain drainage network will be reconfigured to suit the new intersection and Jones Street car park layout while the truck drainage lines and the catchment areas currently draining into them are to be retained.

Within the site, it runoff from all roofed structures will be captured by conventional gutter and pipe drainage system into rainwater harvesting tanks for re-use. The multi-storey car

park will be resigned to drain up to the 100-year ARI storm using a syphonic drainage system. Runoff from the multi-storey car park and all outdoor courtyard/ promenade areas will be drained through a gross pollutant trap (GPT) for initial treatment before being directed into a separate rainwater harvesting tank. Overflows from the storage tank will then be drained to a new drainage line discharging into the Bay.

Portions of the existing loading dock area will be regraded. Runoff from these areas will be intercepted by a new row of trench drains. The trench drain is then connected to a new drainage line which drains through a GPT before being discharged into the Bay.

Properties along the edge of the water in the harbour are expected to be significantly affected by the effects of climate change. Accordingly, all drainage systems will be designed to allow for a rise in sea level of at least 0.4m, allowing for a 40 year operational design life for this site after which it is recommended that the site's stormwater drainage systems should then be re-assessed to determine if upgrades in anticipation of further effects of climate change would be required.

Current Mean High Water Springs (MHWS) for Sydney Harbour is estimated to be at RL 0.65m AHD. This means that all drainage systems for the site should be designed to ensure that design capacities and efficiencies are maintained even with a future MHWS of RL 1.05m AHD.

(Refer additionally to **Appendix 9:** *Proposed Redevelopment, Sydney Fish Market, Pyrmont – Soil and Water Management Plan* (2010) prepared by Smart Civil).

4.8 Water Sensitive Urban Design Measures

Water Sensitive Urban Design (WSUD) seeks to ensure that development is carefully designed, constructed and maintained so as to minimise impacts on the natural water cycle. It focuses on the interactions between the urban built form (including urban landscapes) and the urban water cycle, incorporating the three urban water streams of potable water, waste water and stormwater.

In order to minimise consumption of potable water, it is proposed to collect rainwater from building roofs and stormwater from car parks, and outdoor courtyard areas in two separate storage systems. Roof water runoff will be collected in one storage tank, and stormwater runoff from car parks and outdoor courtyard areas, will be stored in a separate storage tank.

The stored roof water will be treated before it is used in toilet cisterns, irrigation of planter beds and tree pits, hosing down of pavements, and in air conditioning cooling units. The stored stormwater will be treated to a level that is suitable for irrigation of the foreshore's soft landscaping, as well as external area hose down, trade waste area wash down and mechanical plant cooling water.

The tanks have been sized to meet approximately 50% of the non-potable water demands through the site. These demands will be met by potable water once the stormwater has been depleted.

The site will incorporate two bio-retention systems which will treat stormwater from paved surfaces prior to entry into Blackwattle Bay. At the entrance to the Fish Markets on Bridge Road, the first bio-retention system will treat flows from surrounding hard-paved areas, roof water runoff from the all-weather shelter structure and potentially other flows from Bridge Road. The water will be treated to best practice standards prior to discharge to the Harbour.

The second bio-retention system will be located west of Building A, under the new outdoor dining area at the interface with the Waterfront Park. Flows from the Foreshore Urban Plaza will be directed to this system, with treated stormwater drained to the stormwater reuse tank for reuse.

Gross pollutant traps will be provided just upstream of each new discharge outlet into the Bay.

Other treatment devices, such as slit and oil arrestors will also be used to treat runoff within car parks and trade waste systems. All runoff from trafficable areas (driveways and car parks) will be treated up to the higher standard "6-month return period" storm.

All WSUD elements will be maintained as required.

(Refer additionally to **Appendix 10:** *Sydney Fish Market – Water Sensitive Urban Design Concept Design* (August 2010) prepared by Equatica).

4.9 Construction Erosion and Sediment Control

The redevelopment work is proposed to be undertaken in several stages. It is intended for the market to remain in operation during the redevelopment period. The strategy has included provisions for vehicular and pedestrian market traffic.

During construction, soil erosion and sedimentation control measures will be installed in all areas disturbed and affected by construction activities to prevent silt and sediment from leaving the construction site and reaching the bay. Details of these measures are described below and shown on drawings C0100270-SKC-10 and C0100270-SKC-11.

All construction phase erosion and sediment control measures will be provided and installed in accordance with Council's guidelines and Landcom's *Managing Urban Stormwater – Soils and Construction*.

Stormwater runoff from upstream of the construction site will be drained into existing stormwater drains where possible or diverted around the site to reduce erosion. Diversion can be achieved by forming lined channels and embankments along the upstream edge of the site and directed to the nearest downstream drainage points to ensure safe and controlled stormwater discharge.

Temporary earthworks batters in cut and fill will be sloped at 1 vertical to 1.5 horizontal, and stabilised against erosion by wind and rain.

Soil adhering to truck wheels will be prevented from leaving the site by the use of a truck shaker grid and a truck wheel wash. These will be located at the exit roadway so that all trucks leaving the site may be inspected and cleaned before leaving the site.

Water used in the truck wheel wash will be recycled by directing it to a sedimentation tank to allow the settlement of sediments. Sediment will be collected from the sediment tank and scraped off the shaker grid and the truck wheel wash itself.

The transport of sediment will be minimised by the installation of sediment fences. These will be installed along the downstream edge of the construction site, and at the toe of all earth batters and soil stockpiles.

All stormwater drainage pits within and downstream of the construction site will be fitted with sediment filters composed of sand-filled filter bags/socks and block spacers. These will be kept in place and maintained until completion of all construction work around each drainage pit.

All drainage outlets (new and existing) to the bay will be fully enclosed with a floating turbidity barrier. These will be kept in place and maintained for the entire construction period.

Stormwater runoff within the site will be directed to sumps for collection and pump-out. This water will contain silt and suspended soil particles, which must be removed before discharge from the site. Site runoff will initially be pumped from the sumps to a sedimentation chamber where sediments will be allowed to settle. The water will then pass through a filter medium into a pump chamber. This pump will direct the water to the existing trunk drainage system.

During construction, dust generation can be minimised by applying the following dust control measures:

At each work area along the foreshore a boom and silt curtain will be placed in the waterway over the full length of the work area, to prevent debris and disturbed sediment from being disbursed into the waterway.

All construction debris accidentally dropped into the waterway will be contained between the boom and the foreshore, and will be removed.

Bare Earth Surfaces
Keeping bare earth surfaces during construction activity by spraying water from water trucks or hand-held hoses.

Constructed Surfaces
The regular collection of rubbish from site into skips for disposal to approved waste depots. Construction surfaces will be swept regularly.

Skips for the collection of rubbish will be located in areas with suitable truck access. They will be kept covered to prevent dust (and other rubbish) from being picked up and conveyed by wind.

Transported Materials
Materials likely to generate dust will be transported to or from site under cover and dampened to prevent dust from being picked up and transported by wind.

(Refer additionally to **Appendix 9:** *Proposed Redevelopment, Sydney Fish Market, Pyrmont – Soil and Water Management Plan* (2010) prepared by Smart Civil).

4.10 Waste and Odour Impact Assessment

The Sydney Fish market is a distribution point for sales of fresh seafood to the public and commercial sectors. Currently, the Market includes retail and wholesale distribution operations on site that are about to undergo an expansion and reorganisation of some of its existing tenants, which comprise speciality food and produce outlets and restaurants. The expansion will generally increase the restaurant component rather than the existing seafood retail operations. The Auction Hall operation of the business will remain unaltered as a result of the redevelopment.

The waste currently generated by the SFM comprises:

Fresh fish waste
The site currently creates approx 10 tonne of fresh fish waste daily. The waste products are refrigerated on site to contain odours and collected by private contractor usually on a daily basis from Monday to Friday when the Auction floor is in use. The fresh fish waste is taken from site and used within the pet food and fertiliser industries. Currently the waste is collected by Camilleri Stockfoods.

General garbage
The retail and general operations generate approximately 5 tonnes of general waste daily. The waste is stored in a 22 cubic metre compactor. The existing compactor will be upgraded to suit the requirements of the refurbishment.

Liquid waste
A proportion of the fresh food retailers on the site have facilities for cooking that are connected to a series of 3 grease traps installed around the site for liquid waste and removed for suitable disposal. New grease arrestors have been included in the redevelopment design to suit the increased requirements of the additional restaurants.

Cooking oil recycling
The retailers that cook have a requirement under their leases to remove all cooking oils from the site. Cooking oils are currently removed by private contractor and recycled as bio-fuels.

Recyclable materials
In the past, the compactor contents have been too contaminated to recycle and therefore have been disposed of as general garbage. There has been some recycling by individual tenants, but generally restricted to PET and glass. With the proposed redevelopment, a dedicated recycling area has been included in the Building A for recycling of PET, glass, paper and polystyrene. 120 litre bins will be provided for rubbish and recycling within the public precincts.

Timber pallet products

There is a component of waste timber on the site generated by the delivery of non-standard timber pallets. Currently these timber pallets are sent to land fill. Arrangements are being put in place to have these timber pallets collected and recycled. Recycling companies such as Veolia are available to collect these waste products.

Sydney Fish Market (SFM) is committed to minimising its own ecological footprint by pursuing environmental best practice and the prevention of pollution in all operations in the sustainable management and conservation of Australia's environment. Through a process of continual improvement SFM aims to lead the way in efficient and effective environmental procedures, providing a role model for others to follow.

Through its philosophy of reduce, re-use and recycle, SFM's policies will identify, review and manage environmental impacts, potential risks and opportunities for improvement, develop and implement environmental management programs to continually improve performance and realise opportunities for environmentally positive contributions.

Sydney Fish Market has commenced an implementation program for accreditation under ISO 14000 that is due for completion at the end of 2011.

4.11 Ecological Impact Assessment

An ecological assessment of the Sydney Fish Market site and its proposed redevelopment has been undertaken by Environmental Resources Management Australia Pty Ltd (ERM).

ERM has assessed the SFM site as an urban space that is situated on reclaimed land containing very little native vegetation.

The development site is highly modified urban environment on reclaimed land that currently operates as a commercial fish market. The site is almost entirely comprised of warehouses, retail outlets and parking spaces built from concrete and bitumen. There are no remnant ecological communities at the site. There are very few native trees at the site and there are no endangered flora species.

An assessment of the likely impacts associated with the proposed works was undertaken by ERM Australia. ERM has evaluated that the proposed action will cause minimal impacts on threatened flora and fauna species, and there are unlikely to be any ecological issues associated with direct impacts on terrestrial flora and fauna, including threatened species, populations or communities listed under the TSC Act, EPBC Act or FM Act.

ERM has undertaken an assessment of the likely impacts associated with the redevelopment works as follows:

4.11.1 Assessment of flora impacts

Two Hill's Weeping Figs, two Bangalay hybrids and three Crimson Bottlebrushes occur within the site. Impacts of development on these trees and the fauna habitat that they provide were considered under the Environmental Planning and Assessment Act 1979 (EP&A Act). Due to the highly developed and distributed nature of the site there are

limited flora issues associated with the proposed development. No threatened terrestrial flora species listed under the NSW Threatened Species Conservation Act 1995 (TSC Act) or Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) have the potential to occur within the site. No marine vegetation recorded within the site is listed as threatened under the Fisheries Management Act 1994 (FM Act).

4.11.2 Assessment of fauna impacts

The site is unlikely to provide habitat for many native terrestrial fauna species.

The Hill's Weeping Figs provide potential foraging habitat for the Grey Headed Flying-fox, listed as vulnerable under the TSC Act and vulnerable under the EPBC Act. The site does contain a small amount of foraging habitat suitable for the Flying-fox.

An assessment of significance has been undertaken for the Grey-headed Flying-fox pursuant to the TSC Act and EPBC Act. The assessments found that with the implementation of avoidance measures, the proposed development/ action is considered unlikely to have a significant impact on the Grey-headed Flying-fox. In addition, the proposed development has been referred to the Commonwealth department of Environment, Water, Heritage and the Arts (DEWHA) for a decision by its Minister as to whether the action is likely to have a significant impact on matters of national environmental significance.

The waterfront is characterised by a steeply constructed built environment. The depth of the water is too deep to support intertidal or estuarine fauna habitats such as mangroves, seagrasses or salt marshes. Therefore, potential impacts on habitats and species that rely on these habitats are unlikely to be an issue. However, the site includes a marine environment and supports considerable numbers of native waterbirds including Australian White Ibis, Silver Gull, Darter and Australian Pelican, and is likely to support marine fish species.

The site does contain habitat for two migratory listed species, although the condition of the habitat is poor and the project will not involve any actions that will impact significantly on these species. There are no other threatened species that occur at the site, and the proposed development does not involve any actions that will impact on any other threatened species.

4.11.3 Indirect ecological impacts

Whilst there is unlikely to be any ecological issues associated with direct impacts on terrestrial flora and fauna, potential indirect ecological impacts could include:

- Introduction or spread of weeds from vehicles and personnel; and
- Pollution or sedimentation of waterways associated with construction waste and runoff lay down areas.

4.11.4 Mitigation measures

ERM Australia recommends the following general management measures that should be adopted during the proposed works to reduce the potential for impact to flora and fauna within the site. General management measures for implementation include:

- Adoption of weed and sediment control measures;

- Gross pollutant traps will need to be constructed upstream of any discharge point to prevent sediment being discharged into Blackwattle Bay;
- Ensure all lay-down areas cleaned and debris removed following completion of construction works to avoid introduction of disease;
- Development of a wash down facility and central grease trap for new buildings;
- Retention of identified Grey-headed Flying-fox foraging habitat (Hill's Weeping Figs) and protection of the trees through erection of temporary fencing at the drip zone to minimise indirect impacts; and
- Development of the waterfront should be designed to minimise the degree of shading, thereby reducing the potential impact on any marine species that may be present (NSW Fisheries 1999).

(Refer additionally to **Appendix 12**: *Sydney Fish Market – Ecological Impact Assessment* (July 2010) prepared by Environmental Resources Management Australia).

4.12 Heritage and Archaeological Assessment

4.12.1 Cultural significance

The archaeological resource of the site has the potential to yield information about the development of this part of Pyrmont and Ultimo that ranges from the earliest years of the nineteenth century to the mid-twentieth century. The archaeological profile represents the lengthiest period of European association, over 160 years out of the approximately 210 years of development.

The potential for evidence of Aboriginal occupation is assessed to be very low. If evidence of Aboriginal occupation were recovered from the site it would be exceptionally rare; no sites of indigenous life have yet been found in Blackwattle Bay.

Detection of intact topsoil or possible midden deposits is highly unlikely due to the high degree of landform alteration throughout the many phases of development. There is very low potential for Aboriginal relics to occur within the development site. There is no reasonable expectation that relics have survived the significant disturbance and landform modification. On this basis, no application for Section 90 consent under the NPW Act 1974 is warranted for redevelopment of the site.

The history of European association with this place extends to 1806 and its likely development as a landing place servicing the Ultimo Estate. Evidence of any alterations made to the former cove to use it as a means of access to the Ultimo Estate would be rare.

The processes of reclamation and the visible aspects of that work, the retaining walls, are not rare but the ability to investigate and document the processes by which this land-forming was undertaken are not common. Alterations made to the site for the estate water-front development and subsequent reclamation is likely to be intact.

The earliest identified use associated with this site is that of quarrying. The site is likely to be partly encompassed within one of the earliest quarries on the peninsula. Rarer would be evidence of the jetty that was constructed on the northern headland apparently to service this early industrial work.

The later industries on this site, primarily timber and oil, are particularly associated with Blackwattle and Rozelle Bays. The businesses that occupied the site were not especially outstanding or influential in their own right but were representative of the industrialisation of the peninsula and the dominant industries associated with it at particular times, the evidence left from the several industries that have been associated with this site is likely to be fragmented. The ability of the resource to address meaningful research objectives is likely to be compromised by this fragmentation.

4.12.2 Potential heritage impacts

As previously outlined, there are no current heritage listings for any structure, feature or relic within the site. The only significant visible features identified within the site are the sandstone seawalls along the foreshore which were constructed as part of the 1870s reclamation project of Blackwattle Bay. The site is also adjacent to the Blackwattle Bay Stormwater Channel No. 17 (SWC No. 17), which enters Blackwattle Bay at the south-western corner of the site.

New Built Development (Buildings A and B)

None of the existing buildings have been identified to be of heritage value and the proposed works to them will not impact on the cultural values of this place. The principal impact of the work with respect to heritage values will be on the archaeological profile caused by excavation to varying depths for the construction of new buildings. The archaeological and heritage assessment concludes that the site does contain an extensive archaeological profile of varying degrees of significance with the most important items located at the base of reclamation fill.

Waterfront Park and Associated Waterfront Open Space

The existing seawall is in very poor condition. However, as this element has been identified by Wendy Thorp as the only significant visible feature that relates to the history and previous uses of the site, much of the seawall will be retained, even though it will require substantial reconstruction. Based on a review of historic plans of the site, it is likely that the section of seawall around the 'bulge' behind the long wooden jetty towards the north end of the site is the remnant of a small, natural peninsula into the Bay. This projection will be retained and interpreted with minor modifications to the current alignment. South of the 'bulge', the seawall will be reconstructed in a slightly revised configuration to relate to the new publicly accessible foreshore.

The proposed development incorporates a bio-filtration bed within the elevated timber deck in the south-western corner of the site. This is adjacent to the northern end of the Blackwattle Bay Stormwater Channel No. 17 (SWC No. 17) and provides an opportunity to interpret the history of the SWC No 17 as well as issues of sustainability and water harvesting.

Excavation work in the public domain will be limited to small scale pits for new trees, hard landscaping elements, services and the reconstruction of the seawall. This is not likely to have a substantial impact on archaeological resources along the waterfront.

4.12.3 Mitigation strategies

European archaeology

None of the areas of excavation provide a comprehensive view of any of the principal occupants or associations of the site identified in this assessment. On this basis there is little value to be gained from undertaking pre-development archaeological salvage excavation. Because of the random sample of the archaeological profile created by the areas of each development stage, a comprehensive record of the work would still only produce a series of disjointed fragments of several layers of occupation.

However, there is merit in initiating a careful and long-term programme of monitoring and documentation to be undertaken in conjunction with areas of bulk excavation and those for services and landscaping. The programme could produce several valuable outcomes including an archaeological map of the sub-profile that identifies property boundaries, an evaluation of the integrity of the profile, records of sections that can address questions relating to land-forming processes and, finally, if significant and intact relics or sites are uncovered during bulk excavation provision can be made for those items to be individually recorded.

Prior to any detailed archaeological program, consideration should be made of the likely extent of contamination of the site resulting from almost a century of industrial use of the site. This may impact on the ability to extract archaeological information from the site.

Aboriginal archaeology

This evaluation has recognised a very low probability for uncovering relics of Aboriginal occupation during the course of excavation. Because the likelihood is considered to be so low there is no requirement to initiate the procedures recommended by the DECCW for Aboriginal community consultation in respect of a Part 3A project. However, if relics of this type are uncovered on the site they still have protection under the NPWS Act. Identification of Aboriginal relics will require work to cease in that area and the archaeological evidence to be protected while consultation is initiated with the DECCW, for advice and comment, and the traditional Aboriginal groups associated with Blackwattle Cove to establish the significance of the items and their long-term management.

Maritime archaeology

The seawalls along the western boundary of the site are the only visible elements of the 19th century history of the site visible at the surface. They have been assessed to be significant because they illustrate important aspects of the historical development of this place and provide a sense of history within this environment. They are in poor condition and require maintenance for their ongoing stability.

The proposed public domain retains a significant portion of this seawall, primarily at the northern ‘bulge’ which closely reflects the original foreshore in this area. The retention of this seawall requires a detailed assessment of the building fabric and a schedule of works established for the conservation of these elements ensuring that their composition and appearance and the variety of materials is maintained; these variations help to define the several phases of waterfront development.

A materials assessment is required and a schedule of works established for the conservation of these elements ensuring that their composition and appearance and the variety of materials is maintained; these variations help to define the several phases of waterfront development.

Within Blackwattle Bay, adjacent to the seawalls and revetments along the western edge of the site, there are likely to be relics of former jetties and wharves. There is also likely to be an artefact assemblage associated with these elements. These relics, while not visible, contribute a layer of evidence to this site in the same way that land based relics help to document and define aspects of occupation.

The proposed works to the public domain involve some reconfiguring of the western boundary of the site, including new timber decks on piles, concrete and sandstone retaining walls and revetments, though mostly within the existing site boundary. Some of these are likely to have a minor adverse impact on extant maritime archaeology, though this will be generally limited to the piles associated with the new timber decks. Prior to these works commencing, a maritime archaeological survey should be undertaken to identify the scope of the relics and assemblages. Considering the potential contamination of the sediments under the water, this maritime archaeological survey should be a surface investigation only. The results of this work should then inform decisions regarding the protection or documentation of those relics during the work.

Artefacts

The excavation of the site is likely to reveal an assemblage of artefacts although the proposed programme of monitoring makes retrieval of individual relics from secure contexts quite difficult. Any maritime work in the bay could also retrieve an assemblage.

The information inherent in assemblages is only accessible when they have been cleaned and professionally catalogued. The information they can provide with respect to chronology and occupation can be incorporated into the final narrative.

Artefacts that are retrieved from the site should be permanently stored preferably within the development site.

Documentation

Any archaeological work on this site should have a post-excavation programme of final documentation and interpretation of the results included in the scope of works to ensure that the information retrieved from the site is made available in secure formats in permanent repositories.

Interpretation

An important component of a mitigation strategy can be a provision for interpretation. The purpose of the work is to identify issues, themes or elements specific to a site that help to explain its importance and its role in the development of the community. Interpretation devices do not take the place of archaeology or retained historic fabric; they act as a guide to the archaeological and historical values of the site. They can also help to provide a sense of identity for a place. The subject site, as well as its use as a fish market has a rich historical legacy and consideration should be given to using this as a feature of the new development.

Possible themes for interpretation of the heritage of the site could include:

- Early use of Blackwattle Bay as a source of natural drift oysters (before industrial contamination), which ties thematically to its later use as a fish markets;
- Early site development associated with the Ultimo Estate;
- The association of the site with early quarries in the Pyrmont area;
- Industry – Blackwattle Bay, including the subject site, was a key area of industrial development containing industries such as oil refining, timber supply and shipbuilding that had an impact on the development of Sydney's economy and in turn that of NSW;
- The development of public sanitation in Sydney during the first half of the 19th century, as evidenced by the Blackwattle Bay Stormwater Channel No. 17, one of the five original combined sewers built c.1857;
- The late twentieth century use of the site as a Fish Markets with links to the corporationisation of the NSW fishing industry and the dominance of particular migrant families in the local industry.

(Refer additionally to **Appendix 13:** *Sydney Fish Market, Pyrmont – Assessment of European Archaeology and Heritage Resources* (July 2010) prepared by Cultural Resources Management).

4.13 Geotechnical Assessment

Geotechnical assessments for Stages 2 – 4 of the SFM redevelopment and the foreshore works were undertaken by Jeffrey and Katauskas Pty Ltd, Geotechnical and Environmental Engineers.

J+K made the following recommendations based on the results of their borehole and subsurface investigations:

4.13.1 Geotechnical design recommendations

J+K's geotechnical design recommendations are outlined, in summary, as follows:

For Stages 2 and 3:

- All footings for the new buildings and new buildings and any external structures should be taken down to the underlying sandstone bedrock encountered at depths between 0.4m and 8.5m.
- Conventional bored piers are not feasible, due to the sandy nature of the underlying fill and natural soils, as well as the relatively high water table.
- Due to the moderate to high loads anticipated and the relatively high water table CFA piles would be the preferred foundation system.

For Stage 4:

- All footings for the new buildings and any external structures should be taken down to the underlying sandstone bedrock encountered at depths between 0.4m and 1.0m in the boreholes within the building footprint.
- Where sandstone is encountered at a shallow depth, pad footings founded straight onto bedrock would be sufficient. If sandstone is encountered at a greater depth a bored or CFA pile foundation system would need to be employed.

For foreshore works:

- Construction of the new timber boardwalk will require installation of piles from a barge. Piles at the southern end of the boardwalk will be driven through substantial depths of soil of very low bearing capacity and may need to be driven to rock. Piles further to the north near Jetty A will encounter rock at depths of 2m, perhaps even less and will have to be socketed into the rock for lateral stability.
- The soils which occur between Jetties A and B will form a very poor foundation for any new sea walls. The soils comprise 2m to 3m of poorly compacted sandy fill containing sandstone fragments of gravel to boulder size as well as some building rubble. If vertically faced sandstone block walls are required then piled foundations will be necessary or large unpredictable settlements will occur. Alternatively an armoured revetment should be considered. Existing walls of marginal stability can be stabilised with a rock fill berm placed after the boardwalk piles are driven.

4.13.2 Site preparations and earthworks

J+K's recommendations for site preparation and earthworks are outlined, in summary, as follows:

- For new suspended ground floor slab, the fill under the slab to bring the level would not have to be engineered fill, although it should be free of topsoil, root affected soils or other deleterious materials.
- For any new pavements areas, or if ground floor slab is not suspended, earthworks recommendations are to be in accordance with AS3798-2007: *Guidelines on Earthworks for Commercial and Residential Developments*.

4.13.3 Site drainage

J+K's recommendation for site drainage is for good drainage to be provided both during construction and for the long term maintenance of the site.

4.13.4 Sub-grade preparation

J+K recommends the following subgrade preparation under any new pavement areas or floor slabs if not suspended and prior to the placement of engineered fill, in summary, as follows:

- Strip the subgrade of all hard surfacing and/or vegetation, root affected soils or other deleterious materials. The sandy fill may be separated, screened for deleterious materials and reused as engineered fill.
- Following stripping, proof roll the subgrade to improve the near surface density of the soils and identify any soft or unstable areas using a minimum of 6 passes of a smooth drum roller with a static weight of no less than 6 tonnes under the supervision of an experienced geotechnical engineer. Any soft or unstable areas identified should be excavated down to a sound base and reinstated with engineered fill.

4.13.5 General excavation

Excavation for new services trenches and footings is anticipated to extend to a maximum depth of around 1m.

As excavations should not be greater than about 1m in depth, no shoring would be required, although some localised slumping of the soils should be expected.

4.13.6 Engineered fill

J+K recommend that all fill should be compacted in layers no greater than 150mm loose thickness. Granular materials should be compacted to at least 98% Standard Maximum Dry Density (SMDD) or 75% Density Index.

Service trench backfill would be compacted using a vibrating plate attached to an excavator or similar. Where undertaken using a hand operator vibrating plate, it is recommended that layer thicknesses be reduced to 100mm to help achieve the desired level of compaction.

4.13.7 On-shore retaining walls and permanent batters

Minor walls may be required such as for pedestrian ramps. Free-standing and low height cantilevered retaining walls, of up to 2m height should be designated using a coefficient of active earth pressure, K_a of 0.35 for a near level backfill surface and a bulk unit weight of 20kN/m^3.

Permanent batters should be no steeper than 1V in 2H and protected from erosion using a quickly establishing grass cover or by structural means.

The design of retaining walls should incorporate appropriate surcharge loads and hydrostatic pressures; alternatively the design should incorporate behind wall drainage to fully and permanently dissipate the pore water pressures.

4.13.8 Seawall design

Vertical structural retaining walls along the waterfront should be piled to rock as the near surface soils comprise 2m to 3m of loose tipped fill. A cheaper alternative would be to form a battered revetment protected with rip-rap using coarse granular fill such as crushed concrete.

If vertical walls are required, a soldier pile wall will probably be the easiest to construct. Piles could be placed directly in front of the existing walls. The piles could be steel or concrete piles. The design of a soldier pile wall should include:

- Pile walls should be founded in very low strength sandstone or better; and
- Any surcharge (including nearby footings, ground slopes and compaction stresses, etc.) affecting the walls should be designed as drained with provision made for permanent and effective drainage of the ground behind walls. Subsurface drains should incorporate a non-woven geotextile fabric to act as a filter against subsoil erosion.

Cantilever walls (such as new sandstone block sea walls) should be designed for a triangular lateral earth pressure distribution and an “active” earth pressure coefficient, K_a, of 0.35, assuming a near horizontal backfill surface behind the wall.

4.13.9 Footings

For the Main SFM site:

J+K recommend that the main SFM site proposed building should be uniformly founded in the sandstone bedrock which was encountered in the boreholes between 0.4m and 8.5m below ground level. For the new Stage 2-3 development, there are two main options for the footing system:

- CFA Piles; and
- Bored Piers with steel casing

The proposed buildings for the Stage 4 development will predominantly be supported on shallow footings where the depth to rock may be as little as 0.4m below existing ground levels. However, if sandstone is encountered at a deeper depth, a partially piled foundation system would need to be employed following the same criteria as detailed above.

For the foreshore area

The depth to bedrock is quite variable over foreshore area with depth to rock greater towards the south. The rock is generally overlain by fill and very loose and loose sandy soils which could not support moderate loads without the probability of significant differential settlements.

It is recommended that:

- new structures be founded on the underlying sandstone bedrock, with the exception of on-land light weight structures; and
- driven piles be used for the construction of piles installed over water, which may have to be installed from a barge depending on the reach of the machine.

Driven, CFA piles or bored piers with steel casing could be used for the construction of piles on land. For any new boardwalk piles may be possible to cantilever a support system for the walkway on-land without having to drill off a barge.

The presence of concrete rubble over the site in the fill is significant, it may be necessary either to dig out the upper layers of the fill to remove obstructions prior to piling or to use powerful boring rigs which could penetrate the layer.

For boardwalk piles that are subject to lateral loads and where rock is shallower, either the pile may need to be pre-bored or steel piles could be driven into the rock.

High level footings in the sandstone may be possible for some locations along the line of the pedestrian access ramp area only, where the depth to rock may be as little as 0.7m below existing ground.

Piles or shallow footings (less than 1m depth) founded in sandstone may be designed for an allowable bearing pressure of 600kPa. This would increase to 1000kPa if the footings are taken down to sandstone of at least low strength.

For the design of small on-land light weight structures the use of shallow (less than 1m in depth) pad or strip footings would be feasible. An allowable bearing pressure of 50kPa should be adopted for shallow footings for light weight structures in the fill or natural sandy soils provided that the footing bases are properly prepared and inspected.

Following the detailed excavation for the footing, the foundation should be lightly watered and compacted using a “whacker packer”. With the prepared footing should be inspected by a geotechnical engineer. It may be beneficial to over excavate by about 100mm and place a thin layer of material such as compacted road base to provide a suitable base for forming any shallow footing.

J+K recommend that at least the initial stages of pile construction be inspected by a geotechnical engineer to confirm that appropriate bearing has been achieved. Additional inspections can be determined at that time based on apparent variability and strength of the strata.

4.13.10 Slab-on-ground construction and pavements

J+K consider slab-on-ground construction feasible on condition that the sub-grade is prepared in accordance with the recommendations given in site preparations and earthworks. Slabs must be detached from deep or piered footings or fully suspended.

The exposed subgrade should be inspected and any soil removed to a depth of at least 400mm and replaced with good quantity granular engineered fill.

A sub-base layer of minimum 100mm of DGB20, compacted to at least 98% Modified Maximum Dry Density (MMDD) should be used beneath any concrete on-ground floor slab pavements. For flexible pavements, all road base layers should be similarly compacted to at least 98% MMDD.

Concrete pavements should be constituted with joints at 3-4m spacing to reduce the risk of cracking from differential movements within the subgrade.

Subsoil drains should be installed around the perimeter of the pavements, with inverts not less than 0.2m below the sub-grade level. Drainage trenches should be excavated with a significant longitudinal fall to appropriate discharge points so as to reduce the risk of water ponding within the drains. The pavement subgrade should also be graded toward the subsoil drains to promote runoff and minimise ponding on the subgrade. The pavement surface should also have adequate falls to shed surface water.

4.13.11 Geotechnical inspections

J+K recommend geotechnical inspections should be undertaken at the following stages:

- Proof rolling and density testing.
- The initial stages of pile or pier boring.
- Strip and/or pad footings for required bearing pressures.

(Refer additionally to **Appendix 14** and **Appendix 15**:

- *Report to Sydney Fish Market Pty Ltd on Geotechnical Investigation for Proposed Redevelopment, Stages 2 to 4 including New Access Roads and Parking at Sydney Fish Market, Blackwattle Bay, Pyrmont NSW* (14 June 2010); and
- *Geotechnical Assessment and Design Advice for Proposed Foreshore Works at Sydney Fish Market, Blackwattle Bay, Pyrmont NSW* (August 2010)

prepared by Jeffery and Katauskas Pty Ltd.)

4.14 Environmental Site Assessment and Acid Sulfate Soil Assessment

Environmental Investigation Services (EIS), a division of Jeffery & Katauskas Pty Ltd (J+K), has undertaken an environmental site assessment and acid sulfate soil assessment for the proposed redevelopment at the Sydney Fish Market.

The primary objectives of the investigation were to:

- Assess the potential risk of significant widespread contamination of the site;
- Assess the soil and groundwater contamination conditions at the site in relation to the proposed land use;
- Undertake a waste classification assessment for off-site disposal of excavated soil associated with the proposed development works;
- Assess the soil conditions for acid sulfate soil potential.

The scope undertaken to achieve the objectives generally included a site history assessment including review of historical aerial photographs, historical land titles, WorkCover records, regional geology and groundwater conditions, search of the on-line DECCW databases regarding notices or licenses, and a limited soil and groundwater investigation in conjunction with the J+K geotechnical assessment.

A range of fill and natural samples were analysed for heavy metals, total petroleum hydrocarbons (TPH), monocyclic aromatic hydrocarbons (BTEX compounds), polycyclic aromatic hydrocarbons (PAHs), organochlorine and organophosphorus pesticides (OCPs and OPPs), polychlorinated biphenyls (PCBs) and asbestos. Selected fill and natural soil samples from six boreholes were also analysed for acid sulfate soil potential (sPOCAS testing).

4.14.1 Site history assessment

The search of historical information has indicated the following:

- The site was leased by the British Imperial Oil Company Ltd and the Shell Company of Australia Ltd from around 1902 to 1930. The Shell Company of Australia continued to lease the site until the early 1960s. Site use during this period has not been confirmed, however it is considered likely that various activities associated with petroleum storage, distribution and possibly oil refining processes were undertaken at the site during this time;
- The 1930 aerial photograph indicated that the site was located within an industrial area. Several large industrial-type buildings and circular storage towers/silos (possibly associated with petroleum storage and/or refinery processes) were located in the south section of the site. The towers/silos and buildings remained at the site until at least 1961;
- The New South Wales Fish Authority progressively leased portions of the site from 1965. These leases were transferred to the Fish Marketing Authority in the early 1970s and leased by various companies associated with the scale and distribution of seafood;
- There are no recorded notices listed on the NSW DECCW CLM or POEO register; and
- WorkCover have no records of UST licenses issued for the site.

4.14.2 Contaminants

SMF site

Elevated concentrations of contaminants were encountered in the fill soil and groundwater samples obtained during this investigation at concentrations above the adopted site assessment criteria. In summary these included for the SFM site:

- Elevated concentrations of arsenic (1,300mg/kg), total PAHs (149.7mg/kg) and benzo(a)pyrene (19mg/kg and 5.7mg/kg) in several soil samples obtained from BH504;
- Elevated concentrations of light fraction (C_6-C_9) TPH (ranging from 82mg/kg to 480mg/kg) in soil samples obtained from BH507, BH511 and BH517;
- Elevated concentrations of mid to heavy fraction (C_{10}-C_{36}) TPH (ranging from 1,070mg/kg to 15,370mg/kg) in soil samples obtained from BH503, BH507, BH508, BH511 and BH517;
- Elevated concentrations of mid to heavy fraction (C_{10}-C_{36}) TPH (1.3mg/L), light fraction (C_6-C_9) TPH (0.19mg/L) and oil and grease (57mg/kg) in the groundwater sample obtained from MW517; and
- Elevated concentrations of phenanthrene (0.00452mg/L), fluoranthene (0.001mg/L) and total PAHs (0.0163mg/L) in the groundwater sample obtained from MW517.

Foreshore precinct

Within the foreshore precinct are:

- Elevated concentrations of heavy metals, TBT, PAHs and mid to heavy fraction (C_{10}-C_{36}) TPH in the sediment samples;
- Elevated concentrations of total PAHs and/or benzo(a)pyrene in fill soil samples obtained from BH601, BH606 and BH610. The maximum total PAHs and benzo(a)pyrene concentrations in the soil samples were 249.9mg/kg and 24mg/kg respectively;
- Elevated concentrations of TPH (C_{10}-C_{36}) in the majority of the fill soil samples. The maximum TPH (C_{10}-C_{36}) concentration in the soil samples was 22, 100mg/kg;
- Elevated concentrations of copper and zinc in all three of the harbour water samples;
- Marginally elevated concentrations of arsenic in all three groundwater samples. Also elevated concentrations of copper, lead and zinc in MW608;
- Elevated concentrations of TPH (C_{10}-C_{36}) in two of the three monitoring wells. The maximum concentrations of TPH (C_{10}-C_{36}) in the groundwater samples was 1.15mg/L in MW606;
- Elevated concentrations of the PAH compounds anthracene and pheneanthrene in MW605, and pheneanthrene in MW606.

4.14.3 Asbestos

Asbestos was not detected in any of the samples analysed for the investigation of both the SFM site and the Foreshore precinct. The scope of work undertaken assessed the widespread asbestos contamination in soil and not for small scale or buried asbestos features which may be encountered during earthworks or construction works at the site.

Prior to demolition of the existing site buildings (or parts of the existing buildings), a suitably qualified consultant should undertake a hazardous building materials inspection. The demolition works should be undertaken in accordance with the recommendations made within the hazardous building materials report.

4.14.4 Waste classification

SFM site

Based on the results of the assessment, the fill material in the vicinity of BH504 and BH517 is classified as Restricted Solid Waste (non-putrescible) according to the criteria outlined in Waste Classification Guidelines 2009. Any material excavated in the vicinity of BH504 and BH517 and should be disposed of to a suitably licensed NSW DECCW (EPA) landfill.

Based on the results of the assessment, the fill soils across the remainder of the site are classified as "General Solid Waste (non-putrescible)" according to the criteria outlined in Waste Classification Guidelines 2009. All fill material excavated from the site should be disposed of to a suitably licensed NSW DECCW (EPA) landfill.

Foreshore precinct

The fill material encountered at the site contains inclusions of ash and slag. No excavation works should commence on-site prior to preparation of the ASSMP.

4.14.5 Soil contamination

SFM site

Elevated concentrations of contaminants were encountered in fill soil samples analysed for the investigation. The soil TPH contamination is generally associated with the areas in the south and east sections of the site. The highest concentrations of TPHs were encountered in fill samples obtained from BH511 and BH517 in the south section of the site. The fill material extended to depths of 4.2m and 3.6m respectively. Analysis of underlying natural soil samples from these two locations did not encounter significant concentrations of TPHs above the site assessment criteria.

The vertical extent of the soil arsenic contamination encountered in BH504 has not been established. Elevated arsenic concentrations were not, encountered in any of the boreholes that surround BH504. Analysis indicated the potential for significant concentrations of arsenic from this location is relatively low.

Foreshore precinct

Soil samples obtained for the investigation were analysed for the potential contaminants of concern identified at the site. Elevated concentrations of contaminants were encountered in the fill soil samples above the Site Assessment Criteria.

The source of the Total Petroleum Hydrocarbons (TPH) contamination at the site is unlikely to be a result of three primary factors:

- The suspected USTs;
- Unidentified USTs; and/or
- Historical activities associated with use of the site and adjacent areas for petroleum storage, distribution and/or refinery processes.

The highest TPH concentrations were encountered in BH606 which was located immediately adjacent to the suspected USTs in the central-north section of the site. Due to the relatively permeable sandy soils encountered at the site and the shallow groundwater table, the potential for the contamination to migrate away from BH606 and the UST is considered to be high. However, the potential for migration may be reduced slightly if the USTs near BH606 are founded on the sandstone bedrock. The

contaminant migration may have contributed to the elevated TPH concentrations in adjacent boreholes.

The source of the Polycyclic Aromatic Hydrocarbons (including the benzo(a)pyrene) in the fill samples is considered most likely to be associated with the ash and slag material encountered in the fill matrix.

The historical site information indicated that the site was developed prior to 1930 and it is understood that the areas adjacent to Blackwattle Bay and around Wentworth Park (located further to the south of the site) were reclaimed in the late 1800s. Significant filling was undertaken in order to raise the site to the current levels. Slag and ash was frequently used as fill material during this period in Sydney. The slag and ash may have originated from various metal processing industries and from coal burning, respectively.

The potential for contaminant migration associated with ash and slag in fill soils is considered to be relatively low. This was supported by the TCLP data obtained during this investigation which demonstrated that significant concentrations of PAH compounds were unlikely to leach from the samples.

The source of the PAH contamination may also be a result of contamination migration from the adjacent UST. The elevated concentrations of TPHs (C_{10}-C_{36}), together with significantly elevated concentrations of naphthalene and the higher molecular weight compounds such as benzo(a)pyrene, may be associated with fuel and/or an oil product (contained within the USTs).

Based on the results of the investigation, remediation of the site will be required. A remediation action plan (RAP) should be prepared detailing the remediation options, remediation strategy and other site requirements prior to commencement of the proposed redevelopment works. Further assessment of the potential health risks associated with the contaminants may also be required.

4.14.6 Groundwater contamination

SFM site

The groundwater contamination issues (TPHs and PAHs) encountered in MW517 appeared to be confined to south-west section of the site. Groundwater flows in the vicinity of MW517 may be influenced by tidal movements within Blackwattle Bay. It is considered likely that the contamination may extend off-site and towards Blackwattle Bay.

Foreshore precinct

Groundwater monitoring wells were installed in boreholes and groundwater samples were analysed for the potential contaminants of concern identified at the site.

The heavy metal concentrations in the groundwater were considered to be the result of regional groundwater conditions rather than a site specific issue for the following reasons:

- Significant concentrations of arsenic, copper, lead or zinc in the fill material or natural sand which would represent a potential groundwater contamination source, were not identified during this investigation;

- Elevated concentrations of these heavy metals are commonly encountered in groundwater in urban environments and are associated with factors such as surface water infiltration and leaking water infra-structure.

As a result of uncontrolled filling, the groundwater beneath the Pyrmont area is considered to be a "highly disturbed system". Imposition of a regulatory framework that attempts to impose the same level of protection as for a pristine ecosystem to the Pyrmont groundwater is considered to be impractical. However, care should be taken to minimise further degradation of the groundwater quality.

The TPH and PAH contamination in the groundwater is likely to be associated with the suspected (and/or the unidentified) USTs. The condition of the USTs is likely to be severely degraded due to their age.

Due to the elevated concentrations of TPHs and PAHs in the groundwater, some remediation should be discussed in greater detail within the RAP.

4.14.7 Sediments

Elevated levels of contaminants including heavy metals, TBT,PAHs and TPHs were encountered in the sediment samples analysed for this investigation. The contamination is possibly associated with former industrial use of the adjacent SFM site together with historical and current use of Blackwattle Bay for commercial shipping. The results are considered to be typical of sediment conditions throughout Sydney Harbour.

4.14.8 Health risks

Based on the existing site configuration that includes a pavement across the entire site area, the potential health risks associated with the contaminants are considered to be relatively low.

However, the proposed redevelopment works may include demolition of parts of the paved areas which will increase the potential for exposure to the contaminants. These risks should be assessed prior to commencement of the proposed redevelopment works and an appropriate occupational health and safety plan should be developed.

Elevated levels of contaminants including heavy metals, TBT, PAHs and TPHs were encountered in the sediment samples analysed for this investigation. The contamination is possibly associated with former industrial use of the adjacent SFM site together with historical and current use of Blackwattle Bay for commercial shipping. The results are considered to be typical of sediment conditions throughout Sydney Harbour.

4.14.9 Acid sulfate soils

SFM site

Potential acid sulfate soils were identified at the SFM site and were considered to be associated with the natural alluvial soils. An acid sulfate soil management plan will be required prior to commencement of excavation works or piling the site.

Foreshore precinct

Based on the site inspection and analysis results on the foreshore precinct, the risk of the generation of acid sulphate conditions following disturbance of the natural soils and sediments at the site is considered to be high. An acid sulphate soil management plan (ASSMP) is considered necessary for the proposed works at the site.

4.14.10 Contaminant transport mechanisms

Mobile contaminants are expected to move down to the rock surface or groundwater table and migrate laterally down-slope from the source. The movement of contaminants is generally expected to be associated with groundwater flow and seepage at the top of the bedrock. In the vicinity of the west site boundary, the transport of contaminants may also be associated with tidal movement.

4.14.11 Dewatering during development

In the event that dewatering is necessary during the proposed works, the water must not be disposed of to stormwater, sewer or the harbour without prior treatment and approval from the relevant authorities.

4.14.12 Harbour water

Elevated levels of the heavy metals copper and zinc were encountered in each of the three harbour water samples obtained from Blackwattle Bay. These elevations are consistent with regional levels, particularly areas with high densities of recreational boats. Zinc and copper are both used in marine paints.

4.14.13 Suitability of the site for proposed development

Based on the results of the assessment, EIS consider that the potential for significant, widespread soil and groundwater contamination at the site is relatively high. Potential contamination at the site would be anticipated to be associated with:

- Potentially contaminated and imported fill material;
- Potential asbestos contamination associated with demolition of the former site buildings/ sheds;
- Potential use of the site (particularly the south and south-west sections) for petroleum storage and refining processes;
- Unidentified underground storage tanks (USTs);
- Historical use of the site for unknown commercial/ industrial purposes;
- Historical activities such as use of pesticides; and
- The suspected USTs located off-site but adjacent to the west boundary.

4.14.14 Recommendations

Based on the scope of work undertaken for this assessment EIS consider that the site can be made suitable for the proposed redevelopment provided that:

- An additional investigation is undertaken;
- A Remediation Action Plan is prepared for the site detailing the remediation/ management options for the site prior to the commencement of the proposed redevelopment works, and successfully implemented. Any validation works and management/monitoring specified in the RAP should also be undertaken;

- An appropriate occupational health and safety plan is prepared for the contaminants encountered at this site;
- A hazardous building materials inspection is undertaken for any parts of the existing buildings that will be demolished;
- The buildings are demolished appropriately and in accordance with the recommendations made within the hazardous building materials report(s);
- An ASSMP is prepared to address the management requirements associated with disturbance of potential acid sulphate soils at the site; and
- The site is inspected by experienced environmental personnel during demolition and excavation works, to assess any unexpected conditions or subsurface facilities that may be discovered between investigation locations. This should facilitate appropriate adjustment of the works programme and schedule in relation to the changed site conditions.

Additional soil and groundwater investigation should include the following:

- Additional soil sampling in the east and south sections of the site in order to meet the minimum sampling density specified by the EPA (now DECCW);
- Additional delineation of the groundwater contamination in the vicinity of BH/MW517 to better assess the contamination conditions encountered. This should include (as a minimum) the installation of three additional groundwater monitoring wells: one in the far south-west corner of the site; one in between BH510 and BH/MW517; and one in the vicinity of BH507. Consideration should also be given to an off-site well located to the west of BH/MW517. The additional groundwater assessment should address the effects of tidal movements on the migration of the groundwater contaminants;
- Additional soil sampling in the vicinity of BH504 to better assess the TPH and arsenic contaminants;
- Further detailed analysis should be included to assess the nature of the TPH contamination. This could include a silica gel cleanup of the samples to remove any false positive results that could arise from the presence of fats and oils associated with food processing; and speciation of the hydrocarbons to gain a greater understanding of the potential health impacts of the TPH contamination;
- Ground penetrating radar (GPR) survey of the areas that surround BH/MW517 and BH503 to attempt to identify potential USTs; and
- Further sampling and analysis around BH504 and BH517 in order to attempt to reduce the waste classification from Restricted Solid Waste to General Solid Waste, or minimise the volume of Restricted Solid Waste.

(Refer additionally to **Appendix 16** and **Appendix 17**:

- *Environmental Site Assessment and Acid Sulfate Soil Assessment for Proposed Redevelopment at Sydney Fish Market, 56-60 Pyrmont Bridge Road, Pyrmont, NSW* (June 2010); and
- Preliminary Environmental Site Assessment for Proposed Redevelopment of Waterfront at Sydney Fish Markets, 56-60 Pyrmont Bridge Road, Pyrmont, NSW (August 2010)

prepared by Environmental Investigation Services).

4.15 Additional Environmental Site Assessment

The primary areas of contamination concern on the site include:

- the suspected underground storage tanks (USTs) on the site; and
- an arsenic contamination hotspot on the site

as identified in the Remediation Action Plan.

Additional environmental assessment undertaken on the SFM site By Environmental Investigation Services (EIS) has indicated the following:

- The TPH (C_{10}-C_{36}) and TPH (C_9-C_9) contamination was relatively widespread within the fill soils in the central and east sections of the site. The highest elevated concentrations were typically encountered in the vicinity of the suspected USTs and in the vicinity of the suspected former fuel processing facility/refinery;
- Arsenic and PAHs were encountered in the north section of the site in the vicinity of BH504 and BH704. The arsenic hotspot may have been contributing to the elevated arsenic concentrations in the groundwater;
- PAHs were encountered in the fill soils at several locations in the east section of the site;
- With the exception of the elevated concentrations of some PAH compounds encountered in BH606, the majority of the PAH contamination encountered in the fill soils was considered to be associated with ash and slag deposits. The PAHs associated with the ash and slag were generally considered to be relatively immobile;
- Concentrations of some heavy metals (including arsenic), were encountered in the groundwater samples;
- Elevated concentrations of TPH (C_{10}-C_{36}), TPH (C_6-C_9), oil and grease, and PAHs were also encountered in the groundwater at the site; and
- The groundwater levels in the vicinity of MW517 may be influenced by tidal movements. Although the fluctuations are relatively minor, they show some correlation with daily tidal variations.

(Refer additionally to **Appendix 19**: *Additional Environmental Site Assessment and Remediation Action Plan for Proposed Redevelopment at Sydney Fish Markets, 56-60 Pyrmont Bridge Road, Pyrmont, NSW* (August 2010) prepared by Environmental Investigation Services).

4.16 Remediation Action Plan

The proposed site remediation for the SFM site and the Foreshore Area includes a combination of strategies comprising:

- Removal of the suspected underground storage tanks (USTs) identified during the EIS investigations;
- Excavation and off-site disposal of the worst of the contaminated soil where practical (based on contaminant concentrations and the potential for the contaminants to impact on the groundwater system);
- Cap and contain the remainder of the contaminated soil;
- On-going monitoring of the groundwater conditions; and
- Management of the site via the implementation of an environmental management plan (EMP).

4.16.1 Suspected underground storage tanks (USTs) – Areas A, B and C

The most viable option for the remediation of Areas A, B and C is for the removal of the tanks and associated infrastructure in accordance with AS4976-2008[30], followed by excavation and off-site disposal of the impacted fill/soil in the immediate vicinity of the suspected UST(s).

Liquid and/or sludge within the UST and associated pipe work should be pumped out and disposed of by a licensed liquid waste operator.

4.16.2 Arsenic contamination hotspot – Area D

The most viable option for remediation of the arsenic contamination is for the excavation and off-site disposal of the contaminated material. The cap and contain approach would then be adopted to further reduce the potential adverse impacts associated with the site contamination.

Elevated Polycyclic Aromatic Hydrocarbons (PAHs) were also encountered in Area D. However, as the PAHs at this location were not considered to be particularly mobile, removal of the PAH contaminated soil was not considered necessary. Implementation of the cap and contain approach would be used to remediate/manage the PAH contamination that remained in the area after removal of the arsenic hotspot.

4.16.3 Whole of site

Following implementation of the remedial strategies, remediation/ management of the entire site will be required in order to address the remaining TPH and PAH contamination. The most viable option for the site remediation is considered to be the:

- Cap and contain approach; and
- Implementation of an environmental management plan (EMP).

This combined remediation strategy is considered appropriate for the following reasons:

- Elevated concentrations of contaminants will be present at the site following the remediation of Areas A to D (inclusive);
- Remediation of the whole site to remove all of the contaminated soil is considered impractical and unfeasible; and
- The current/proposed land use is not considered to be particularly sensitive.

An assessment of the health risks associated with the site contamination and the proposed cap and contain approach will be required prior to proceeding on this basis. This would require a quantitative health risk assessment to be undertaken by a suitably qualified consultant.

4.16.4 Groundwater

EIS are of the opinion that physical remediation of the groundwater is not necessary at this point in time. The most viable option is the on-going management and monitoring of the groundwater and the most appropriate remediation strategy at this stage for the following reasons:

- Implementation of the RAP should remove the worst of the on-site contamination sources that may be impacting on the groundwater quality. This may result in the natural attenuation of some of the groundwater contaminants;

- Groundwater beneath the Pyrmont area and the water/ sediments of Blackwattle Bay are considered to be highly disturbed systems as a result of past historical use of the area for industrial activities;
- The preliminary assessment of the harbour water in Blackwattle Bay, immediately adjacent to the site, did not indicate that significant quantities of TPH or BTEX compounds were migrating into Blackwattle Bay; and
- Groundwater in the vicinity of the site is not currently utilised as a significant resource.

4.16.5 OH&S, inspections & Environmental Management Plan (EMP)

Prior to commencement of the proposed remediation works, a suitable occupational health and safety plan should be prepared for the contaminants that are present at the site.

Environmental personnel should be present during removal of any tanks and associated pipe work to access the excavation and provide advice on the removal of any impacted soil in the vicinity of the subsurface facilities.

Following remediation and validation assessment of the remediation works, environmental management plan (EMP) should subsequently be prepared for the contaminants remaining on the site.

(Refer additionally to **Appendix 19**: *Additional Environmental Site Assessment and Remediation Action Plan for Proposed Redevelopment at Sydney Fish Markets, 56-60 Pyrmont Bridge Road, Pyrmont, NSW* (August 2010), prepared by Environmental Investigation Services).

4.17 Acid Sulfate Soil Management

4.17.1 Acid sulfate conditions at the site

Soil samples for the Acid Sulfate Soil assessment evaluated the risk of the generation of acid sulfate conditions following disturbance of the natural alluvial soils at the site was considered to be high and recommended the preparation of an ASSMP for the proposed works at the SFM site.

4.17.2 Acid Sulfate Soil Management Plan (ASSMP)

The objective of the ASSMP is to reduce the potential on-site and off-site environmental impacts associated with disturbance of ASS identified at the site.

Soil exclusion zone

Based on the result of the ASS assessment Environmental Consultant, EIS are of the opinion that an ASSMP is not considered necessary for development works to a depth of approximately 1.5m. Any works below this depth should be undertaken in accordance with the ASSMP.

Management of excavated material

Any fill soils excavated from below a depth of approximately 1.5m at the site must be treated, assigned a waste classification and disposed of to an appropriate landfill.

The following options are available for the disposal of ASS soils excavated during the development works:

- Option A – Fill and Natural ASS: Treatment, waste classification and disposal of landfill; and
- Option B – Natural ASS only: Immediate transport of natural ASS to landfill for disposal beneath the water table. A number of conditions have to be satisfied for burial beneath the water table to be viable. This option is not suitable for fill material.

Groundwater seepage and dewatering

In the event that de-watering of excavations is required during construction, management of the pumped out water and conditions within the surrounding ASS will be required, as outlined in the ASSMP.

4.17.3 Contingency Plan

In the event that de-watering of soil neutralisation of groundwater monitoring tests indicate a significant change in acidic conditions, the contingency plan should be implemented.

If soil monitoring indicates the presence of significantly more acid material than expected or water monitoring indicates that the pH of the pumped water has become significantly more acidic, all excavation works should be placed on hold until further action is taken to limit the oxidation of ASS soils in the area of the current earthworks.

Contingency works are outlined in the ASSMP.

(Refer additionally to **Appendix 18**: *Acid Sulfate Soil Management Plan for proposed redevelopment at Sydney Fish Markets, 56-66 Pyrmont, NSW* (August 2010), prepared by Environmental Investigation Services).

4.18 Staging of the Works

4.18.1 Descriptions of the works

The proposed development will be constructed in stages, with Stage 1 being the construction of an extension to existing single storey Building 72 located at the northern portion of the SFM site. Development approval for the Stage 1 work is being assessed by the Sydney City Council under Part 4 of the EP&A Act.

Stages 2, 3 and 4 of the proposed development are part of this Part 3A Project Assessment process. These works comprise:

Stage 2

- Demolition of existing Buildings with lessee nos. 61, 64, 73, 75, 76, 77, 78 and 81;
- Construction of northern portion of Building A comprising retail, wholesale and parking facilities (Ground Floor, L1–L3);
- Retention of existing northern roadway for public vehicular access to the SFM site;
- Retention of 295 car parking spaces within the SFM site;
- Provision of new roadway at the eastern perimeter of the site for construction traffic along its northern portion; and
- Provision of parking for the SFM along the southern portion of the roadway.

At the completion of Stage 2, spaces are provided at Level 1 with access from the south via the loading dock.

Stage 3

- Demolition of existing buildings with lessee nos. 62, 65, 66, 67, 68, 70, 74, 79 and 80;
- Construction of southern portion of Building A comprising retail, wholesale, dining and car parking facilities (Ground Floor, L1–L3);
- Construction of the new Bank Street entry and arrival court including part basement below;
- Construction of external vehicular access ramp to parking levels;
- Retention of existing northern roadway for construction vehicular access too the SFM site;
- Retention of 293 car parking spaces within the SFM site;
- Provision of access to the eastern perimeter roadway for construction traffic along the northern portion of the roadway; and
- Provision of parking for SFM along the southern portion of the roadway.

At the completion of Stage 3, the above ground parking is fully operational with access via the reconfigured Bank Street intersection.

Stage 4

- Demolition of existing Buildings with lessee nos. 69, 71 and 72 the north-eastern portion of the site;
- Construction of Building B and the First Floor terrace above to the Stage 1 development;
- Construction of external areas, Foreshore Urban Plaza and Kiosk abutments along the western side of Building A;
- Construction of the Waterfront Park, the Promontory and the northern portion of the waterfront Promenade; and
- Construction of the Miller Street Link.

Stage 5

- Construction of the All-Weather Dining Area, southern Waterfront Promenade and Pyrmont Bridge Road Entrance Deck, including amendments to existing ramps along the concrete service road on the western side of the Main Fish Market building and the ramp leading from the loading docks down to the main wharf.

During the Stages 2 and 3 redevelopment period, the existing vehicular access at Bank Street will be retained for use by both construction and normal market traffic. Vehicle and pedestrian circulation routes within the site will be adjusted to suit the changing construction conditions, and with minimal disruption to market operations.

4.18.2 Construction Traffic Management Plan

A Construction Traffic Management Plan for the stages of construction has been prepared by Halcrow. Key management measures are as follows:

Access

For all stages of construction, access will be provided via the existing site entry and exit at the signalised intersection with Miller Street and Bank Street.

Traffic control

Traffic controllers would assist truck drivers with access to/ from the work area in accordance with AS1742.3 – *Manual of Uniform Traffic Control Devices* and the RTA's *Traffic Control at Worksites*.

Traffic management measures include:

- Advisory road signage must be installed and maintained in accordance with AS 1742.3 – *Manual of Uniform Traffic Control Devices* for works on roads and the RTA's *Traffic Control at Worksites* throughout all the construction stages;
- Signage would be placed along Bank Street to warn traffic that there are large vehicles turning into and out of the site;
- Qualified traffic control personnel with RTA blue and yellow cards must remain on site at all times whilst any temporary signage is in place;
- The selection and specific implementation of traffic control plans must be carried out by qualified traffic control personnel with RTA red and orange (where applicable) cards; and
- No neighbouring driveways or pedestrian access should be blocked during the works.

Pedestrian management

Pedestrian management measures would include:

- Maintaining the pedestrian route on the footpath along Bank Street site frontage;
- Protection of pedestrian safety within the vicinity of the site through signage, barricades and webbing;
- Provision of pedestrian diversions in the form of pedestrian markings to indicate the primary pedestrian routes to/ from the site as well as to/ from parking;
- Improvements to pedestrian access to include providing lighting, hazard markers on overhead height restrictions and a formed surface; and
- Signposting of all routes and provision of traffic controllers at key locations where pedestrian movements conflict with construction routes and/ or loading areas.

Coach management

The coaches would generally drop passengers outside the Fish Market entrance and then park elsewhere. Coach parking locations would be provided on site throughout the construction process.

Car parking

SFM staff	The existing Fish Market operations do not provide parking for existing staff. This practise is intended to continue throughout the construction phase.
Consultation workers	The majority of staff (of up to 80) would come by public transport. Applicable short-term parking restrictions and pay parking on nearby streets would avoid impacts on parking in the surrounding area.
Tradesmen	Tradesmen will be given a loading/ unloading position within the site which will change throughout the works.
Visitors	The current car park has a nominal 418 parking spaces. Excluding the loading spaces, the onsite parking is exclusively used by visitors to the market. During the stages of construction parking on-site will be reduced.

Parking management measures

To assist with the management of parking a number of measures have been proposed as follows:

- Hours of operation would be modified to ensure maximum opportunity for parking during construction. Trading vehicles and wholesalers will be restricted to access prior to 9am. General retail traffic including coaches will be permitted to enter after 9am.
- A shuttle bus will operate from a nearby car parking station in Harris Street for construction workers, staff and visitors.
- Material on sustainable transport options would be distributed to staff and construction workers.
- The Sydney Fish Markets website will provide the best non-car alternatives to get to the markets for visitors.
- The bicycle facilities and signage for pedestrians/ cyclists from key landmarks will be brought forward and provided throughout the construction process.
- Improved access and facilities for bicycle riders will be provided throughout the construction process.
- Dedicated guidance signage to access the Fish Markets from key landmarks will be provided.
- On site parking management for use during the peak periods of operation.
- Dedicated areas of short term parking will be provided on the site to assist with turnover.

Emergency vehicle access

The access for police and emergency services would remain open during construction working hours to minimise response times.

Hours of operation

Work to be undertaken during DA approved construction hours, which are:

- Monday to Friday 7am-6pm
- Saturday 7am-6pm

Any work outside of the approved hours shall only occur where approval is granted by Council.

(Refer additionally to **Appendix 7**: *Sydney Fish Market Redevelopment – Construction Management Plan: Stages 2 – 4* (August 2010), prepared by Halcrow MWT).

4.18.3 Archaeological profile at staged works

The site contains an extensive archaeological profile of varying degrees of significance with the most important items located at the base of the reclamation fill. The components of the archaeological profile likely to be encountered at each stage are as follows:

Stage 1 (not within this application):
The site lies over part of the original north headland. The components of the archaeological profile that could be revealed in this work are:

- Environmental evidence;
- Potential for Aboriginal relics;
- Evidence of quarrying;
- Fragmentary evidence of the earliest post-reclamation industrial occupation of the timber yard of Maze and Sons (1885).

More extensive evidence of the timber store erected by Allen Taylor and Sons in the early years of the twentieth century.

Stage 2:
The Stage 2 development is located on a complex cross-section of the archaeological profile. It straddles the interface between the original headland and shore and flats. As well it crosses the boundaries of several of the industrial yards. Bores indicate an increasing depth of fill from 0.8 metres at the north to 2.6 metres towards the southern end of the building. This profile reflects the grading of the original landform into the gradually shoaling bay. The components of the archaeological profile that could be revealed in this stage are:

- Environmental evidence;
- The potential for Aboriginal relics in the area of the former headland;
- Drains and culverts associated with the Ultimo Estate from 1806;
- Evidence of quarrying from the 1840s-1850s;
- Reclamation fill of 1882;
- Fragmentary elements from the timber yards of the Maze Brothers (1885), Thomas Davis (1885), Thomas Holdship (1895) and especially Allen Taylor's early twentieth century timber store; and
- Features associated with the Blackwattle Iron Works (1885), the cooperage (1895), the Park and Lacey ore treating works (1897) and the several oil companies, particularly the Shell Company from the early to middle years of the 20th century.

Stage 3:
The Stage 3 building occupies an area likely to encompass a complex archaeological profile. It is located at the interface between the eastern shore of the cove and the water with the majority of the building located above the eastern end of the cove. Elements of the archaeological profile that could be encompassed in this stage are:

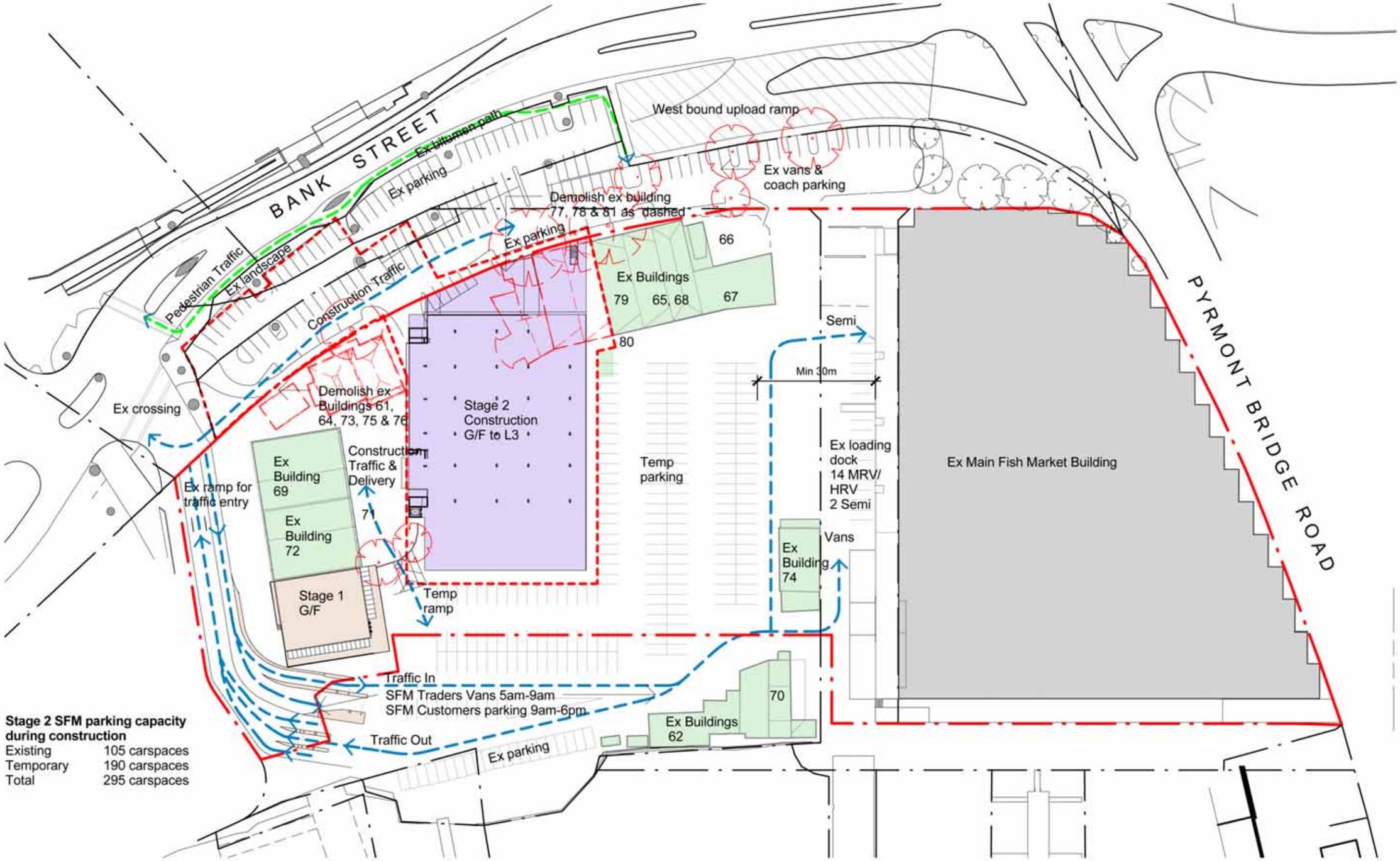
- Environmental evidence;
- Possible improvements for the Ultimo Estate from 1806;
- Reclamation fill from 1882 and buried rubble and other walls that contained the site during this period;
- Possible reclamation fill associated with the extension of Gipps Street in c. 1910;
- Kerbing, gutters and surfaces and services associated with Gipps Street from the 1890s onwards;
- Elements from Buckle's warehousing and offices including structural elements from stores, stables and smaller buildings from 1899 to 1928; and
- Components from the several oil companies that occupied the site in the twentieth century especially the large oil store that was last used as the first fish market hall.

Stage 4:
Stage 4 will have the least impact on the site with a maximum only of 1.2 metres of excavation. This stage of work lies directly above the former northern headland of the cove. The elements of the archaeological profile likely to be encountered by this work are as follows:

- Environmental evidence;
- The potential for Aboriginal relics;
- Elements of the Harris estate such as culverts or drains;
- Reclamation fill from 1882;
- Components of the Maze Brothers Yard (1885);
- Components of Allen Taylor's yard, specifically an office constructed in the early years of the twentieth century; and
- Minor components of the oil companies' period of occupation.

Refer to Figures 41 – 43: Staging Site Plans.

(Refer additionally to **Appendix 13**: *Sydney Fish Market, Pyrmont: Assessment of European Archaeology and Heritage Resources* (July 2010), prepared by Cultural Resources Management).



Stage 2 SFM parking capacity during construction

Existing	105 carspaces
Temporary	190 carspaces
Total	295 carspaces

1 Stage 2 Site Plan

1 : 1000

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Date	Description	Rev

Reilly Design Group
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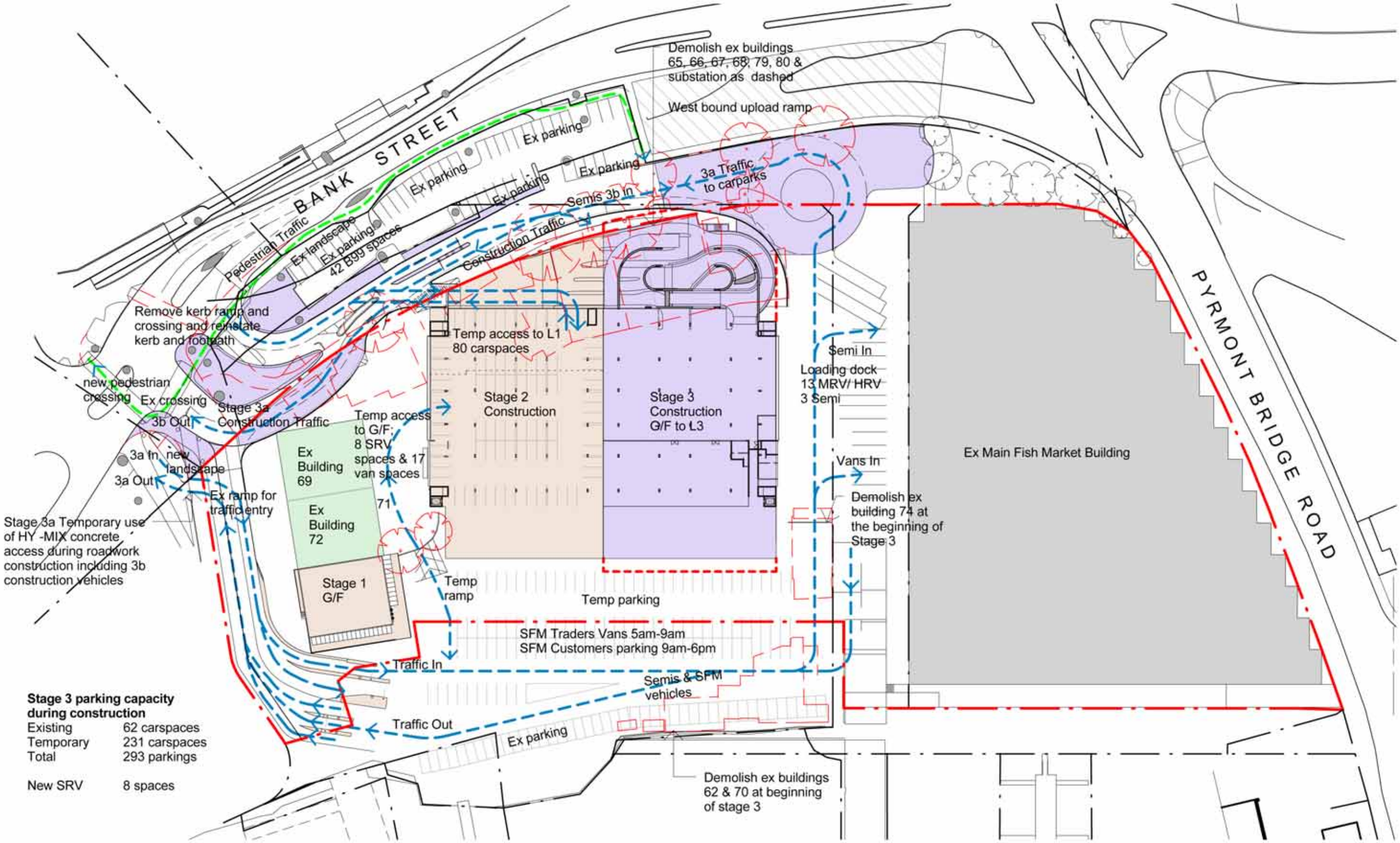
Project	Sydney Fish Market Redevelopement
	Blackwattle Bay
Client	Sydney Fish Market
Title	Stage 2 Site Plan
Date	September 2010
Dwg No	10034 083
Dn/Ch	Author/ Checker
Revision	



Stage 3 parking capacity during construction

Existing	62 carspaces
Temporary	231 carspaces
Total	293 parkings
New SRV	8 spaces

1 Stage 3 Site Plan

1 : 1000

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Date	Description	Rev

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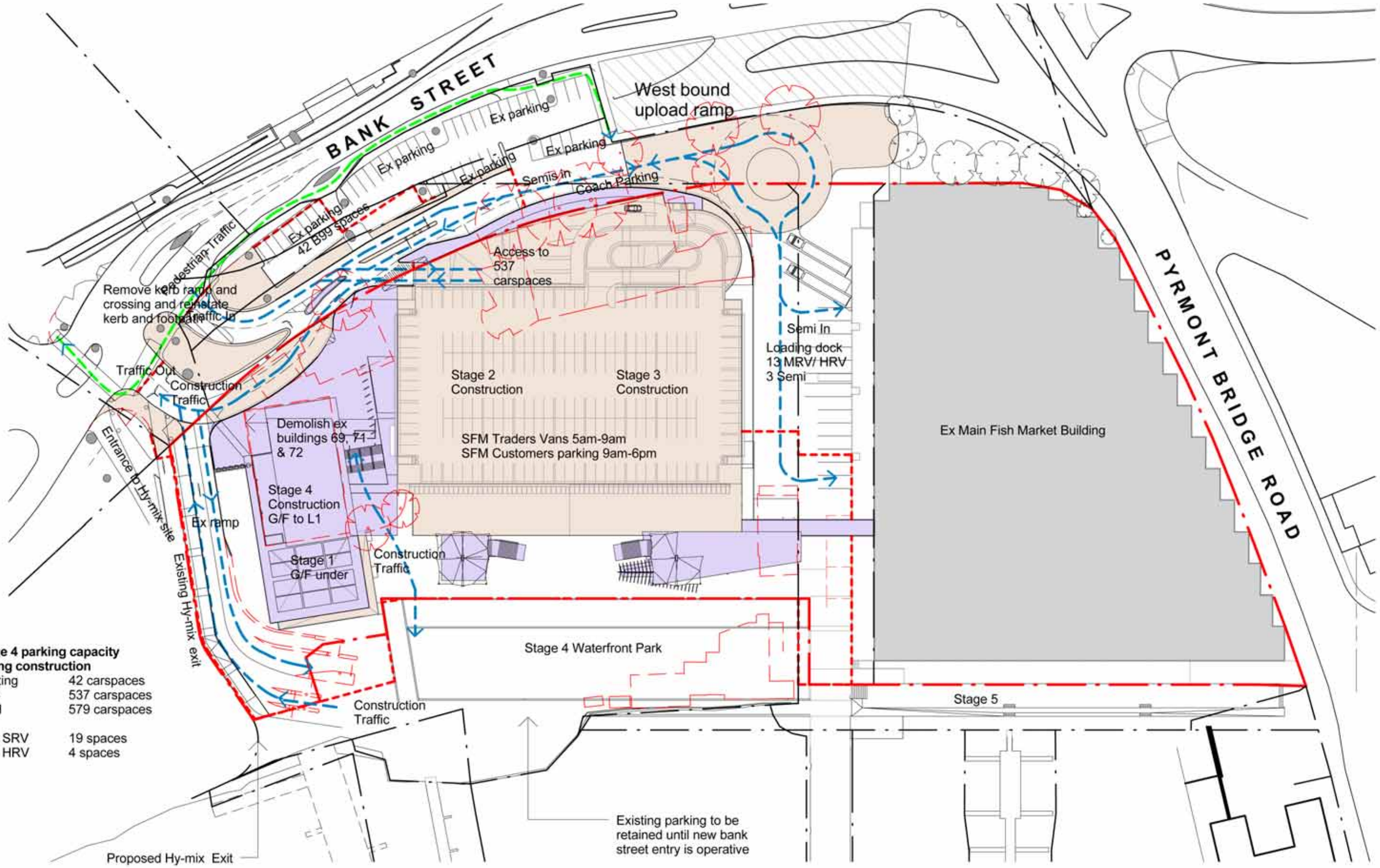
Project: Sydney Fish Market Redevelopement
Blackwattle Bay
Client: Sydney Fish Market

Title: Stage 3 Site Plan
Date: September 2010
Dwg No: 10034 084
Dn/Ch: Author/ Checker
Revision:



Stage 4 parking capacity during construction

Existing	42 carspaces
New	537 carspaces
Total	579 carspaces
New SRV	19 spaces
New HRV	4 spaces

1 Stage 4 Site Plan

1 : 1000

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Date	Description	Rev

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Project	Sydney Fish Market Redevelopement
	Blackwattle Bay
Client	Sydney Fish Market

Title	Stage 4 Site Plan		Author/ Checker
Date	September 2010	Dn/Ch	
Dwg No	10034 085	Revision	

5.0 PLANNING FRAMEWORK

5.1 Statutory and Local Planning Controls

The site is located within the City of Sydney local government area.

The site is subject to the following State and local government policy requirements of:

- NSW State Plan;
- Sydney Metropolitan Strategy – City of Cities: A Plan for Sydney's Future;
- Draft Sydney City Subregional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Environmental Planning Policy (Infrastructure) 2007;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005;
- Sydney Regional Environmental Plan No. 26 – City West;
- Urban Development Plan for Ultimo – Pyrmont 1998;
- Sydney Fish Market Master Plan (2005);
- Sydney LEP 2005; and
- Environmental and Planning and Assessment Act 1979.

Assessment of the proposed development in accordance to the above environmental planning instruments, policies and guidelines are as follows:

5.2 NSW State Plan

The NSW State Plan is set out in terms of five areas of activity of the NSW Government:

- **Rights, Respect and Responsibility –** the justice system and services that promote community involvement and citizenship;
- **Delivering Better Services –** the key areas of service delivery to the whole population (Health, education, transport);
- **Fairness and Opportunity –** services that promote social justice and reduce disadvantage;
- **Growing Prosperity Across NSW –** activities that promote productivity and economic growth, including in rural and regional NSW; and
- **Environment for Living –** planning, environmental protection, and arts and recreation.

The State Plan's purpose is to deliver better results for the community from NSW Government services. Within the framework of Growing Prosperity across NSW, is the priority to increase business investment, with its targets to:

- Continue to increase business investment through making NSW a more attractive place to do business; and
- Increase tourist visitation to NSW by 10 million visitor nights by 2016.

Within this priority are actions which include:

- Working with local business to keep jobs and investment in NSW and side by side with Invest Australia to promote Sydney and regional NSW as first-rate business destinations; and
- Reducing turnaround times and increasing the certainty of expected timeframes for major development assessment approvals.

Compliance of the Proposed Development
The proposed redevelopment will revitalise and improve this key economic, tourist and recreational precinct within the Sydney CBD.

5.3 Sydney Metropolitan Strategy

Implementation of the Metropolitan Strategy and the Subregional Strategies is fundamental to the achievement of the priorities and targets set by the State Plan. The actions and directions of the Metropolitan Strategy strongly contribute to the majority of the State Plan priorities, in particular, building harmonious and healthy communities, providing a high quality transport system as well as improving urban environments and stimulating business investment.

The Sydney Metropolitan Strategy is a framework to secure Sydney's place in the global economy by promoting and managing growth.

The Strategy is for the next 20 years (to 2031) over which time Sydney's population is anticipated to grow by around 1.1 million people. It sets out the challenges facing Sydney over the next 25 years, including:

- A population forecast of 5.3 million by 2031;
- 640,000 new homes by 2031;
- 500,000 jobs between 2031 to 2036.

The guiding principle of the Metropolitan Strategy is sustainability – economic, social and environmental.

One of the Strategy's aims is to "Strengthen economic competitiveness", to "achieve a more sustainable city", to:

> *Strengthen Sydney's long-term economic prosperity by increasing the city and region's competitiveness in globalised markets, and sharing the benefits across the city.*

The Metropolitan Strategy consists of seven strategies to achieve its aims, which are:

- Economy and Employment
- Centres and Corridors
- Housing
- Transport
- Environment and Resources
- Parks and Public Places
- Implementation and Governance

Within the strategy of **Economy and Employment** is the promotion of tourism. Tourism has been one of the fastest growing industries in Sydney over the past 20 years.

Within the Strategy for **Parks and Public Places** is to improve access and facilities for existing parks and reservation areas. It addresses economic competitiveness by recognising the value to service providers and business from improved open space, including tourism, education, health, transport and sport and recreation. Quality urban environments and access to recreational facilities also benefits surrounding property values. Increased physical activity is important for health and productivity. Sydney's

recognition internationally as a desirable city for investment and lifestyle is closely related to its physical and natural assets.

The objectives and initiatives identified to achieve this strategy include "increasing access to quality parks and public places and improving the quality of local open space". The SFM foreshore is a public place. A Harbour loop Walk traverses the SFM site.

Compliance of the Proposed Development
The SFM redevelopment will improve the economic potential of this precinct with revitalised facilities and improved open space amenity. The facility is a tourist destination.

5.4 Draft Sydney City Subregional Strategy

The Draft Sydney City Subregional Strategy translates the Metropolitan Strategy to the local Sydney level. The Ultimo-Pyrmont precinct which the SFM site is located is within the Sydney City Subregion.

The Draft Subregional Strategy is plans for an additional 58,000 jobs or more by 2031 for the Sydney City Subregion.

The Draft Sydney Subregional Strategy identifies that Pyrmont-Ultimo as a location for cultural institutions and entertainment cluster facilities including the Powerhouse and Maritime Museums, Star City Casino and Lyric Theatre, as well as maritime activities and the associated retail and wholesale activities of the Sydney Fish Markets. The precinct is also identified as an emerging information technology, communications and media precinct.

The identified future for this precinct is to promote a vibrant mixed-use area with specialised activities in multi-media and maritime.

Sites of urban renewal within the subregion present opportunities for innovative use and reuse of water, combined with water sensitive urban design. Identified environmentally sustainable design initiatives include:

- Multi-water reuse including grey-water and black-water treatment;
- Stormwater treatment and reuse;
- Peak energy demand management;
- Energy efficient buildings; and
- Public transport services and connections.

The Strategy outlines the actions to:

- Recognise the night economy to protect entertainment and nightlife clusters; and
- Continue to plan for the improvement of tourism precincts in Sydney

The Harbour provides significant employment and economic benefit through its role as a tourist attraction, recreation hub and maritime centre.

The Sydney City Subregional Strategy outlines in its Strategy objectives for parks and public places to:

"Increase access to quality parks and public places".

This includes access to the harbour's extensive foreshore and the implementation of a foreshore walk around Sydney Harbour to the Glebe Peninsula.

"Enhance cultural life and tourism precincts".

This includes planning for the improvement of tourism precincts in Sydney to maintain Sydney's market position as Australia's premier tourist destination.

"Managing Sydney Harbour".

This includes recognition of Sydney Harbour as a prime natural asset, providing significant employment and economic benefit through its role as a tourist attraction, recreation hub and maritime centre. Urban development must be carefully managed to minimise the impact on the harbour environment and to conserve its natural plant and animal habitat.

Compliance of the Proposed Development

The redevelopment proposed for the SFM complies with the Subregional Strategy's identified future for this precinct, which is that of a vibrant area with specialised maritime, retail and tourist activities.

The development will revitalise and improve this tourism precinct, improve access to the harbour foreshore and contribute to enhancing the cultural and tourist facilities of Sydney.

The development will adopt ESD initiatives and comply with the requirements of SREP (Sydney Harbour Catchment) 2005.

The SREP (Sydney Harbour Catchment) 2005 was introduced by the NSW Government to manage urban development adjacent to the Harbour and to minimise its impact on the harbour environment. This Plan zones the entire waterway of the harbour and lists specific matters for consideration by consent authorities assessing development. These relate to such matters as ecological and scenic protection, public access, working harbour, built form and design, heritage conservation and wetlands protection.

5.5 State Environmental Planning Policy (Major Development) 2005

The proposed development is considered as a "Major Project" to which Part 3A of the Environmental Planning and Assessment Act 1979 applies. The development of the type described in Clause 6 of the SEPP, being development that is described in Schedule 2 (Specified Sites) of the Major Projects SEPP, and is a major project to be determined under Part 3A of the Environmental Planning and Assessment Act 1979.

The proposed development falls under the category of:

Schedule 2, Item 10 – Sydney Harbour Foreshore Sites, which applies to:

1. Development (with a capital investment value of more than $5 million) in the area identified on Map 9 to this Schedule.

The SFM development, as a class of development, satisfies the above criteria in that it has a capital investment of more than $5 million, and it is identified on Map 9 of the Schedule as *Bank Street (including the Sydney Fish Market).*

Compliance of the Proposed Development

The proposed development has been approved by the Director-General of the NSW Department of Planning as a Major Project as described under Schedule 2, Clause

10(1) of the *State Environmental Planning Policy (Major Development)* 2005 being development with a capital investment value of more than $5 million within the area identified on Map 9, and is therefore a project to which Part 3A of the Act applies for the purposes of Section 75B of the Act. This is a non discretionary project under the Major Development SEPP.

5.6 State Environmental Planning Policy 55 – Remediation of land

The object of this Policy is to provide for a State wide planning approach to the remediation of contaminated land.

This Policy aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment:

(a) by specifying when consent is required, and when it is not required, for a remediation work, and

(b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, and

(c) by requiring that a remediation work meet certain standards and notification requirements.

SEPP 55 requires the consent authority in consenting to the carrying out of any development on land that:

(a) it has considered whether the land is contaminated, and

(b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and

(c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.

Compliance of the Proposed Development

An Environmental Site Assessment has been undertaken by Environmental Investigation Services (EIS) on the potential risk of contamination of the site by subsurface soil and ground water conditions.

EIS has recommended:

- Additional investigation be undertaken;
- A Remediation Action Plan is prepared for the site detailing the remediation/ management options for the site prior to the commencement of the proposed redevelopment work, and successfully implemented.
- A hazardous building materials inspection is undertaken for any parts of the existing buildings that will be demolished and demolition to take place in accordance with the report's recommendations;
- An ASSMP is prepared to address the management requirements associated with disturbance of potential acid sulphate soils at the site; and
- The site is inspected by experienced environmental personnel during demolition and excavation works, to assess any unexpected conditions or subsurface facilities that may be discovered between investigation locations. This should

facilitate appropriate adjustment of the works programme and schedule in relation to the changed site conditions.

Additional investigations and environmental assessment has been undertaken with a Remediation Action Plan prepared for the SFM site. Refer to Section 4.15 – Additional Environmental Site Assessment and Section 4.16 – Remediation Action Plan of the report.

5.7 State Environmental Planning Policy (Infrastructure) 2007

The SFM fronts Bank Street and Pyrmont Bridge Road. Pyrmont Bridge Road is a classified road under the definition of SEPP (Infrastructure) 2007. "Classified road" is defined under clause 93 of the SEPP to mean:

(a) A main road,
(b) A highway,
(c) A freeway,
(d) A controlled access road,
(e) A secondary road,
(f) A tourist road,
(g) A tollway,
(h) A transitway,
(i) A State work.

Clause 101(1) of the SEPP: ***Development with frontage to classified road*** states in its objectives:

(a) To ensure that new development does not compromise the effective and ongoing operation and function of classified roads, and

(b) To prevent or reduce the potential impact of traffic noise and vehicle emission on development adjacent to classified roads.

The proposed development is to ensure compliance with the following matters (clause 101(2)):

(a) Where practicable, vehicular access to the land is provided by a road other than the classified road, and

(b) The safety, efficiency and ongoing operation of the classified road will not be adversely affected by the development as a result of:
    (i) The design of the vehicular access to the land, or
    (ii) The emission of smoke or dust from the development, or
    (iii) The nature, volume or frequency of vehicles using the classified road to gain access to the land, and

(c) The development is of a type that is not sensitive to traffic noise or vehicle emissions, or is appropriately located and designed, or includes measures, to ameliorate potential traffic noise or vehicle emissions within the site of the development arising from the adjacent classified road.

Compliance of the Proposed Development

The analysis shows that the proposed development with changes to the operations of traffic signals at the intersection of Bank and Miller Streets and at Pyrmont Bridge Road, Bank Street and the Western Distributor ramps will provide a significant

improvement in traffic operations during the critical PM peak, with only the increase in delay of only 10-15 seconds at intersections during the Sunday midday peak.

Movements onto the Western Distributor during the weekday PM peak period are constrained by the prevailing speed and conditions on the Anzac Bridge, which contributes to congestion on Pyrmont Bridge Road, Wattle Street and Bank Street. With the changes to the signal arrangements, significant benefit is realised for the movement from the Western Distributor off ramp (away from the City) turning left into Pyrmont Bridge Road.

During the Sunday midday peak, the proposed signal arrangements assist flows into and out of the Sydney Fish Markets while improving overall operations.

The proposed Sydney Fish Markets development will not have a significant impact on the operations of the surrounding road network, with the proposed changes to intersection operations potentially providing significant operational benefits outside of peak generation times for the site.

Clause 104 of the SEPP: ***Traffic generating development*** requires:

(a) New premises of the relevant size or capacity (meaning a site that has direct vehicular or pedestrian access to any road), or

(b) An enlargement or extension of existing premises, being an alteration or addition of the relevant size or capacity,

That is specified in Column 1 of Schedule 3 of the SEPP, must:

(a) Give written notice of the application to the RTA within 7 days after the application is made, and

(b) Take into consideration:

  (i) Any submission that the RTA provides in response to that notice within 21 days after the notice was given (unless, before the 21 days have passed, the RTA advises that it will not be making a submission), and

  (ii) The accessibility of the site concerned, including:

    (A) The efficiency of movement of people and freight to and from the site and the extent of multi-purpose trips, and

    (B) The potential to minimise the need for travel by car and to maximise movement of freight in containers or bulk freight by rail, and

  (iii) Any potential traffic safety, road congestion or parking implications of the development.

Column 1 of Schedule 3 requires that:

- Shops and commercial premises of over 4000m^2 with access to any road; and
- Tourist and/or recreation facilities with 200 or more motor vehicles;

must comply with the above requirements.

Compliance of the Proposed Development

The proposed development, as retail and commercial premises is over 4000m^2 in area. Additionally, as a tourist facility, the site accommodates 200 or more motor vehicles. The proposed development must therefore be referred to the RTA for consideration.

5.8 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

SREP (Sydney Harbour Catchment) 2005 applies to the SFM site. The SFM site is additionally within the Foreshores and Waterways Area of the Sydney Harbour Catchment (Sheet 2 of Foreshores and Waterways Area Map).

5.8.1 Aims of the Plan (Clause 2)

The aims of the Plan with respect to a site within the Sydney Harbour Catchment are:

(a) To ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:
  (i) As an outstanding natural asset, and
  (ii) As a public asset of national and heritage significance, for existing and future generations,

(b) To ensure a healthy, sustainable environment on land and water,

(c) To achieve a high quality and ecologically sustainable urban environment,

(d) To ensure a prosperous working harbour and an effective transport corridor,

(e) To encourage a culturally rich and vibrant place for people,

(f) To ensure accessibility to and along Sydney Harbour and its foreshores,

(g) To ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity,

(h) To provide a consolidated, simplified and updated legislative framework for future planning.

As the site is within the Foreshores and Waterways area, the following principles must be adopted:

(a) Sydney Harbour is to be recognised as a public resource, owned by the public, to be protected for the public good,

(b) The public good has precedence over the private good whenever and whatever change is proposed for Sydney Harbour or its foreshores,

(c) Protection of the natural assets of Sydney Harbour has precedence over all other interests.

Compliance of the Proposed Development

The development proposes to enhance the foreshore of Blackwattle Bay at the SFM site with new Fish Market buildings and improved public precincts of a Foreshore Urban Plaza, Waterfront Park and Promenade. Water sensitive urban design measures will be implemented to minimise impacts on the natural water cycle with the collection of rainwater and stormwater for harvesting. Gross pollutant traps will be provided at each discharge outlet into the Bay.

The proposed development will provide a new visually attractive precinct on the foreshore of the Bay as well as improved public and pedestrian amenity.

5.8.2 Foreshores and waterway areas – Planning principles (Clause 14)

The planning principles for land within the Foreshores and Waterways Area and compliance of the proposed development are as follows:

Planning Principles	Assessment of compliance
(a) Development should protect, maintain and enhance the natural assets and unique environmental qualities of Sydney Harbour and its islands and foreshores,	The proposed development improves and revitalises the foreshore precinct of the SFM site.
(b) Public access to and along the foreshore should be increased, maintained and improved, while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,	Public access to and along the foreshore will be visually and physically increased and improved.
(c) Access to and from the waterways should be increased, maintained and improved for public recreational purposes (such as swimming, fishing and boating), while minimising its impact on watercourses, wetlands, riparian lands and remnant vegetation,	Access to and from Blackwattle Bay for boating, and wharf activities will be maintained.
(d) Development along the foreshores and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands and foreshores,	The design of the development is sensitive to its foreshore setting and provides greater views of the water for patrons of the SFM as well as the general public. The proposed planting will enhance the visual character of the site.
(e) Adequate provision should be made for the retention of foreshore land to meet existing and future demand for working harbour uses,	The foreshore land will be retained for public and fish market use. The design accommodates the potential for a new wharf to be built in the future, opposite the service road alongside Building B.
(f) Public access along foreshore land should be provided on land used for industrial or commercial maritime purposes where such access does not interfere with the use of the land for those purposes,	Public access will be available along the foreshore with the construction of the new waterfront promenade. The design maximises the separation between public access/ recreation and operational (commercial/ maritime) uses, thereby alleviating some of the existing user conflicts. The waterfront public domain precinct will not impact on the function of the Fish Market.
(g) The use of foreshore land adjacent to land used for industrial or commercial maritime purposes should be compatible with those purposes,	The foreshore public precinct is compatible with the function of the Fish Market.
(h) Water-based public transport (such as ferries) should be encouraged to link with land-based public transport (such as buses and trains) at appropriate public spaces along the waterfront,	Water-based transport is maintained and encouraged with working wharfs retained for transport, trading and recreation purposes.

Planning Principles	Assessment of compliance
(i) The provision and use of public boating facilities along the waterfront should be encouraged.	Existing recreational boating activities and wharfage will not be impacted by the development.

5.8.3 Matters for Consideration (Part 3, Division 2)

Matters for consideration	Assessment of compliance
Public access to, and use of foreshores and waterway (Clause 22)	
The matters to be taken into consideration by the proposed development in relation to public access to, and use of, the foreshores and waterways are as follows: (a) Development should maintain and improve public access to and along the foreshore, without adversely impacting on watercourses,	The development maintains and improves public access to and along the foreshore as well as to and from the waterways for recreational purposes (such as swimming, fishing and boating), without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation.
wetlands, riparian lands or remnant vegetation, (b) Development should maintain and improve public access to and from the waterways for recreational purposes (such as swimming, fishing and boating), without adversely impacting on watercourses, wetlands, riparian lands or remnant vegetation,	The proposed extension and widening of the existing boardwalk would not have an impact on navigational use or vessel movements in Blackwattle Bay. Waterway use/ access is not adversely affected.
Foreshore and waterways scenic quality (Clause 25)	
The matters to be taken into consideration in relation to the maintenance, protection and enhancement of the scenic quality of foreshores and waterways are as follows: (a) The scale, form, design and siting of any building should be based on an analysis of: (i) The land on which it is to be erected, and (ii) The adjoining land, and (iii) The likely future character of the locality (b) Development should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands, foreshores and tributaries, (c) The cumulative impact of water-based development should not detract from the character of the waterways and adjoining foreshores.	The development takes into consideration the maintenance, protection and enhancement of the scenic quality of foreshores and waterways. The introduction of endemic vegetation at the site will build on the existing landscape qualities and make a positive contribution to the scenic qualities of the site and surrounds.

Matters for consideration	Assessment of compliance
Maintenance, protection and enhancement of views (Clause 26)	
The matters to be taken into consideration in relation to the maintenance, protection and enhancement of views are as follows: (a) Development should maintain, protect and enhance views (including night views) to and from Sydney Harbour, (b) Development should minimise any adverse impacts on views and vistas to and from public places, landmarks and heritage items, (c) The cumulative impact of development on views should be minimised.	Existing development to the east of the site have views restricted by the structures of the Western Distributor. The proposed development matches this roadway in height. The development will enable the public an improved view of the harbour from the site. There are no adverse impacts on views and vistas to and from public places. Refer to Section 3.17 – *Views and Visual Assessment* of the report.

5.9 Sydney Regional Environmental Plan 26 – City West

The SFM site is located within the Ultimo-Pyrmont precinct of City West.

5.9.1 Planning Principles – City West (Clause 11)

SREP 26 outlines planning principles for City West, applicable to the SFM site as outlined, with assessment of compliance of the proposed development with these principles as follows:

5.9.1.1 Environmental issues

Development in City West is to ensure a high level of environmental quality by addressing issues of air quality, noise levels, wind conditions, access to light and sunshine, privacy, soil conditions and water quality. Development in City West is to have regard to the principles of ecologically sustainable development.

Planning principles	Assessment of compliance
▪ Incorporate measures to minimise waste, including (where practicable) utilising recycled materials and renewable building resources, recycling building and demolition wastes, and providing facilities for recycling and composting,	The proposed facility will have a Waste Management Strategy for recycling of materials generated on the site.
▪ Implement total water cycle management, including (where practicable) reducing consumption of potable water, treating and recycling waste water for re-use, minimising site run-off and stormwater generation, and reusing stormwater,	Run-off from roofed areas is to be collected in an underground storage tank, with rainwater reused for toilet flushing and irrigation. WSUD initiatives for implementation on the proposed development being investigated include: ▪ Two biofiltration systems ▪ Rainwater harvesting and re-use; ▪ Treatment of stormwater runoff prior to discharge into the bay; and ▪ Absorption by soft landscaping.

Planning principles	Assessment of compliance
▪ Incorporate measures to conserve energy, including (where practicable) reducing energy consumption, and increasing inherent energy efficiency through design and materials selection,	Measures to conserve energy and reduce energy consumption in the proposed development include: ▪ Use of high performance glazing to glazed walls to reduce the capital cost and energy consumption of the air conditioning system; ▪ Increasing the thermal performance of the buildings with the use of insulation to roofs, walls and floors; ▪ Optimal utilisation of natural ventilation to reduce the energy consumption of air conditioning systems; ▪ Individually tenanted air conditioning system for direct control usage and monitoring by each tenant; ▪ Use of photoelectric daylight sensors to control lighting usage; and ▪ Use of high energy efficiency fluorescent and LED lights.
▪ Promote biological diversity by measures that include (where practicable) increasing habitat through appropriate retention, planting and maintenance of native flora considered representative of the locality,	There is no native flora within the site. The site will be revitalised with planting of endemic trees that will provide additional food sources for local fauna, including birds and Flying Foxes.
▪ Complement and reinforce the development and use of the existing and planned integrated public transport, pedestrian and cycling networks in City West.	The use of public transport is encouraged by the development with upgrading and reinforcement of pedestrian pathways to the SFM site from adjacent light rail stops (Fish Market and Wentworth Park) and bus stops along Bank Street. Bicycle parking will be provided at key locations within the site. The Waterfront Promenade will provide a shared Pedestrian Cycle link through the site, consistent with the City of Sydney pedestrian/ bicycle planning framework.

5.9.1.2 Urban design and the public domain

Planning principles	Assessment of compliance
▪ Development in City West is to enhance, complement and contribute to the development of the public domain in order to create a high-quality physical environment for access, enjoyment and recreation for residents and workers.	The proposed development will provide new and improved public domain areas in the: ▪ Foreshore Urban Plaza ▪ Waterfront parklands, open space and promenade.

5.9.1.3 Movement and parking

Planning principles	Assessment of compliance
▪ A high degree of accessibility is to be provided to places in and outside City West for both able and disabled persons. Walking, cycling and use of public transport are to be encouraged as the means of movement.	Accessibility for able and disability pedestrians, cyclists and public transport users will be provided.
▪ Development, particularly that which is employment related, is to be within the capacities of existing and proposed public transport and arterial road systems.	The proposed development only increases the retail and restaurant facilities of the site.
▪ The provision for vehicular movement is to be consistent with the development of a high-quality pedestrian environment within the street system.	Pedestrian access to the site will be improved by the development. Within the site will be a high quality pedestrian orientated environment.

5.9.2 Planning principles – Ultimo-Pyrmont precinct (Part 3, Clause 15)

Planning principles specifically for the Ultimo-Pyrmont precinct and assessment of compliance of the proposed development with these principles is as follows:

5.9.2.1 Role and land use activities

Planning principles	Assessment of compliance
▪ Where possible, development is to make use of existing under-utilised buildings and large areas of land which are either vacant or occupied by out of date facilities.	The development will replace the existing single storey buildings and car parking area with a quality retail, restaurant and wholesale precinct.
▪ Development is to take full advantage of the Precinct's existing facilities, proximity to Darling Harbour, Central Station and other facilities of the city centre, and the extensive Pyrmont waterfront.	The site, in close proximity to light rail, bus and potential ferry stop, will be revitalised into a tourist waterfront destination.
▪ Retail development providing for the full range of neighbourhood needs is to be encouraged.	The Fish Market will predominantly provide for the trading of seafood but will offer ancillary retail outlets as existing.
▪ Uses at the ground level of buildings fronting the public domain should complement the functions of the public domain.	Retail and outdoor dining at ground level will seamlessly integrate with the public domain of the waterfront.

5.9.2.2 Social issues

Planning principles	Assessment of compliance
▪ Urban design is to enhance the conviviality and sense of place of the Ultimo-Pyrmont Precinct and reflect the character and heritage of the Precinct.	The urban design of the precinct focuses on improved public amenity at the foreshore of Sydney Harbour. It integrates opportunities for interpreting the natural environment and development history of the site.

5.9.2.3 Urban design

Planning principles	Assessment of compliance
▪ The heights and scale of new buildings are to respect existing buildings in the locality, particularly heritage items and buildings in conservation areas.	The height and scale of the proposed buildings is 2-3 storeys which integrate with the existing 2 storey Main Fish Market building. There are no heritage buildings on the site.
▪ The heights and form of buildings are to take account of visual impact, solar access, and wind impact and, where appropriate, the privacy of residences, in order to contribute to a high quality of environmental amenity in intensively used parts of the public domain and in residential areas.	The scale and form of the development has: ▪ Minimal visual impact from surrounding foreshore vantage points (refer to Section 3.17 – Views and Visual Impacts); ▪ No overshadowing to the public foreshore precinct; and ▪ Minimal impact on the residential amenity of its surrounding neighbours.
▪ Buildings fronting the public domain should have appropriate height, bulk, finish and street alignment so as to enhance its quality by respecting its character. In general the scale of street facades must respect the width of adjoining streets or lanes, adjoining heritage items or other contextual elements.	The buildings are 3 storeys in height to the street and foreshore and are lower in height to adjacent buildings to its east.
▪ Development on the waterfront and on adjoining land is to maximise the environmental quality of those parts of the peninsula for all users.	The development improves the environmental quality and amenity of the waterfront precinct for all users including visitors, workers and people who view the site from other areas.

5.9.2.4 Public domain

Planning principles	Assessment of compliance
▪ Coordinated pedestrian and cycling networks are to be provided throughout the Precinct and to link with the city centre and suburbs adjoining the Precinct. Access to major natural features such as foreshores and escarpments is to be included.	Pedestrian and cycling paths of travel within the site link to the surrounding local network, consistent with the City of Sydney pedestrian/ bicycle planning framework. The proposed Waterfront Promenade improves public accessibility and amenity at the foreshore of

Planning principles	Assessment of compliance
	Blackwattle Bay. The development will make accessible large portions of the foreshore that are currently not available for access.

5.9.3 Zoning (Part 3, Division 4)

5.9.3.1 Residential-Business zone

The majority of the SFM site is zoned **Residential-Business** (Clause 18). The foreshore frontage of the site to Blackwattle Bay is zoned **Public Recreation** with an adjoining Activity Strip. Objectives of the zone and assessment of compliance of the development is as follows:

Objectives	Assessment of compliance
▪ To promote a wide range of uses, particularly business development including tourist, leisure, commercial, retail and office development consistent with Ultimo-Pyrmont's proximity to the Sydney CBD, harbour locations and transport infrastructure.	The proposed development provides tourist, leisure, commercial (minor) retail, dining and wholesale trading uses, which is compliant with its permissible land use zoning.
▪ To accommodate uses which generate employment opportunities and provide facilities and services that enable people to live and work in the same community.	The development will generate increased employment opportunities. No residential accommodation is provided on the site.
▪ To ensure that the total amount of employment-generating development is compatible with the traffic capacity of Ultimo-Pyrmont and adjoining areas.	The development provides additional dining facilities within the site, with retail and wholesale trading capacity unchanged. The site is serviced by public transport facilities of bus and light rail.
▪ To encourage sustainable transport modes for journeys to work and other trips, including walking, cycling and all forms of public transport.	The development aims to encourage all sustainable modes of transport rather than reliance on private vehicular mode of travel to the site. The development includes significant improvements to the current pedestrian access route from the Fish Market Light Rail Stop, as part of the redesign of the Bank Street intersection.

5.9.3.2 Public Recreation zone

The foreshore area is zoned **Public Recreation** (Clause 19). The objectives of the zone are:

Objectives	Assessment of compliance
▪ To establish public recreation areas which serve the needs of residents and workers within Ultimo-Pyrmont and the adjoining suburbs, and	A new public recreation and tourist precinct along the waterfront will be established for local and regional users.

Objectives	Assessment of compliance
▪ To provide public access to all parts of the public domain, especially waterfront areas and escarpments, and	Public access to the waterfront will be improved by the development.
▪ To provide a variety of public areas and recreational opportunities, and	Recreational opportunities for public waterfront usage will be provided. There are numerous public areas throughout the development, including the Pedestrian Arrival Forecourt and Entrance Deck, the Foreshore Urban Plaza, the Waterfront Park and Promenade and the Promontory. Recreational opportunities include formal and informal dining, walking, and relaxation, observing of maritime activities/ the working harbour, enjoyment of views and pursuit of individual personal fitness.
▪ To provide for facilities that accommodates or are ancillary to recreational activities relating to the use of the public domain.	The retail trading of seafood and restaurant facilities are compatible with the recreational activities of the waterfront public domain precinct. Public toilets will be provided within the development and will be available to visitors of the public domain.

Uses permissible in the zone adjoining the Public Recreation zone are also permissible in the Public Recreation zone for a distance of 10m from the zone boundary if, in the opinion of the consent authority, it would allow a better relationship between use of land as a public recreation area and use of the adjoining land and would not decrease the total amount of land that will be available for use as a public recreation area.

5.9.3.3 Activity strips (Clause 21B)

Activity Strips are noted on Sheet 1 of Map 2 to be along the perimeter of the public recreation precinct on the SFM site. The objectives of Activity Strips are:

Objectives	Assessment of compliance
On Activity Strips, development on the ground floor must provide for non-residential uses, including retail outlets, restaurants, neighbourhood facilities and the like that provide people-orientated street frontages, and enhance security and surveillance compatible with adjoining development.	The areas designated as Activity Strips on the Map will be public domain areas to augment the retail and restaurant facilities of the Fish Market.

5.9.3.3.1 Maximum building heights (Clause 23)

Requirements	Assessment of compliance
The height of any building must not exceed the maximum building height shown on Map 3. However, any building on land zoned Public Recreation must not exceed 7m in height.	Map 3 indicates: ▪ the foreshore precinct with maximum permissible height of 14m; and ▪ the remaining site with maximum permissible height of 21m. The western portion of Building B, which extends across the foreshore precinct, is 2 storeys (7.8m in height). The building does not exceed the maximum permissible height of 14m. Building A and the eastern portion of Building B has the maximum height of 3 storeys and is 15m to the top of the stair and lift shafts. The buildings do not exceed the maximum permissible height of 21m.

5.9.4 Scale and alignment of building facades (Clause 26A)

Requirements	Assessment of compliance
In the Ultimo-Pyrmont precinct, the scale and alignment of the building facades on the street boundary or boundaries respects the width of the street, adjoining heritage items or other contextual elements.	The scale of the proposed buildings is 3 storeys in height, which is compatible in scale with the existing Main Fish Market building and of a lower scale than the apartment buildings (6-10 storeys) along the eastern side of Bank Street.

5.9.4.1 Floor space (Clause 27)

Requirements	Assessment of compliance
In Ultimo-Pyrmont, the ratio of business floor space of buildings in a master plan area to the site area must not be greater than 2.5:1 to the north of Pyrmont Bridge Road. The SFM site, north of Pyrmont Bridge Road has maximum permissible FSR of 2.5:1. ▪ Site area: 43,000m^2 (approximate); ▪ GFA for proposed development: 24,758m^2 (approximate); ▪ GFA for existing building: 16,322m^2; ▪ **Total GFA: 41,080m^2**.	The proposed development and the Fish Market Main Building will not exceed this development area. The proposed development, with existing facilities, has a resultant FSR of 0.955:1, which complies.

5.9.5 Heritage items and conservation areas (Clause 28)

The SFM site is not a heritage item and is not within a conservation area. There are no listed heritage items within the site. However, adjacent to the is he Blackwattle Bay Stormwater Channel No. 17 (SWC No. 17) which is listed on the State Heritage Register and noted as having a high level of historical and technical significance as one of the five original combined sewers built in Sydney c1857. The proposed development does not impact on the Blackwattle Bay Stormwater Channel No. 17 (SWC No. 17) but provides an opportunity to interpret its history.

5.9.6 Master plan (Clause 40)

The SFM site is land subject to a Masterplan. A Masterplan for the SFM site was approved by the former Department of Infrastructure and National Resources in February 2005.

5.10 Urban Development Plan for Ultimo-Pyrmont Precinct (1998)

This Urban Development Plan has been prepared in terms of Clause 36 of Sydney Regional Environmental Plan (REP) No. 26 – *City West*. Under Clause 35 of the REP, an urban development plan makes more detailed provisions relating to development within a precinct than are contained within the REP.

The principal objective of this Plan is to ensure that detailed planning and urban design principles and controls reflect and complement the principles and controls in the REP to assist in achieving a built environment of a high standard in the precinct.

Clause 34 of the REP requires the relevant consent authority to take any relevant consent authority to take any relevant urban development plan into account when determining a development application.

Development controls of the Ultimo-Pyrmont Urban Development Plan relevant to the development are outlined and assessed for compliance as follows:

5.10.1 Built form (Section 3)

Principles	Assessment of compliance
The principles and controls relating to built form are directed at securing a high quality of both public domain and living and working environments on private land. This is achieved by: ▪ Enhancing the distinctive character of sub-precincts; ▪ Encouraging interesting activities at street level; ▪ Achieving a high quality of environment quality and amenity on both private land and in the public domain; and ▪ Protecting and enhancing views.	The proposed development will create a revitalised, retail, restaurant and fish market precinct as a distinctive tourist destination, with: ▪ an active street front of retail and restaurant outlets foreshore area; ▪ a high quality public domain precinct created along the foreshore; ▪ the redevelopment opening up views of and physical access to Blackwattle Bay. The proposed development will not unduly impact on views from surrounding apartment buildings as the development will be similar in height to the suspended roadway structure of the Western Distributor.

Principles	Assessment of compliance
A minimum floor to ceiling height of 3.5m is required for the ground floor of buildings located in Activity strips and for retail and/or commercial uses on the ground floor of a development.	The floor to floor height of the Ground Floor level fronting the activity strips is to be 4.5m.

5.10.2 Street frontages (Section 3.1.1)

Development controls	Assessment of compliance
The existing character of the Ultimo-Pyrmont Precinct is one of urbanity with a complex mix of built forms and local characters. There are both consistency of scale within groups of particular building types. Buildings are generally built to the street alignment, or close to it. The public domain must not be dominated or significantly overshadowed by buildings of excessive scale.	There is a consistency of scale in building form between the existing Main Fish Market building and the proposed buildings (A and B).

5.10.3 Heritage items and conservation areas (Section 3.3)

Development controls	Assessment of compliance
The integrity and significance of buildings, places and other items of heritage value must be protected.	There are no heritage items or conservation areas identified in the planning controls for this precinct. The existing seawalls are considered important as they illustrate important aspects of the development of the place and provide a sense of history. As part of the development, the walls are to be reconstructed in an alignment closely following their present form.

5.10.4 Views and vistas from the public domain (Section 3.4.1)

The siting and form of development must have regard to the creation, retention and enhancement of significant views and vistas from public places. This includes views into, out of and within the precinct and to significant buildings.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: (a) Major existing views and vistas out from the precinct and to the precinct, should be maintained and new vistas and views should be opened up through the urban fabric.	The siting and the design of the building maximises the public view to Sydney Harbour from within the SFM site, that is the view corridor between Buildings A and B, and along the service road along the northern site boundary.

Development controls	Assessment of compliance
(b) Development should provide for continuous views of the Harbour from the proposed waterfront promenade. (c) Views and vistas along streets and from public places to buildings and places of architectural, streetscape or heritage significance should be maintained.	The proposed building enables views of the water and western foreshore of Blackwattle Bay to be generally maintained from various points along the Western Distributor.
(d) Important views and vistas should enhance by the form and treatment of buildings along the view corridor.	Continuous views of the harbour will be provided from the Waterfront promenade and intermittently framed by trees to provide visual interest and variety, while maximising amenity (i.e. shade and protection from the westerly sun).

5.10.5 View sharing from within buildings (Section 3.4.2)

Development controls	Assessment of compliance
Without compromising the streetscape principles, care must be taken to protect the views from existing buildings and potential views from adjoining future developments.	As the proposed development is of similar height to the Western Distributor, apartments to the south-east of the site will generally be able to retain their existing views. Additionally, the height of the proposed development is lower than the permissible height control under the Ultimo-Pyrmont Urban Development Plan.

5.10.6 Ground level activities (Section 4.1)

Street spaces must be interesting and safe and there must be adequate provision of a range of neighbourhood facilities. These should be concentrated along major pedestrian routes, around the edges of squares and parks and along foreshore areas and should be visually interesting.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Permissible uses such as cafes and particularly outdoor cafes, restaurants, retail shops, small-scale businesses and uses which will encourage pedestrian use must be concentrated at ground level in locations indicated as “Activity Strips”. ▪ The proportion of building frontages given over to entry foyers, atria, vehicular entries and exits, blank walls and advertising panels and various other building services must not conflict with the principle of active street frontages and/or visual interest.	Retail, restaurants and outdoor eating areas are proposed to the water front public domain precinct, which will encourage an active foreshore area. The Bank Street frontage will not be an active street frontage due to the poor environmental amenity created by traffic along Bank Street and the Western Distributor.

Development controls	Assessment of compliance
▪ Ground level uses must directly address footpath levels, whether on flat or sloping ground, and be designed in a manner which is convenient and pleasant to use. Floor levels therefore need to be adjusted to provide easy transition from the public domain into the building and provide mobility impaired access.	All ground level and upper level uses provide a seamless transition between active indoor and outdoor spaces. These spaces will be accessible to all users.
▪ Pedestrian circulation patterns should not be diverted away from ground level by the use of over bridges or underpasses.	Overhead pedestrian bridges will be used to provide a connection to the upper restaurant level (L1) of the development. The restaurant level will also be connected via external stairs and lifts.
▪ Car parking should be located below ground level or, where this is not possible, should be screened. Design details at ground level should maintain the continuity of frontage activity and/or visual interest.	Car parking is provided to the upper levels of Building A to free the ground level of the development for retail and dining facilities. Underground car park structures are not feasible on this site.
▪ Minimal interference to pedestrian movement at vehicular entry points to and exit points from buildings is required, by controlling their location, number and width. Sharing of vehicular entry points by adjoining developments is encouraged.	The placement of pedestrian and vehicular paths of travel has been considered to minimise potential conflict. The singular vehicular entry point to the development from Bank Street allows for the sharing of entry points by commercial and private vehicles. The proposed shared use of the service road adjoining Building B by Hymix trucks exiting their land will reduce the number of vehicle crossings/ driveways over the Bank Street footpath, as well as control vehicle movements with traffic lights.

5.10.7 Façade treatment (Section 4.2)

Facades must be rich in treatment and modelling. It is important that by careful design of building facades, development contributes both to a lively environment and to harmonious streetscapes and built edges of public domain.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Facades of new development should relate sympathetically to existing buildings in the vicinity, particularly if they have heritage or streetscape value.	Building A will have its façade to Bank Street and side facades to have a single storey base of solid construction, with the upper car parking facades externally cladded as a public art façade of light weight woven stainless steel mesh. The external colour of the building will be light with a maritime flavour.

Development controls	Assessment of compliance
▪ Buildings should be modulated both in plan and elevation to develop appropriate rhythm, proportions and depth in facades to articulate street edges.	
▪ Long facades should be articulated by breaking the building into distinct segments and indented courtyards.	The facades of the proposed development will be fully glazed to the public domain and the waterfront.
▪ Entries to buildings should be articulated.	Entries to the SFM development will be clearly articulated by building design and signage.
▪ The detailing of facades facing an internal courtyard should be designed to enhance the amenity of the courtyard.	
▪ New development must complement existing buildings in the vicinity in materials and colour.	
▪ Facades of buildings should not contain large unbroken expanses of a single material.	
▪ Reflective glass must not be used.	Reflective glass will not be used.
▪ Light and warm colours should predominate. Colours must draw on their context.	
▪ Materials in ground floor areas of buildings immediately alongside footpaths should be of the highest quality and durability responding to their visually prominent location.	Materials used within the public domain will be robust, slip resistant and easy to maintain.

5.10.8 **Roof design** (Section 4.4)

Roofscapes must be attractive, enhance the skyline, and enhance views from adjoining buildings and the foreshore. Roofscapes must not dominate the skyline or be intrusive elements.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Lift over-runs and rooftop plant should be concealed within roof structures and these must enhance views from adjoining developments. They should be located and designed to minimise noise impacts on adjoining developments. ▪ Areas of communal rooftop facilities may be enclosed in weatherproof structures. The design of rooftop pergolas and screens must be integrated with other rooftop projections.	On Building A, the lift, access and service structures are integrated into the overall designs of the building. The roof of Building A is designed as a car parking deck and screened. Roof top pergolas for the foreshore portion of Building B and the outdoor dining kiosks are integrated into the design of these structures.

5.10.9 Signage (Section 4.5)

Signage must reflect and contribute to the character and amenity of a street or locality and act as a unifying element. Signage must complement the architecture and scale of the building and should wherever possible, be integrated within the design of a building. Advertising must relate to the use of the site.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ The City of Sydney "*Advertising Sign Code Ultimo/Pyrmont"* should be complied with. ▪ Signs at the top of a building should be contained within its parapet and integrated with the form, architectural character and façade detailing of the building.	Signage will be designed to complement the design and maritime nature of the development. Signage within the public domain if required would be integrated with other structures as much as possible, including interpretive signage/ panels.

5.10.10 Public art (Section 4.6)

It is considered that the provision of public art projects as an integral part of the development of City West will significantly enhance the quality and enjoyment of the distinctive identity and cultural heritage of the precinct.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Artworks which draw on the history of Ultimo-Pyrmont are encouraged.	Public art will be integrated into the design of the public domain with interpretive artworks integrated into the design of the Pedestrian Arrival Forecourt. This will draw from the rich history of land use and development on the site. The waterfront design incorporates art and interpretation in the form of ▪ The bioretention basin near Pyrmont Bridge Road. This has the potential to interpret the original swamp environment as well as water management practices over time, linking to the Blackwattle Bay combined sewer and stormwater outlet. ▪ The reconstruction of the seawall along the distinct 'bulge' in the shape of the foreshore: interpreting the likely alignment of the original shoreline as well as the history of development and land reclamation on the site.

5.10.11 Retail and neighbourhood services

The DCP identifies the SFM as **Retail and Leisure** uses and the site for the Sydney Fish Markets as a: "unique retail attraction of regional significance for both tourists to Sydney and regular shoppers, and providing wholesale seafood supplies."

A principle of this land use is to recognise the tourist market and the attraction to such facilities as Star City and the Sydney Fish Markets.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows:	
▪ Retail and neighbourhood facilities are to be provided in developments at recognised nodes and along Activity Strips.	Retail and restaurant facilities are to be provided along the identified activity strip of the foreshore precinct.
▪ A minimum floor to ceiling height of 3.5m is required for the ground floor of buildings located in Activity Strips and where retail and/or commercial facilities are provided on the ground floor of a development.	A 4.5m floor to floor height is to be provided to the Ground (retail) and restaurant (L1) levels.
▪ Advertising signs must be integrated with the building design.	Advertising signage will be integrated with the building.
▪ Upper levels of buildings must be designed to accommodate ventilation/exhausts stacks for ground floor uses that generate exhaust such as food outlets.	Ventilation stacks will exhaust to roof level and integrated with the design of the buildings.
▪ Ground level access to retail and neighbourhood facilities is to be adequately provided for people with mobility problems and is to comply with "The City of Sydney Access Policy, December 1992".	The public areas of the building will be accessible to the mobility challenged.

5.10.12 Environmental issues (Section 7)

5.10.12.1 Wind impact

Development controls	Assessment of compliance
Wind impact	
Development is to be designed and sited to avoid unsafe and uncomfortable winds at pedestrian level in public areas and in the private and semi-public open spaces of development sites.	The proposed development has been designed, along with the existing Main Fish Market building, to encircle the proposed Foreshore Urban Plaza. This will minimise wind effects on the public precinct.

5.10.12.2 Reflectivity impact

Buildings must be sited and designed to avoid hazardous or undesirable glare to pedestrians, motorists, people using open spaces, and those in other buildings.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Building materials and finishes which minimise adverse reflectivity must be used. The use of glass of more than 20% reflectivity and other highly reflective materials are not permitted. ▪ Reflected solar radiation should not have an adverse impact on the heat loading of other buildings.	No reflective glazing of more than 20% reflectivity will be used on the facades of the building.

5.10.12.3 Solar access to public open space

Ensure that the environment quality of public parks, squares, pocket parks and adjoining private open space is maintained throughout the year and that the overshadowing is limited during winter months.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Development applications are to include shadow diagrams which demonstrate that any development will not unduly overshadow major parks, squares, pocket parks and adjoining private open space. ▪ No more than 50% of major open space areas and communal private open space should be overshadowed between 10am and 2pm between 21st April and 21st August.	Solar access will be maintained to the public domain area for the majority of the daylight hours throughout the year. Refer to Section 4.4.1 – Solar access and overshadowing.

5.10.12.4 Development near major noise sources

To minimise adverse noise impacts adjoining or near such facilities as elevated arterial roadways, the light rail, the port facility and developments in construction phase, the nature of land use, the siting and form of development and the construction of developments requires careful attention.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Buildings should be designed with areas of high usage facing away from noise sources. In the case of traffic noise the location of individual buildings and groups of buildings should enable them to act as barriers to the noise.	The public domain and heavily used areas of the development are designed to front the foreshore away from surrounding residential buildings and screened by the service areas of the proposed development.

Development controls	Assessment of compliance
▪ During construction of a development the cumulative noise impacts of both this development and other nearby developments under construction should be considered.	

5.10.13 Ecologically Sustainable Development (Section 8)

5.10.13.1 Energy Conservation

Energy consumption levels and the consumption of finite resources should be reduced:

- Using renewable resources in preference to finite resources;
- Encouraging a reduction in power consumption by maximising passive thermal comfort and enabling building uses to make efficient use of buildings and appliances.
- Reducing energy consumption costs through reducing the running costs of buildings
- Insulating buildings
- Recycling buildings and using recycled components and materials in new projects;
- Using total water cycle management principles and best practice;
- Waste minimisation; and
- Designing robust buildings to enable adaptability.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Appliances with a low energy rating are to be used when provided as part of a development. Energy efficient gas or solar water heating appliances are to be used.	The proposed development will use high performance glazing to glazed walls to reduce the capital cost and energy consumption of the air conditioning system. Insulation to roofs, walls and floors will be used to increase the thermal performance of the buildings. Natural ventilation will be used to reduce the energy consumption of air conditioning systems. Energy efficient air conditioning systems and lighting will be used.

5.10.13.2 Water

Measures should be implemented to reduce water demand and use water more efficiently.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Water conservation devices and low water use appliances with an AAA rating are to be used, including low flow tap roses, dual flush toilets and drip irrigation of landscaped areas. ▪ Minimal use of water dependant plant species should occur.	WSUD measures will be utilised where possible with use of roof water for toilet flushing, landscape irrigation and hose down of shop-floors, vehicles and hard-stand areas. AAA fixtures and fittings will be utilised.

Development controls	Assessment of compliance
▪ Landscape design is to minimise hard surfaces and maximise use of soft plantings, grass and other porous surface materials. Less than 25% of any landscaped area is to include hard surfacing. ▪ Energy gas or solar water heating systems are to be used. ▪ Landscaping and plantings should enhance the micro climate of the site to reduce summer heat gain without reducing solar access in winter. Use of indigenous plant species is encouraged to attract fauna.	The design of the waterfront park maximises the provision of green/ soft open space, as well as the use of porous pavements where practicable based on the anticipated nature and intensity of use. The planting palette for the waterfront public domain draws on endemic (local native) flora.

5.10.13.3 Earth

Ultimo-Pyrmont should contribute to the development of better practice to stabilise or overcome waste problems by consideration of integrated waste management.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Only the use of materials which come from renewable resources and which are recyclable are permitted. ▪ Waste management and recycling facilities are to be provided. Waste storage, recycling and composting areas must be provided. Appropriate screening and venting of waste storage and collection areas is necessary.	Waste management and recycling measures will be implemented. Seafood waste will be recycled. Recycling bins will be installed to the outdoor eating areas and public precinct.

5.10.13.4 Biodiversity

Ultimo-Pyrmont should contribute to the protection and development of biodiversity.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Materials and processes which threaten endangered species and habitats should be avoided; ▪ Planting of indigenous species and the creation and extension of habitat is encouraged.	The precinct will increase in its landscaped areas with the planting of eucalyptus, Canary Island and Cabbage palms along various foreshore locations. The planting palette for the waterfront public domain draws on endemic flora and will provide food sources for local fauna including birds and endangered Flying Foxes.

5.10.13.5 Human health

Development controls	Assessment of compliance
Development in Ultimo-Pyrmont should contribute to the protection improvement of human health: ▪ Avoiding the use of toxic materials; ▪ Practices to discourage microbes and mites; ▪ Maximising natural ventilation and solar access; ▪ Controlling electromagnetic radiation; ▪ Remediation of contaminated sites.	The site will be remediated in accordance with the remediation strategies recommended by the Environmental Consultant (EIS).

5.10.13.6 Air

Development controls	Assessment of compliance
Ultimo-Pyrmont should contribute to the development of better practice to stabilise or overcome these problems by measures such as: ▪ Reduced reliance on private transport for journey to work trips; ▪ Travel demand management; ▪ Energy efficiency; ▪ Use of recycled and low embodied energy materials; ▪ Construction of buildings capable of adaptation in the long term. Development in Ultimo-Pyrmont is to promote reduction in the reliance on private transport for journey to work and other trips. Increasing public transport use, walking and cycling contributes to the achievement of ESD principles and leads to a decrease in traffic congestion and an increase in the amenity of the street environment for pedestrians.	The proposed development will have the limit of approximately 621 car parking spaces within the site. This includes 95 spaces for service and delivery vehicles, 13 bays for larger delivery vans and 7 spaces for semi-trailers. The proposed development relies on the patronage of public transport by its customers. The proximity of the Fish Market light rail stop and bus stops along Bank Street will assist in these alternative modes of transport. Improvements to the pedestrian connection from the Fish Market Light Rail Stop will assist in making light rail a more attractive alternative. The development will also rely on a tourist patronage accessing the site by organised coach services.

5.10.14 Access, parking and circulation (Section 9)

5.10.14.1 Access and facilities for cyclists

Cycling is the most efficient, cleanest and healthiest mode of travel and it is encouraged throughout Pyrmont and Ultimo.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows: ▪ Provision of secure bicycle storage for 1 bicycle per 300m^2 of business space and 1 visitor space per 2,500m^2 of business space.	The Traffic Consultant has assessed that doubling the modal share is a reasonable target for the provision of bicycle parking and recommends: ▪ 28 staff parking; and ▪ 79 visitor parking ▪ 117 total bike parking

Development controls	Assessment of compliance
▪ Provision of shower and changing room facilities adjoining storage areas in commercial buildings for cyclists.	The proposed development has 31 staff parking and 90 visitor (121). Bicycle parking will be placed at the following locations: ▪ Main pedestrian arrival forecourt (Level 1); ▪ Ground floor under the Foreshore Urban Plaza stairs; ▪ Ground Level service lane; and ▪ Jones Street car park. Shower and change facilities are available.

5.10.14.2 Parking and Servicing

The provision of car parking in, or associated with buildings, should reasonably satisfy the needs of occupants, but should acknowledge the precinct's high accessibility by foot, cycle and public transport. The provision of on-site parking is regulated to reflect the availability of other transport modes.

Business developments located in close proximity to light rail stops and bus routes are encouraged to reduce car parking levels for employees.

Development controls	Assessment of compliance
Business development	
Maximum provision for business premises are: ▪ Location north of Pyrmont Bridge Road: 1 car space per 150m^2 gross floor are or part thereof.	The SFM site (inclusive of the Main Fish Market building) requires 274 car spaces for its total of 41,080m^2 of business space. 510 car spaces for public parking are provided within the development on L1, L2 and L3 of Building A and the Bank Street parking area.
Service vehicle provision	
All business developments must also provide: ▪ 1 service vehicle space per 4,000m^2 gross floor area for first 20,000m^2 (5 spaces); ▪ 1 service vehicle space per 8,000m^2 gross floor area thereafter (2.6 spaces); ▪ 50% of the service vehicle spaces should be suitable for trucks.	The SFM site (inclusive of the Main Fish Market building) requires 8 service vehicles spaces. 108 service vehicle spaces are provided with the Ground Floor level of Building A, within the service lane and within the loading area north of the Main Fish Market Building. The spaces are suitable for various sizes of trucks.
Disabled parking	
▪ 1-2% of total parking spaces must be designed for people with disabilities and located adjacent lifts. Disabled parking is inclusive of total parking and not additional.	11 disabled parking spaces are provided within L1 of Building A. This constitutes 18% of the total parking spaces provided on the site.

5.10.14.3 Design of parking and servicing facilities

Parking and servicing provision should not be intrusive, or alienate space at ground level from activities which are more likely to enhance street life; nor should access proposals create conflict with pedestrian movement.

Development controls	Assessment of compliance
Controls applicable to the proposed development are as follows:	
▪ On-site parking within developments must be provided below ground level or located within buildings or screened to meet the objective of street level interest and safety.	Car parking spaces are predominantly provided within L1, L2 and L3 of Building A. The parking area will be serviced by a public art façade with a maritime theme. The car park at Bank Street will be retained.
▪ Where parking is to be provided at ground level, it must be located and designed so as to maintain opportunities for continuity or retail or other street frontage activity particularly in locations indicated as "Activity Strips".	Service parking at Ground Floor level will be located within Building A and not visible from public view.
▪ Where parking is provided in buildings above ground level, the facades to floor space containing that car parking must be designed to integrate with the remainder of the building facades.	
▪ The design of above ground car parking shall be integrated into the development and not dominated by ventilation grills, exhaust, driveways (entrances, openings, etc) or the like.	The design of parking levels is fully integrated with the design of the buildings.
▪ The design of service vehicle areas and access to buildings, including driveways, shall be based on minimum requirements, as specified in the aforementioned guide, in order that there is minimal impact on the street frontage and that facilities are compatible with the scale of the building. Facilities for garbage trucks are to have minimal impact on the street frontage and are preferably to be located off street.	Vehicular circulation space will be guided by car and truck movement patterns. Service and storage areas will be hidden from public view, adjacent to the internal service lane at the Ground Floor level of Building A. Vehicular access for loading, service, coach and private vehicles will utilise a single vehicular access point at the intersection of Bank Street and Miller Street. Refer additionally to Section 3.6 – Vehicular and Service Access of the report.
▪ To minimise visual intrusion and give priority to pedestrian movement along major street frontages, vehicle entries/exits to and from buildings should be as narrow and few as possible, and consolidated, separated from pedestrian entries, and to the side or rear of buildings.	
▪ Access for loading, unloading and service should be combined with parking access.	

5.10.14.4 Access and facilities for the disabled or mobility impaired

The development must provide access for people with various types and severity of disability including access for the aged, pram users and other mobility impaired purposes so that everyone can use and enjoy the full range of facilities offered by the Precinct.

Development controls	Assessment of compliance
All buildings and facilities must be designed to comply with the Building Code of Australia, "Access for People with Disabilities principles", AS 1428 and the City Council's Access Policy. All buildings and facilities should be designed to accommodate the needs of people with disabilities and for people who are mobility impaired.	The proposed development will be fully accessible from public transport stops, coach bay, taxi rank and pedestrian signalised intersections located at the perimeter of the site. The development complies with the *Disability (Access to premises – Buildings) Standards 2010*, the BCA and AS 1428. Refer to Section 3.15 – Mobility/ Disabled Access of the report. The waterfront public domain design, together with the proposed modifications to existing ramps, will achieve compliance with the requirements of AS1428.

5.10.15 The public domain (Section 10)

5.10.15.1 Open space

Open spaces are areas which provide places for social activity and recreation.

The Urban Development plan has identified in Map 15 – *Public Domain Framework* a public square and Waterfront Park for the site. These are described as follows:

Fishmarket Square

This already partially developed system of waterfront open spaces and promenade associated with the Fishmarkets and oriented to Blackwattle Bay will further develop as an active vital market place with activities complementary to the Fishmarkets. It will be a tourist destination as well as a retail facility for visitors and residents. Direct links from the core of the peninsula and integration of adjoining sections of the Foreshore Promenade will ensure ease of pedestrian access. This open space system will form a western "gateway" to the peninsula.

Waterfront Park on Miller street alignment (Local Park)

This park will provide views of Blackwattle Bay and also an access point to the foreshore.

Compliance of the proposed development

The foreshore public domain precinct will be designed to provide for social activity, recreation and as an extension to the Fish Market retail and dining experience.

5.10.15.2 Pedestrian circulation

Development controls	Assessment of compliance
Ensuring the distribution, continuity and priority of pedestrian circulation. Major routes are identified as: ▪ The Foreshore Promenade, linking Darling Harbour to Wentworth Park ▪ Through site links located primarily in Pyrmont and the waterfront precincts to increase connections between the ridge, open spaces and the waterfront. Through site links are generally pedestrian/cyclist zones. ▪ Pedestrian foreshore walks and Foreshore Promenades which are to be a minimum of 6m and an average of 10m.	Accessible pedestrian paths of travel are provided from the Fish Market light rail stop, via a signalised pedestrian crossing to the Pedestrian Arrival Forecourt. From the Pedestrian Arrival Forecourt, pedestrian access is available via a broad set of stairs located between Buildings A and B, down to the retail areas (at Ground Floor Level) or via an accessible ramp to the restaurant level (L1). A 2m wide pedestrian footpath is provided along the eastern side of the building connecting the coach parking area to the Pedestrian Arrival Forecourt. A 3.6m wide shared pedestrian walkway provides access from the northern boundary of the site to the foreshore area (Miller Street Link). From Pyrmont Bridge Road, pedestrian access is available from the south-western corner of the site (near Wentworth Park) to the foreshore. This link is improved with a new arrival space on the timber deck. The Waterfront Promenade provides a continuous through site link. It varies in width between 3.9m and 7.4m. During peak times cyclists would be expected to dismount along the waterfront. Limiting factors affecting the width of the foreshore walk are: ▪ the site's topography; ▪ the need to provide universal access between the foreshore and the development; ▪ the design of the existing development/ structures to be retained; ▪ operational requirements, in particular those associated with the existing Main Fish Market building; and ▪ the need to minimise boardwalks and other structures over the water. Refer additionally to Section 3.13 – Pedestrian Access of the report.

5.10.15.3 Vehicular circulation

Development controls	Assessment of compliance
The increase in commercial activity which will occur as a result of the redevelopment of the peninsula should not have a negative impact on vehicular circulation and consequently on the public domain.	The increase in commercial activity (retail and restaurant) will not adversely affect vehicular circulation. A clear separation of vehicular, pedestrian and service movement within the site is provided. The proposed development improves on the paths of circulation of these modes of travel. Vehicular circulation (cars and service vehicles) will not intrude on the public domain.

5.10.15.4 Access for people with disabilities

Development controls	Assessment of compliance
A path of continuous, unimpeded access is essential. These continuous paths should connect areas within the peninsula and connect specific facilities within a site. The strategy for disabled access assumes wheelchair access is provided as a minimum requirement, and is: ▪ General access along the entire Foreshore Promenade and Foreshore Drive, including permeation into the adjacent parks and squares (Pyrmont Bay Park, Pyrmont Point Park, Elizabeth Bay Square, Foreshore Parks in Johnston's and Blackwattle Bays and Fishmarkets Square) including carparking and facility access within open spaces. ▪ East-west access from Blackwattle Bay to Darling Harbour along Miller and Union Streets and Pyrmont Bridge Road. Lift access within buildings is recommended.	Accessible paths of travel are provided on public transport stops to the site. From the Pedestrian Arrival Court, an accessible path of travel is available via the central east-west pedestrian accessway located between Building A and B up via a complying ramp to the restaurant level (L1) with access via a lift to the retail level (Ground Floor level). The northern pathway link (3.6m accessible path of travel along the northern boundary of the site) and the Waterfront Promenade provide a path of continuous unimpeded access along the waterfront to Pyrmont Bridge Road and the Coal Loader site. It would be available 24 hours a day. Accessible paths of travel are available throughout the levels of the proposed buildings via lifts located at the north-western and south-western corners of Building A. Refer to Section 3.15 – Mobility/ Disabled Access of the report.

5.10.15.5 Cyclist circulation

Development controls	Assessment of compliance
The provision for the various levels of cyclists within the peninsula is central to the concept of an appropriate public domain and to the principle of pedestrian/cyclist priority and amenity.	Cyclists within the site will share the internal roads with vehicles. The foreshore area is to be a shared zone between cyclists and pedestrians. During peak times cyclists would be expected to dismount along the waterfront, to minimise the potential for conflict with pedestrians. Bicycle storage facilities are available within the site.

5.10.15.6 Street trees and planting

Development controls	Assessment of compliance
The objectives of tree planting in the parks, squares and streets are to: ▪ Ameliorate the impacts of traffic – atmospheric, visual and acoustic. ▪ Provide positive environmental impact – air quality, stormwater run-off, shade. ▪ Define space, hierarchies of space and use of spaces within the peninsula. Reinforce character precincts and character zones within precincts. ▪ Provide scale, form, texture and colour. The following species are nominated within the 3 character zones of the peninsula: **Waterfront** ▪ Foreshore Drive: a formal avenue of *Ficus hillii*. **Pyrmont** ▪ Open spaces: *Eucalyptus spp, Angophora costata, Ficus macrophylla, Ficus rubiginosa*. ▪ Feature: *Phoenix canariensis, Livistona australis, Washingtonia sp, Auracaria cunninghamiana*. ▪ Planting arrangement is more flexible and random within the Pyrmont character precinct. ▪ An increased use of Eucalypts/ Angophora is recommended within this character zone.	The tree planting proposed in the Outdoor Dining Area of the Waterfront Park will form an integral component of a bio-retention and filtration system cleansing runoff from the Foreshore Urban Plaza. The reed bed proposed within the Pyrmont Bridge Road entrance deck will form an integral component of a bio-retention and filtration system cleansing runoff from the existing service road along the Main Fish Market Building, and stormwater from the proposed structure over the all-weather outdoor dining area. Tree planting and the proposed structure over the all-weather outdoor dining area will enhance amenity by providing shade. The structure will also provide weather protection, maximising the potential for year-round public use of the site. *Ficus rubiginosa*, together with other endemic plant species will be used on the site. They have been developed based on the report *Transformation. Ecology of Pyrmont Peninsula 1788-2008*, prepared by John Broadbent for the City of Sydney in 2010.

5.11 Sydney Fish Market Master Plan (2005)

5.11.1 Masterplan principles

The key principles of the approved Sydney Fish Market Master Plan (2005) are outlined. Compliance of the proposed development with these principles is assessed as follows:

Master plan principles	Assessment of compliance
▪ Redefine the site's public address and entry points with new pedestrian connections to public transport and neighbouring areas.	The Pedestrian Arrival Forecourt at the north-eastern portion of the SFM site defines the pedestrian arrival node to the site. It is the focal point of pedestrian access from the Fish Market light rail stop (situated at the corner of Miller Street and Bank Street) the proposed coach set down area and taxi rank. The site's entry point from Pyrmont Bridge Road/ Wentworth Park will be redefined with a new generous entrance space on a timber deck opposite the existing pedestrian crossing at the head of Blackwattle Bay.
▪ Provide a new public foreshore promenade along the length of the site, connecting to Fish Market Square and the site's public entries at Pyrmont Bridge Road and Bank Street.	A new Waterfront Promenade from Pyrmont Bridge Road to the northern boundary of the site (Bank and Miller Street intersection) is to be provided. The promenade is part of the foreshore public domain precinct proposed for the site. Pedestrian linkages and views corridors are provided from the eastern boundary of the site (Bank Street) to the Waterfront of Blackwattle Bay.
▪ Provide legible public open space.	Legible public precinct is provided along the foreshore area and in the east-west connections across the site.
▪ Provide new retail spaces and arcades connected to Sydney Fish Market Square.	Additional retail and dining facilities are provided within the proposed development.
▪ Provide new public car parking facilities with an appropriate number of parking spaces.	2½ levels of car parking for 622 cars and service vehicles are provided within the proposed development. This constitutes an additional 205 spaces (existing 417 spaces) for the site, for the additional 7,403m^2 retail and dining areas on the site.
▪ Improve and separate loading facilities and parking for service and commercial/ private vehicles.	Within the proposed development, areas for loading and delivery are clearly separated from private car parking areas.

Master plan principles	Assessment of compliance
▪ Enhance the streetscape along Pyrmont Bridge Road and Bank Street and public interface to the adjoining Coal Loader.	The interface with the Coal Loader site will be improved through the provision of the new entrance deck, as well as the reconstruction of the area west of the Main Fish Market Building which includes an upgraded dining area with all-weather structure, timber seating steps and a new boardwalk with link to the Coal Loader.
▪ Rectify environmental site issues.	Environmental issues within the site will be addressed and improved by the proposed development. These include: ▪ Remedial measures as required; ▪ WSUD measures to improve the quality of water entering Blackwattle Bay; ▪ Waste management measures.
▪ Maintain and enhance view corridors to and within the site.	View corridors will be enhanced by the development with: ▪ East-west view corridors provided from Miller Street (along the northern site boundary) and between Building A and B; ▪ Extensive views to the bay from the Ground and first floor (L1) levels of the proposed buildings, as well as from the public domain.
▪ Maintain a working harbour character and market atmosphere.	The working harbour character of the SFM will be retained by maintaining the functions of its working wharfs for delivery activities and for the recreational watercraft. The market atmosphere will be improved with ground floor retail outlets, kiosks and outdoor eating areas.
▪ Increase efficiency and duration of operations.	The operations of the SFM will not change. The development will improve the circulation, loading facilities and hence efficiency of its operations.
▪ Ensure user safety and security.	Use safety and security are provided through the design, which enables passive surveillance of its proposed public domain areas which face active retail and restaurant frontages. Tourist/ recreation use and access will be separated from operational access as much as possible. Existing maritime structures will be repaired as required to ensure public access where applicable is safe.

Master plan principles	Assessment of compliance
▪ Address the land and water interface.	The land and water interference will be improved with greater accessibility, physical and visual connection to the water. Existing structures, which obstruct the view and access to the water, will be removed. The proposal provides for greater access to and appreciation of the land-water interface. It includes a number of treatments of the water's edge to maximise variety and provide a rich user experience. Existing structures will be repaired as necessary to maximise their life span.

5.11.2 Land use principles

The key site planning principle for land use proposed in the SFM Master Plan:

> *to retain the authenticity of SFM environment/ working harbour character and the mix of activities and function that makes SFM special*.

Other identified land use principles are outlined. Compliance of the proposed development with these land use principles is as follows:

Land use principles	Assessment of compliance
▪ A mix of appropriate and commercially viable land uses ensuring the rights of existing tenants are protected.	Existing tenants will be relocated to new premises within the development. New retail compatible with the functions of the site and a variety of restaurant will be encouraged.
▪ Sharing Sydney Harbour, where possible, by all users with precedence given to the working harbour/ market operations.	The existing Fish Market Main Building with retail and wholesale facilities, located at the southern portion of the site, will be retained and ultimately refurbished. The building is not part of this Part 3A application. The harbour/ water's edge will continue to be shared by the working fishing fleet and the public. Existing maritime uses would not be affected by the proposal. Additional retail outlets and wholesale trading areas are incorporated in new 2-3 storey buildings with car parking levels. These facilities are to be erected on the existing surface car parking area and the remaining portion of the SFM site. The aim of the expansion is to retain the existing tenants through the expansion of these existing businesses, as well as introducing new tenants that complement the existing fish market retailing ideals.

Land use principles	Assessment of compliance
▪ Flexibility to meet both current and future market opportunities.	The design of the development enables flexibility in tenancy areas to suit a variety of tenant needs.
▪ Greater foreshore access and pedestrian connection to surrounding areas.	The development will provide improved foreshore access with a new harbour side urban plaza and foreshore boardwalk. It will improve the connections of the site with Wentworth Park and Miller Street/ Fish Market Light Rail Stop.
▪ Increased amenity for pedestrian and other users.	The proposal maintains and enhances the seafood experience with the fish market operating as retail and wholesale market, seafood cooking school, food and beverage outlet, as well as a tourist attraction and harbour side entertainment precinct.
	The existing amenity of the public domain is poor and will be improved as a result of the development.
▪ Increased efficiency of operations.	The planning proposed will improve the efficiency of the operation of the SFM with separation of public and working spaces as promoted by the Master Plan; and provide clearly defined public space and pedestrian connections to surrounding areas.
▪ Activate ground level uses within and around the site.	Active ground level uses are provided to front the foreshore public precinct.

The proposed development is designed in accordance with the above principles to maintain and enhance the character of the fish market.

5.11.3 Water uses

Principles	Assessment of compliance
Activities within the waterway, including structures spanning water and any works to wharves and ports are not part of the Masterplan. “Waterways” is the approval authority for all water based activities. Reintroduction of a ferry terminal connecting the SFM with Circular Quay, as recommended by the Master Plan will be pursued.	Public domain improvements along the waterfront consider the interface of land and water functions in the design of the public. No water based activities form part of this proposal.

5.11.4 Function and operation

The function and operation principles proposed in the SFM Master Plan are outlined. Compliance of the proposed development with these function and operation principles is as follows:

Function and operation principles	Assessment of compliance
▪ Increase the efficiency of material handling on site.	The efficiency of material handling on site will be improved by dedicated service and delivery areas and the separation of service/delivery areas from public parking areas.
▪ Balance improved on-site functions and operations whilst retaining the distinctive and unique visitor experience provided through.	A maritime flavour and the trading functions of the Fish Market will be retained and experimental within the development.
▪ Direct involvement in a wholesale market place and working fish market environment.	The wholesale, auction and maritime activities of the SFM will be retained.
▪ Areas for net drying and mending, storage of fishing fleet equipment and light maintenance works to be catered for without disrupting pedestrian flow in green space.	Dedicated areas for loading, net drying and repairs are provided. The operational requirements of the wharfs in loading, delivery and fuelling will be controlled to prevent public access when required for optimal functionality.
▪ Reduce the impact of vehicles on public spaces by separating where possible operational and public/pedestrian circulation, giving market operations precedence where there is a conflict.	Pedestrian, vehicular and loading paths of travel are clearly defined and separated to reduce circulation conflict. Loading and service areas will be restricted to patrons and visitors.
▪ Hours of operation are to be revisited to optimise use of the site, in particular retail operations.	Hours of operation will be from 5am (for auctions) to midnight (for restaurants). Deliveries are anticipated to occur 24 hours.

The proposed development will ensure the optimum function and operation of the various activities of the SFM in the design of access, circulation and loading requirements of the markets.

5.11.5 Transport, movement and access

The transport, movement and operation principles identified in the SFM Master Plan are outlined. Compliance of the proposed development with these principles is assessed as follows:

Transport, movement and access principles	Assessment of compliance
▪ Improve the ease of access and parking to the site by separating commercial and private vehicles movements.	The existing entry point to the SFM is retained with improvement through replanning to the ingress to and egress from the site for pedestrian and vehicles.

Transport, movement and access principles	Assessment of compliance
	Pedestrian movements are separated from vehicular movements. Commercial vehicles are to be separated from private vehicles immediately upon entering the site. Vehicular access is limited to the waterfront precinct, to ensure that this public precinct remains as a pedestrian zone. Operational and emergency vehicles will be able to access the main wharf, as well as the northern section of the Promontory, opposite the northern wharf. Access to the fish market operations is via a service road at ground level behind the retail zone. The existing main loading area and concrete service road along the western side of the Main Fish Market Building are retained.
▪ Provide an appropriate number of car parking spaces thereby relieving parking pressures within the surrounding road network.	The site currently has 417 car parking spaces, located at grade. The proposed development provides for approximate 622 car spaces within a car parking structure, integrated with new fish market buildings, and within the parking area west of Bank Street. The site is in close proximity to public transport. Dedicated parking for coaches, taxi rank and pick-up/ drop-off point are to be provided along the eastern side of the site.
▪ Improve connections to public transport as an element pivotal to the site's successful redevelopment.	Connections to public transport are maintained. Connections to public transport are improved and pedestrian and cyclist routes are integrated into the broader context of Pyrmont and Blackwattle Bay.
▪ Improve amenity for pedestrians as an essential element to improve the general ambience of SFM and achieve a memorable place.	Pedestrian amenity is improved with a new public domain precinct along the foreshore and improved pedestrian connections to and within the site.
▪ Provide safe and convenient pedestrian and cycle access to and within the site to foster walking and cycling for local trips as a means of encouraging community interactions, health and reduced car dependency and contributing to the vitality of the site as a whole.	Safe pedestrian and cycle access and facilities are provided. Pedestrian and cycle access will be maintained and improved from the Bank/ Miller Street intersection and from Wentworth Park across Pyrmont Bridge Road. Pedestrian access will also be maintained and improved from Gipps Street, where access will be provided through the Main

Transport, movement and access principles	Assessment of compliance
	Fish Market Building via a lift and elevated walkway. There will be continuous foreshore pedestrian access, as well as pedestrian linkages between all major facilities and attractions within the site. Pedestrian and cycle networks will be integrated with the wider pedestrian and cycle network. Bicycle spaces will be provided within the site at key entry nodes. Bicycle access is possible along the waterfront and the Miller Street Link. However, cyclists would be expected to dismount during busy times.The proposed development will retain the wharfs and recreational berths. Provision of a berth capable of use by a commercial ferry at the end of the central wharf will be subject to future investigation. A bicycle path adjacent to Bank Street is proposed in accordance with the *City of Sydney Cycle Strategy and Action Plan – 2007-2017*.

A Traffic and Accessibility Impact Assessment prepared by Halcrow accompanies this report which includes supplementary traffic studies of the proposed development on the existing local traffic network.

5.11.6 Urban design, built form, density, colours and materials

The Master Plan identifies for the redevelopment of the SFM, to upgrade and improve the overall visual appearance, function and amenity of the site. The Master Plan proposes the revitalisation of the site to be dependent on the successful development of a united and coherent public domain and to achieve a public domain that is active, vibrant and celebrates the maritime nature of the site, in accordance with the following urban design principles as outlined. Compliance with these principles is assessed as follows:

Principles	Assessment of compliance
Urban design	
▪ Provide greater foreshore access and facilitate better pedestrian connections to the surrounding areas including improving pedestrian linkages through to Wentworth Park and the western side of Blackwattle Bay, and contributing to a coherent and enticing network of public open space.	Greater foreshore access and improved pedestrian connections of the site to the surrounding Pyrmont Bridge Road, Wattle Street, Wentworth Park, Bank Street and Miller Street have been provided in the design.

Principles	Assessment of compliance
▪ Ensure legible definition to the primary pedestrian entries and circulation paths.	Primary pedestrian entries are legible with the design of focal nodes to define the key entry point to the site.
▪ Maintain and enhance view corridors to and within the site.	View corridors are enhanced within the site.
▪ Provide articulated built form in terms of mass, footprint and height.	The built form provides visual interest with upper level facades of decorative, maritime-themed screens.
▪ Provide an activity node or focal point to enhance the market atmosphere of SFM.	An active public foreshore precinct is provided, directly accessible from retail and restaurant areas. The Foreshore Urban Plaza and associated retail/ dining facilities will provide an active focal point.
▪ Reinforce the working industrial/maritime character of the SFM through the site layout, built form, open space and landscape elements.	The building will incorporate a maritime theme in the design of the façade screens to the car parking areas. Maritime materials of timber, concrete and stone are the palette of materials and finishes for the design of the public domain. The working character of the harbour will be maintained. The landscape design will maximise the potential for the public to observe and appreciate the working harbour character.
Built form	
The Master Plan proposes the built form principle to improve the visual appearance of SFM by providing high quality design which positively addresses the public domain, foreshore of Blackwattle Bay and surrounding streets, and reinforces the character of the working harbour and Blackwattle Bay.	The design provides an active frontage of retail and dining facilities to the foreshore public domain precinct. The design of the waterfront incorporates the existing seawalls, and opens up the view and physical connection of the site to Blackwattle Bay.
Floor space ratio	
The Master Plan proposes that the maximum floor space ratio across the site is to not exceed 2.5:1 in accordance with SREP 26. The proposed development does not exceed this recommendation. The Master Plan states that development on the site is to be of high architectural quality, express the working marine character of the site. Continuous awnings or similar elements are to be provided to public space frontages containing ground floor retail uses.	The proposed design will be of high architectural quality. Awnings and shade structures are proposed to external retail and dining areas.

Principles	Assessment of compliance
Colours and materials	
The Master Plan proposes the following colours and materials with: ▪ Building materials and colours are to enhance and contribute to the maritime character of the development, enhance the built form and articulate the lively character of SFM. ▪ Building materials must be compatible with the character of the site, and support environmental sustainability.	Proposed colours and materials will generally be in accordance with the Master Plan.

5.11.7 Views and visual character

Principles	Assessment of compliance
The Master Plan proposes the following visual quality principles to: ▪ Protect and improve the unique visual qualities of this highly visible and recognisable site within the Harbour context. ▪ Retain and enhance the existing Gipps Street corridor view to and within the site as described in the *Ultimo-Pyrmont Urban Development Plan*. ▪ Improve the visual appearance and connection of SFM to Blackwattle Bay by creating a variety of open spaces and a foreshore promenade along the waterfront. ▪ Create new view corridors to and along the waterfront of the site from the surrounding area. ▪ Create a visual link between the site, Wentworth Park and public transport nodes ▪ Create public places and spaces at prime vantage points to emphasise views and vistas.	The proposed development maintains the view corridors from Bank Street to the water. View from Gipps Street to the bay will be improved by creating a corridor between 20-35m between buildings. An Urban Plaza and Foreshore Promenade are created along the waterfront to improve views along the foreshore. They will visually connect the site to the remainder of Blackwattle Bay. The design of the foreshore incorporates a variety of spaces, both in terms of character and scale. The design maximise views and vistas of the Bay.

5.11.8 Site connections and linkages

Principles	Assessment of compliance
The Master Plan proposes the following linkages principles to: ▪ Develop a walkable pedestrian space with strong connections to Blackwattle Bay, public transport and the surrounding suburbs. ▪ Provide legible definition to the primary pedestrian entries and circulation paths.	The primary pedestrian access is to be from the north-east, at pedestrian Arrival Forecourt. The pedestrian entry is sited to provide a clear connection and linkage to the light rail stop at the eastern side of Bank Street, near Miller Street.

Principles	Assessment of compliance
▪ The treatment of entrances is to give the SFM high visual prominence from the surrounding pedestrian and public transport network. ▪ Through site connections are to be designed as clear and legible extensions of the public domain. ▪ Consider access for all groups of mobility impaired persons, including the physically impaired, elderly, young people and groups with strollers, prams or shopping.	Universal pedestrian access to the foreshore is provided along the northern boundary of the site. A foreshore promenade will provide continuous access to and along the waterfront, with connections to facilities external to the site of the Coal Loader site to the south and potential development sites to the north. Universal access is considered throughout the development. The Pyrmont Bridge Entrance Deck will provide visual prominence to the SFM from Pyrmont Bridge Road, as well as improve links from the site to Wentworth Park and Ultimo. Universal access will be provided throughout the foreshore public domain. The circulation system is clear and legible and integrates the public domain with commercial/ retail areas.

5.11.9 Overshadowing and solar access

Principles	Assessment of compliance
The Master Plan proposes the solar access principle of the desirability of optimum solar access, but building orientation to the Bay and Pyrmont Bridge Road should be respected.	The proposed development will provide greater solar access to the foreshore precinct with the creation of an urban plaza along the central western portion of the site.

5.11.10 Public domain

Principles	Assessment of compliance
The Master Plan proposes the implementation of the following public domain and open space principles to provide: ▪ A cohesive system of parks/squares, attached to the primary pedestrian network is to be provided for the enjoyment of workers, customers and the general public. This will provide a variety of experiences and site permeability.	An urban plaza is proposed within the western portion of the site, fronted by retail and dining outlets and open to the foreshore and bay. This public open space precinct is larger than that proposed in the Master Plan. The urban plaza will provide space for casual dining, ephemeral attractions and events, and will contribute to the vitality and attraction of the SFM.

Principles	Assessment of compliance
▪ Areas for net drying and mending, storage of fishing fleet equipment and light maintenance works to be catered for without disrupting pedestrian flow in green space. ▪ Develop high-quality urban elements which reflect the industrial/waterfront nature of the site. ▪ Create a pedestrian network at the waters edge connecting public places, squares and vantage points. ▪ Create legible public open space and ensure the land and water interface is addressed. ▪ Ensure legible definition to the primary pedestrian entries and circulation paths.	The design of the foreshore will provide a series of spaces of different character and scale that are easily accessed by all users from the circulation network. As much as possible, operational needs have been separated from public space and pedestrian routes. A continuous foreshore promenade will be provided along the western side of the site fronting the bay. A palette of high quality, custom designed furniture will be provided that will be robust and reflect the working harbour nature of the site. Seating and lighting will be provided to the public domain. Facilities and the public domain will be designed to be accessible to all users, and to ensure safety and security. The circulation system will be designed to be clearly legible, including clear differentiation of public/ pedestrian from operational routes.

5.11.11 Landscape

Principles	Assessment of compliance
The Master Plan proposes the following landscape principles to: ▪ Reinforce the sense of place of SFM and working waterfront through the layout, finish and form of landscape elements. ▪ Public Domain strategies of City of Sydney and SREP 26 to be taken into account.	Existing trees located around the perimeter of the site where possible will be retained. The proposed urban plaza and foreshore areas are to be landscaped with appropriate species. The proposed development will reconnect the SFM site with Blackwattle Bay, by opening up of the foreshore to views and access, as well as through planting of trees which visually link with other parts of the foreshore.

5.11.12 Heritage and archaeology

Principles	Assessment of compliance
The Master Plan proposes the following heritage principles being: ▪ The integrity and significance of items of heritage value must be protected. ▪ Adaptive reuse of heritage items must be investigated where possible to ensure conservation of the item.	There are no listed heritage items on the site. The Blackwattle Bay Stormwater Channel No. 17 adjoining the site will not be affected by the works. The sandstone seawalls are important. They are in poor condition and will be reconstructed as part of the development, using the existing stone and with minor modifications to the existing alignment.

5.11.13 Infrastructure and services

Principles	Assessment of compliance
The Master Plan proposes the infrastructure principle to improve environmental systems by upgrading infrastructures to rectify the existing environmental problems.	The proposed development will comply with the infrastructure principle of the Master Plan for: ▪ Stormwater; ▪ Sewerage; ▪ Waste control and management; and ▪ Marine and seawall infrastructure.

5.11.14 Environment

Principles	Assessment of compliance
The Master Plan proposes the following environmental principles: ▪ Implement Ecologically Sustainable Development (ESD) principles during demolition, construction and operation including stormwater management; water quality; noise management; odour emission; contamination; management during demolition, removal and construction phases; waste management and waste minimisation. ▪ The environmental issues requiring remedial action should be given priority in accordance with the recommendations contained in the supporting Environmental Audit.	The proposed development will comply with the environment principles of the Master Plan for: ▪ Energy conservation; ▪ Remediation; ▪ Odour control and management; and ▪ Noise control.

5.12 Sydney LEP 2005

The SFM site is within the City of Sydney LGA and the planning controls of SLEP 2005.

The consent authority for the SFM site is the Minister for Planning, to be approved under Part 3A of the EP&A Act (Clause 3).

5.12.1 Aims

The aims of SLEP 2005 (Clause 11) are:

(a) To protect and enhance the diversity and special qualities of the City of Sydney, and its surrounding areas;

(b) To establish the City of Sydney as the best place to live in, work in and visit;

(c) To foster environmental, economic, social and physical well-being so that the City of Sydney continues to develop as an integrated, balanced, sustainable and prosperous living city of world standing;

(d) To encourage orderly, sustainable and high quality development of land and other resources within the City of Sydney; and

(e) To conserve the environmental heritage of the City of Sydney.

Compliance:

The proposed development complies with the overall aims of the planning instrument.

5.12.2 Urban form (Part 5, SLEP 2005)

An adopted development plan is required before consent is granted to a development application for a development application for a building where the site area exceeds 1500m^2. A "stage 1 development application" under Section 80(4) of the EP&A Act 1979, in the nature of a Master Plan may be prepared.

Compliance:

A Master Plan for the SFM site was adopted for the site on 16 February 2005.

5.12.3 Design excellence (Part 5, Clause 26 (2))

Matters of consideration	Assessment of compliance
The consent authority must have regard to the following matters of design excellence: (a) Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved; (b) Whether the form and external appearance of the building type and location will improve the quality and amenity of the public domain; and (c) Whether the new development detrimentally impacts on view corridors identified in the relevant development control plan.	The proposed development has a high standard of design. Refer to Section 3.3 – Design Concept and Section 4.3 – Views and Visual Assessment of the report.

5.12.4 Environment and design (Part 5, Clause 27)

Matters of consideration	Assessment of compliance
The consent authority must have regard to the principles of ecologically sustainable development based on a "whole of building" approach by considering: (a) Greenhouse gas reduction, embodied energy in materials and building processes; (b) Embodied energy in materials and building processes; (c) Building design and orientation; (d) Passive solar design and day lighting; (e) Natural ventilation; (f) Energy efficiency and energy conservation; (g) Water conservation and grey water reuse; (h) Waste minimisation and recycling; (i) Reduction of car dependence; (j) Potential for adaptive reuse.	The proposed development complies with the above requirements. Refer to Section 4.6 – ESD Strategies of the report.

5.12.5 Planning principles for Ultimo-Pyrmont

The planning principles for Ultimo Pyrmont are the same as the planning principles in SREP 26 – *City West*. Refer to Section 5.9.1 of the report.

5.12.6 Zoning

The majority of the SFM site is zoned ***Residential-Business***. The foreshore frontage of the site to Blackwattle Bay is zoned ***Public Recreation*** with an adjoining Activity Strip.

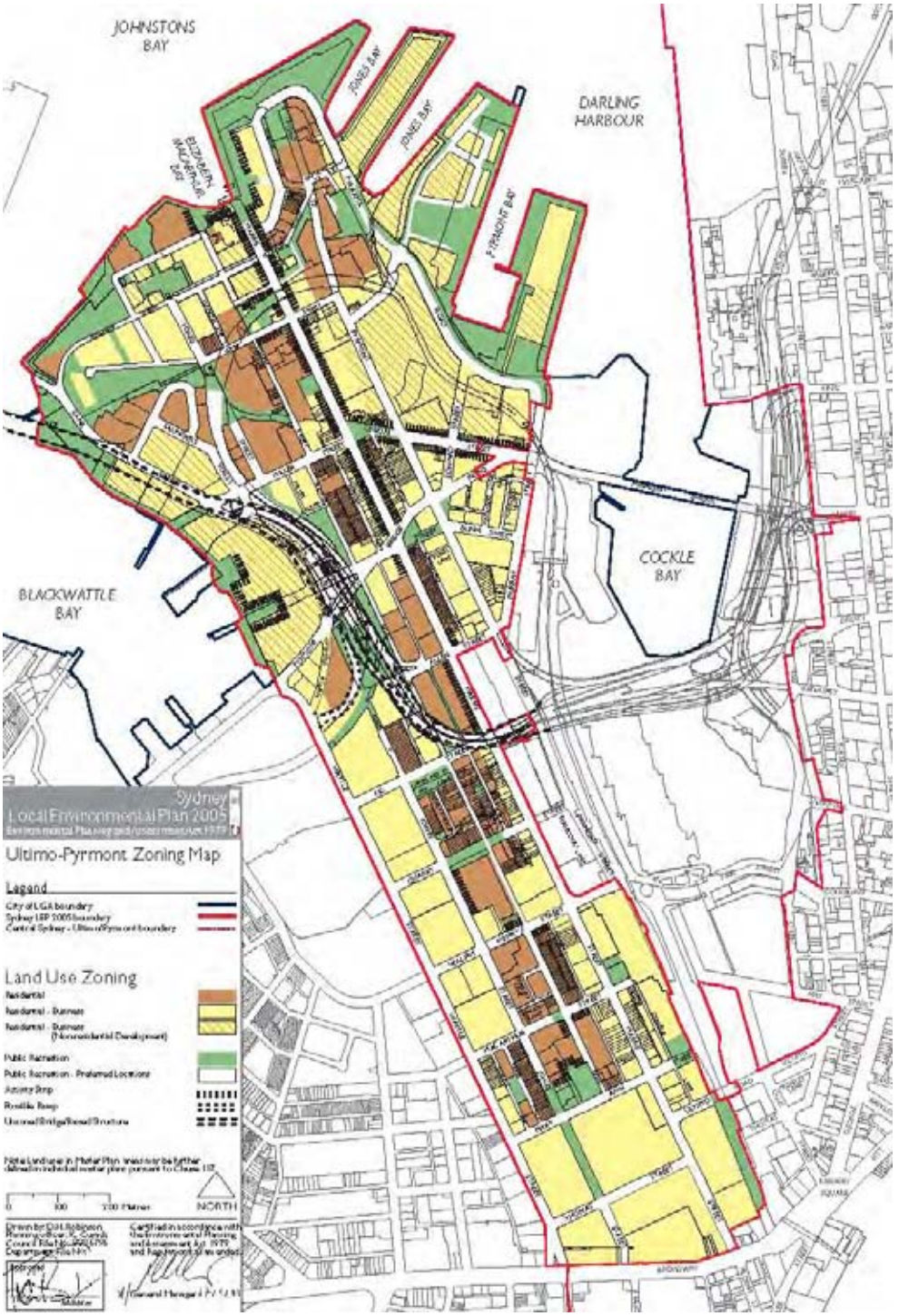

Figure 44: Ultimo-Pyrmont Zoning Map (SLEP 2005)

Compliance

The proposed development, as a retail, dining, wholesale trading and recreational precinct, complies with the permissible range of uses on the site. Refer to Section 5.9.3 of the report.

5.12.7 Building heights

The height of any building must not exceed the maximum building height shown on the Ultimo-Pyrmont Height Map. However, any building on land in the **Public Recreation** zone must not exceed 7m in height.

In accordance with the Ultimo-Pyrmont height map the maximum building height is:

- 21m – at the eastern portion of the site;
- 14m – at the western portion of the site towards the foreshore.

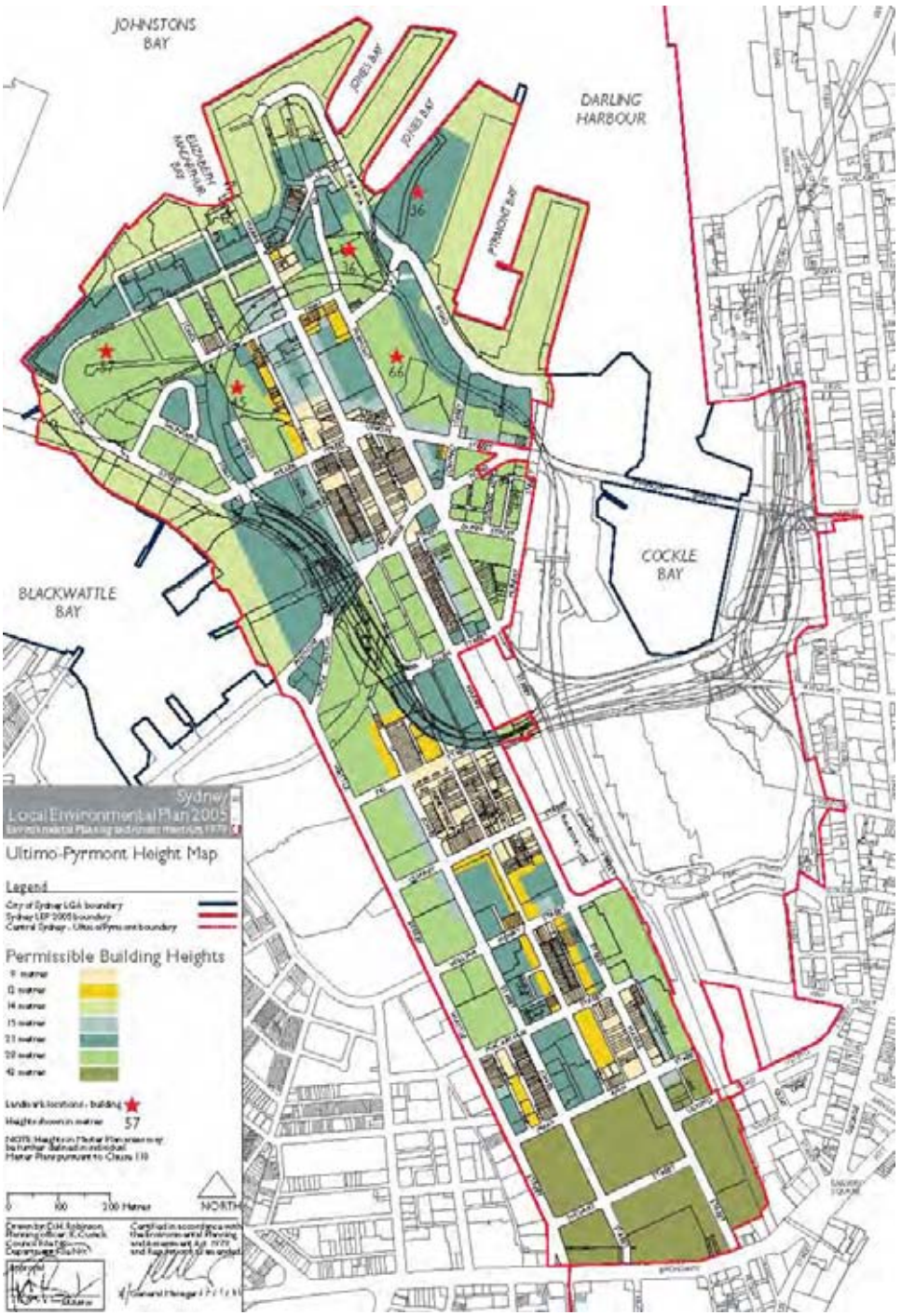

Figure 45: Ultimo-Pyrmont Height Map (SLEP 2005)

Compliance:
The proposed buildings within the eastern portion of the site are maximum 3 storeys in height which complies with the planning controls.

5.12.8 Floor space area

In Ultimo-Pyrmont, the ratio of business floor space of buildings in a master plan area to the site area must not be greater than 2.5:1 to the north of Pyrmont Bridge Road and 3:1 to the south of Pyrmont Bridge Road.

Therefore, the SFM site, north of Pyrmont Bridge Road, has maximum permissible FSR of 2.5:1.

- Site area: 43,000m^2 (approximate).
- Maximum permissible Gross Floor Area: 107,500m^2 (approximate).

Compliance:
The proposed development and the Fish Market Main Building with 41,080m^2 of GFA will not exceed this development area.

5.13 Disability (Access to premises – Buildings) Standards 2010

The Disability (Access to premises – Buildings) Standards 2010 is a legislative instrument which will commence operation on 1 May 2011.

Assessment of the compliance of the proposed development with the Disability (Access to premises – Buildings) Standards 2010 (Part D) is as follows:

Premises Standard	Assessment of Compliance
Access and egress Access must be provided, to the degree necessary, to enable: (a) People to: (i) Approach the building from the road boundary and from any *accessible* car parking spaces associated with the building; and (ii) Access work and public spaces, accommodation and facilities for personal hygiene; and (b) Identification of *accessways* at appropriate locations which are easy to find.	**Approach to the buildings from the road** An accessible path of travel is available from the Fish Market light rail station located on the eastern side of Bank Street (north-east of the SFM site). The path of travel is via the existing signalised pedestrian crossing located across Bank Street, to a new pedestrian path, which links to the marked pedestrian crossing across the new internal access road, to the Pedestrian Arrival Forecourt. The ramp in the existing concrete service road on the western side of the Main Fish Market building will be reconstructed to achieve compliance and provide access from Pyrmont Bridge Road to the existing retail arcade. **Approach to the buildings from accessible car spaces** Accessible car spaces (11) are located on the L1 parking area, directly at the rear of the restaurants.

Premises Standard	Assessment of Compliance
	Accessible parking spaces are located close to lifts, accessible paths to restaurants and adjacent to the restaurants rear entry doors to car parking areas. **Access to Disabled WCs** Disabled WCs (2) are located within the amenities core on the northern side of Building A; on Ground Floor level and Level 1.
Exits must be provided from a building to allow occupants to evacuate safely, with their number, location and dimensions being appropriate.	Exits from a building are compliant in width and location with the BCA.
Accessways to exits must have dimensions appropriate to: (a) The number, mobility and other characteristics of occupants; and (b) The function or use of the building.	As above.
Car parking spaces for use by people with a disability must be: (a) Provided, to the degree necessary, to give equitable access for car parking; and (b) Designated and easy to find.	108 car spaces are provided for service vehicles associated with the wholesale functions (Class 7b) of the SFM. This constitutes 1 disabled parking space required under the BCA. 510 car spaces are provided for patrons and staff of the SFM for retail and restaurant functions (Class 6). This constitutes 10 disabled parking spaces required under the BCA. 11 disabled parking spaces are provided within the development, which comply. Accessible car spaces will be sign marked to comply with AS 1428.1.
An inbuilt communication system for entry, information, entertainment, or for the provision of a service, must be suitable for occupants who are deaf or hearing impaired.	All public facilities will be sign marked to comply with the requirements of the deaf and visually impaired.
Access for people with a disability ▪ **Class 6 (retail and dining) –** To and within all areas normally used by the occupants. ▪ **Class 7a (parking) –** To and within any level containing *accessible* car parking spaces. ▪ **Class 7b (wholesale) –** To and within all areas normally used by the occupants.	All retail, dining whole sale and parking areas of the premises are accessible to the disabled.

Premises Standard	Assessment of Compliance
Access to buildings An *accessway* must be provided: (a) To a building *required* to be *accessible*; (b) From the main points of a pedestrian entry at the allotment boundary; and (i) From another *accessible* building connected by a pedestrian link; and (ii) From any *required accessible* car parking space on the allotment.	An accessible path of travel is available from the coach set down area located at the eastern side of Building A. The footpath adjacent to the coach area is 2m in width and of accessible gradient (complying with AS 1428.1- 2009). The footpath connects to the Pedestrian Arrival Forecourt. The Pedestrian Arrival Forecourt is of level grade. From the Forecourt, an accessible path of travel to L1 restaurants is available via a ramp with gradient of 1 in 20. Ramp is provided with: ▪ Landing of minimum 1200mm in length at intervals not greater than 15m; ▪ Constant gradient; ▪ Handrails in compliance with Clause 10 of AS 1428.1, on both sides of the ramp; and ▪ Kerb rails of between 75-150mm above finished floor on the open side of the ramp in compliance with AS 1428.1 – 2009. From the top of the access ramp at L1, access to the retail areas is via a lift located adjacent to the ramp. A 3.6m accessible walkway (with gradient of approximately 1 in 20 and landings every 15m, as per AS1428) is provided along the northern perimeter of the site to the foreshore area. An accessible path of travel will be provided from Gipps Street, via a lift and elevated walkway over the Auction Hall in the Fish Market Main Building. A bridge over the loading area will provide an accessible path to the new development. A lift will provide access to the existing retail arcade.
In a building *required* to be *accessible*, an *accessway* must be provided through the principal pedestrian entrance, and: (a) Through not less than 50% of all pedestrian entrances including the principal pedestrian entrance.	An accessible path of travel is provided to the Tavern (located on L1 of Building B). Doorways to dining and retail facilities will be of width to comply with AS 1428.1.
Where a pedestrian entrance *required* to be *accessible* has multiple doorways: (a) If the pedestrian entrance consists of not more than 3 doorways – not less than one of those doorways must be *accessible.*	Doorways will comply with this requirement.

Premises Standard	Assessment of Compliance
Where a doorway on an *accessway* has multiple leaves, (except an automatic opening door) one of those leaves must have a clear opening width of not less than 850mm in accordance with AS1428.1.	Doorways will comply with this requirement.
Parts of buildings to be accessible In a building *required* to be *accessible:* (a) Every ramp and stairway must comply with: (i) For a ramp – Clause 10 of AS 1428.1; (ii) For a stairway – Clause 11 of AS 1428.1; (iii) For a fire-isolated stairway – Clause 11.1(f) and (g) of AS 1428.1; (b) Every passenger lift must comply with Clause E3.6; (c) *Accessway* must have: (i) Passing spaces complying with AS 1428.1 at maximum 20m intervals on those parts of an *accessway* where a direct line of sight is not available; (ii) Turning spaces complying with AS 1428.1: (A) Within 2m of the end of *accessways* where it is not possible to continue travelling along the *accessway;* and (B) At maximum 20m intervals along the *accessway;* (d) An intersection of *accessways* satisfies the spatial requirements for passing and turning space.	Design of ramps and stairs comply with AS 1428.1. Design of passenger lift complies with E3.6 of the BCA. There are adequate turning spaces at maximum 20m intervals.
Exemptions The following areas are not *required* to be *accessible*: (a) An area where access would be inappropriate because of the particular purpose for which the area is used.	Service and pant areas are not accessible.
Accessible car parking *Accessible* car parking spaces: (i) A Class 7a building (parking) is *required* to be *accessible.* **Car parking spaces for people with a disability** ▪ **Class 7 (parking and wholesale) –** 1 space for every 100 car parking spaces or part thereof. ▪ **Class 6 (retail and dining) –** 1 space for every 50 car parking spaces or part thereof.	Numbers of accessible/ disabled parking spaces provided complies with this requirement. 510 car parking spaces are provided for customer and staff parking, which requires 10 disabled spaces. 11 disabled spaces have been provided.

Premises Standard	Assessment of Compliance
Signage In a building *required* to be *accessible:* (a) Braille and tactile signage complying with Part D4 and incorporating the international symbol of access or deafness, as appropriate, in accordance with As 1428.1 must identify each: (i) Sanitary facility; (ii) Space with a hearing augmentation system; and (b) Signage in accordance with AS 1428.1 must be provided for *accessible* unisex sanitary facilities to identify if the facility is suitable for left or right handed use; (c) Signage to identify an ambulant *accessible* sanitary facility in accordance with AS 1428.1 must be located on the door of the facility; and (d) Where a pedestrian entrance is not *accessible,* directional signage incorporating the international symbol of access, in accordance with AS 1428.1 must be provided to direct a person to the location of the nearest *accessible* pedestrian entrance.	Braille and tactile signage will be provided to comply with the Premises Standards, AS 1428.1 – *Design for access and mobility* and the BCA.
Tactile indicators For a building *required* to be *accessible,* tactile ground surface indicators must be provided to warn people who are blind or have a vision impairment that they are approaching: (a) a stairway, other than a *fire-isolated stairway;* (b) a ramp other than a step ramp, a kerb ramp (c) in the absence of a suitable barrier: (i) an *accessway* meeting a vehicular way adjacent to any pedestrian entrance to a building, if there is no kerb or kerb ramp at that point; Except for areas exempted by clause D3.4. Tactile ground surface indicators must comply with sections 1 and 2 of AS/NZS 1428.4.1.	Tactile indicators will be provided to stairs, ramps and at the approach to vehicular roadway adjacent to a pedestrian entrance to the building. The location, and type of tactile indicator will comply with AS 1428.4 – Tactile ground surface indicators.
Ramps On an accessway: (a) A series of connected ramps must not have a combined vertical rise of more than 3.6m.	The vertical rise from the access ramp from the Pedestrian Arrival Forecourt to L1 (restaurant) is 1.5m, which complies.

Premises Standard	Assessment of Compliance
	Due to the topography of the site, the Miller Street link needs to overcome a vertical rise of 3.9m. To assist access, it has been designed as a series of 1:20 walkways, with landings provided every 15m, as required by AS1428.
Glazing on an accessway On an *accessway,* all frameless or fully glazed doors, any glazing capable of being mistaken for a doorway or opening, must be clearly marked in accordance with AS 1428.1.	Glazed doors to retail and restaurant facilities will be designed to comply.
Passenger lifts Application of features to passenger lifts: ▪ Handrail; ▪ Lift floor dimension of not less than 1400mm x 1600mm – all lifts which travel more than 12m; ▪ Minimum clear door opening complying with AS 1735.12; ▪ Passenger protection system complying with AS 1735.12; ▪ Lift landing doors at the upper landing; ▪ Lift car and landing control buttons complying with AS 1735.12; ▪ Lighting in accordance with AS 1735.12 – all enclosed lift cars; (a) Automatic audible information within the lift car to identify the level each time the car stops; and (b) Audible and visual indication at each lift landing to indicate the arrival of the lift car; and (c) Audible information and audible indication *required* by (a) and (b) is to be provided in a range of between 20-80 dbA at a maximum frequency of 1500Hz; ▪ Emergency hands-free communication.	Passenger lifts have dimensions to comply with the minimum of 1400mm x 1600mm. The design of the lift cars will comply with this requirement.
Sanitary and other facilities The number of persons accommodated must be calculated according to clause D1.13 of the BCA. Clause D1.13 of the BCA requires the minimum of 2 disabled toilets.	2 disabled toilets are provided in the proposed development.

Premises Standard	Assessment of Compliance
Accessible sanitary facilities In a building required to be accessible: (a) *Accessible* unisex *sanitary compartments* must be provided in *accessible* parts of the building in accordance with Table F2.4 (a); (b) *Accessible* unisex showers must be provided in accordance with Table F2.4 (b); (c) At each bank of toilets where there is one or more toilets, a *sanitary compartment* suitable for a person with an ambulant disability in accordance with AS 1428.1 must be provided for use by males and females, (d) An *accessible* unisex *sanitary compartment* must contain a closet pan, washbasin, shelf or bench top and adequate means of disposal of sanitary towels; (e) The circulation spaces, fixtures and fittings of all *accessible* sanitary facilities with the requirements of AS 1428.1; (f) Where two or more of each type of *accessible* unisex sanitary facility are provided, the number of left and right handed mirror image facilities, must be provided as evenly as possible. **Accessible unisex sanitary compartments** Class 6 and 7 – 1 on every *storey* containing *sanitary compartments.*	Accessible WCs are provided to comply with AS 1428.1, adjacent to general sanitary compartments.

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6.0 ASSESSMENT OF ENVIRONMENTAL EFFECTS

In determining a development application, a consent authority is to take into consideration such of the following matters as are of relevance to the development the subject of the development application:

(a) Statutory Planning considerations:

(i) any environmental planning instrument, and

(ii) any draft environmental planning instrument that is or has been placed on public exhibition and details of which have been notified to the consent authority (unless the Director-General has notified the consent authority that the making of the draft instrument has been deferred indefinitely or has not been approved), and

(ii) any development control plan, and

(iii) any planning agreement that has been entered into under section 93F, or any draft planning agreement that a developer has offered to enter into under section 93F, and

(iv) the regulations (to the extent that they prescribe matters for the purposes of this paragraph), that apply to the land to which the development application relates,

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

(c) the suitability of the site for the development,

(d) any submissions made in accordance with this Act or the regulations,

(e) the public interest.

6.1 Section 79C(1)(a) – Environmental Planning Considerations

The site is subject to the following State and local government planning instruments of:

- NSW State Plan;
- Sydney Metropolitan Strategy – City of Cities: A Plan for Sydney's Future;
- Draft Sydney City Subregional Strategy;
- State Environmental Planning Policy (Major Development) 2005;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Environmental Planning Policy (Infrastructure) 2007;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005;
- Sydney Regional Environmental Plan No. 26 – City West;
- Urban Development Plan for Ultimo – Pyrmont 1998;
- Sydney Fish Market Master Plan (2005);
- Sydney LEP 2005; and
- Environmental and Planning and Assessment Act 1979.

The proposed redevelopment of the SFM site and its foreshore public domain improvements comply with the aims and objectives of State and local planning strategies.

The proposed SFM development complies with the land use permissible with its designated **Residential-Business** zone under Sydney Regional Plan No. 26 – City West and Sydney Local Environmental Plan 2005. The foreshore public domain precinct complies with the land use permissible within its designated **Public Recreation** zone under the above planning instruments.

The proposed development complies with the planning principles and design guidelines outlined in Sydney REP No. 28 – City West, the Urban Development Plan for Ultimo – Pyrmont 1998 and Sydney LEP 2005 in terms of the consideration in the proposed design of the following design elements of:

- Urban design, activities, façade treatment, materials and finishes;
- Public domain;
- Land use;
- Building heights;
- Floor space;
- Views and vistas;
- Environmental amenity;
- ESD considerations;
- Access parking and servicing; and
- Universal accessibility.

Refer additionally to Section 5.0: Planning Framework for the detailed assessment of compliance of the proposed development with the relevant planning instruments.

6.2 Section 79C(1)(b) – Environmental Impacts

The proposal is a major redevelopment on the eastern foreshore of Blackwattle Bay within Sydney Harbour. The proposed development will not cause adverse impact to the natural environment and ecology of the site. The development will not adversely impact on but contribute to the social and economic vitality of the locality.

6.2.1 Visual amenity

The SFM site is visually prominent from the Blackwattle Bay waterway, from key publicly accessible vantage points located along the western foreshore of Blackwattle Bay and from the Western Distributor.

The proposed development and its foreshore public domain improvements will visually enhance and provide a positive contribution to the aesthetic appearance, public and pedestrian amenity, and environmental quality of the eastern foreshore of the Bay.

6.2.2 Solar access and overshadowing

The buildings are oriented predominantly to the west, toward Blackwattle Bay. As the development is sited below the Western Distributor, it will not overshadow surrounding buildings and private spaces.

The foreshore public precinct will not be overshadowed by the proposed development and will receive solar access for the predominance of the year except for the Urban Foreshore Plaza in mid winter (June 21) up to mid–morning.

6.2.3 Noise and acoustic privacy

Noise generated from the SFM trading operations includes service vehicle and private vehicle movements, noise from restaurant patrons and mechanical services plant.

All of the predicted noise levels will comply with the noise assessment criteria except mechanical noise at night, which are the most significant contributors.

Mitigation measures include use of attenuation to achieve compliance such as silencers, acoustic insulation or installation of units with total sound power level output less than or equal to 82.5dBA.

6.2.4 Visual amenity

The proposed development, buffered to the east by the overhead structures of the Western Distributor and to the south by the existing Fish Market Building, will have no visual impact on the privacy of surrounding residential developments.

6.2.5 Traffic and access

The proposed development will increase private and service vehicle parking from 417 vehicles to 622 vehicles (an increase of 49%).

The site meets the criteria set within the *Integrating Land Use and Transport Package* and the *NSW Planning Guidelines for Walking and Cycling* for the placement of businesses and services. It is well served by public transport, located within a densely populated area and has good current and proposed walking and cycling networks.

The development will have not have a significant impact on the operations of the surrounding road network, with the proposed changes to intersection operations potentially providing significant operational benefits outside of peak generation times for the site.

Proposed changes in the operations of traffic signals in the area include:

- Changes to the layout and signal operations at the intersection of Bank Street and Miller Streets; and
- Changes to the lane markings and signal operations at the intersection of Pyrmont Bridge Road, Bank Street and the Western Distributor ramps.

6.2.6 Water quality

The overall site layout has been designed to minimise the number of discharge outlets into Blackwattle Bay.

Runoff from the multi-storey car park and all outdoor courtyard/ promenade areas will be drained through a gross pollutant trap (GPT) for initial treatment before being directed into a separate rainwater harvesting tank. Overflows from the storage tank will then be drained to a new drainage line discharging into the Bay.

The site will incorporate bio-retention systems which will treat stormwater from paved surfaces prior to entry into Blackwattle Bay. The water will be treated to best practice standards prior to discharge to the Harbour.

Gross pollutant traps will be provided just upstream of each new discharge outlet into the Bay.

Other treatment devices, such as silt and oil arrestors will also be used to treat runoff within car parks and trade waste systems.

6.2.7 Erosion and sedimentation

During construction, soil erosion and sedimentation control measures will be installed in all areas disturbed and affected by construction activities to prevent silt and sediment from leaving the construction site and reaching the Bay.

Soil adhering to truck wheels will be prevented from leaving the site by the use of a truck shaker grid and a truck wheel wash.

The transport of sediment will be minimised by the installation of sediment fences, installed along the downstream edge of the construction site.

All drainage outlets (new and existing) to the bay will be fully enclosed with a floating turbidity barrier. These will be kept in place and maintained for the entire construction period.

6.2.8 Ecology

SFM is a highly urban environment situated on reclaimed land containing very little native vegetation. There are no remnant ecological communities, very few native trees and no endangered flora species on the site.

The site is evaluated to have no likely ecological issues associated with direct impacts on terrestrial flora and fauna, including threatened species, populations or communities listed under the TSE Act, EPBC Act or FM Act.

Approximately an additional 88 trees will be planted on the site.

6.2.9 Environmental

Potential acid sulphate soils identified on the site will be managed by the implementation of an Acid Sulfate Soil Management Plan on the site prior to commencement of excavation works or piling.

The site has been assessed to contain elevated concentrations of contaminants. Remedial works will be undertaken for the removal of underground storage tanks and arsenic contamination areas on the site, with strategies recommended for the removal or capping of contaminated soil.

6.2.10 Impacts on the built environment

The site is zoned **Residential-Business** and the foreshore precinct zoned **Public Recreation** with an adjoining Activity Strip.

The proposed development retains the existing use of the site and complies with the permissible uses on the site.

The development, being of 3 storeys (13.2m) in height with roof top parking complies with the maximum permissible height of 14m at the foreshore and 21m at the eastern portion of the site.

The development will replace and improve the existing active use of the site, enhance the development, by replacing the existing surface parking area with retail, restaurant and wholesale trading uses, and refurbishing the foreshore area will revitalise the site as an attractive, public retail and recreational harbourside precinct.

6.2.11 Social and economic impact

Redevelopment of the SFM will provide an additional indoor and dining facilities and attractive revitalised foreshore precinct along Sydney Harbour. The development will provide social and economic benefits, as a tourist, retail dining and recreational precinct to the City of Sydney.

6.2.12 Impacts on the Aboriginal, archaeological and cultural heritage significance of the site

The site as a reclamation area contains an extensive archaeological profile of varying degrees of significance with most of the important items located at the base of the reclamation fill.

The seawalls are the only visible elements of 19th century history of the site, and require maintenance for their ongoing stability.

Archaeological assessment recommends the storage of artefacts retrieved from the site within the development site, with documentation and interpretation of findings.

6.3 Section 79C(1)(c) – Suitability of the Site for Development

The site is suitable for the proposed uses. Redevelopment of the site will enhance the Fish Market facilities and functions. The foreshore precinct will be revitalised and improved for pedestrian amenity and accessibility.

6.4 Section 79C(1)(d) – Submissions

The Consent Authority will consider under Section 75H of the EP&A Act all submissions received within the specified time period of at least 30 days against planning criteria in State legislation, planning instruments and controls before determining the Project Application.

6.5 Section 79C(1)(e) – Public Interest

The proposed development will make a positive contribution to the public amenity of the Sydney Harbour foreshore and provide improved facilities for the SFM. All environmental impacts have been addressed within this submission.

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7.0 COMPLIANCE WITH THE DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The proposed development has been assessed for compliance with the Director-General's Environmental Assessment Requirements as follows:

Key Issues		Compliance	
1.	**Relevant Environmental Planning Instrument's, Policies and Guidelines** ▪ The planning provisions applying to the site, including permissibility, and the provisions of all plans and policies including an assessment against: – Objects of the *Environmental Planning and Assessment Act 1979;* – Relevant State Environmental Planning Policies, including (*State Environmental Planning Policy (Major Development) 2005 and State Environmental Planning Policy No. 55 – Remediation of Land and State Environmental Planning Policy (Infrastructure) 2007*; – Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005; – Sydney Regional Environmental Plan No. 26 – City West and approved Sydney Fish Market Master Plan (2005); and – The NSW State Plan, the Sydney Metropolitan Strategy and Draft Sydney City Subregional Strategy. ▪ Consideration of the *Sydney Local Environmental Plan 2005* and applicable policies and plans; and ▪ The nature, extent and justification for any inconsistencies or non-compliance with relevant environment planning instruments, plans and guidelines, including the relevant Development Control Plans.	Refer to Section 5.0 of the Environmental Assessment (EA) report.	√
2.	**Built form and Urban Design** ▪ Consideration of the height, bulk and scale of the proposed development within the context of the locality (detailed envelope/ height, FSR and contextual studies should be undertaken to ensure the proposal integrates with the local environment, and that the form, layout and siting of the buildings achieve optimal design and amenity outcomes). ▪ A detailed description of the design quality with specific consideration of the facades, massing, setbacks, building articulation, use of appropriate colours, materials/ finishes, landscaping, safety by design and public domain (including an assessment against the Crime Prevention Through Environmental Design Principles); and	Refer the architectural drawings and Sections 3.2 and 3.3 of the EA report. Refer to Sections 3.3 and 3.18 of the EA report.	√

Key Issues		Compliance	
	▪ The provision of a view analysis inclusive of photomontages and perspectives of key elements and views of the development and to the harbour from key locations (including, but not limited to, from Pyrmont, Blackwattle Bay and the opposing Glebe foreshore area).	Refer to Section 4.3 of the EA report.	√
3.	**Environmental Amenity and Public Domain**		√
	▪ Consideration of the impacts of the projects on solar access, acoustic privacy, visual privacy and views;	Refer to Section 4.4 of the EA report.	
	▪ Consideration of design quality with specific consideration of the massing, waterfront interface (including waterfront access and safety), setbacks and visual impacts of any proposed structures, including views;	Refer to Sections 3.3 and 4.3 of the report.	
	▪ Identification of proposed open space, public domain and linkages with and between other public domain spaces, including the waterfront and Wentworth Park, the light rail stop on Bank Street and the greater Pyrmont suburb;	Refer to Sections 3.12 and 3.13 of the report.	
	▪ Details on the interface between the proposed uses, public domain, and the relationship to and impact upon the existing public domain;	Refer to Sections 3.16 of the report.	
	▪ Consideration of existing and future opportunities for public access to and along the foreshore, including details on how public access along the foreshore will be provided and maintained: e.g. dedication of land, registration of easement on title or other;	Refer to Sections 3.12 and 3.16 of the report.	
	▪ Details of the width of unobstructed public access along the foreshore including the area in front of the existing building at the southern end of the site;	Refer to Sections 3.16.6 and 3.16.8 of the report.	
	▪ Details of hours of public access, including any restrictions and how restrictions will be enforced (signage, fencing or other);	Refer to Section 3.17 of the report.	
	▪ Details on how public domain works will be resolved to prevent conflict between vehicles and pedestrians entering and leaving the site, and consideration of how the design and location of pedestrian and vehicle entry points can be redesigned to reduce conflict between user groups;	Refer to Sections 3.6 – 3.15 of the report.	
	▪ Consideration of how links can be upgraded to improve the pedestrian and cycle experience accessing the site, particularly to the area under the overpass, with consideration also given to improved lighting, artwork, paving, signage and the like; and	Refer to Sections 3.6 – 3.16 of the report.	
	▪ Consideration of the provision of soft landscaping throughout the site including shade trees to soften large areas of hard surface areas (car park, promenade and pedestrian paved areas).	Refer to Section 3.16 of the report.	

Key Issues		Compliance	
4.	**Ecologically Sustainable Development (ESD)** ▪ A detailed description of how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development; and ▪ A description of the measures that would be implemented to minimise water and energy consumption.	Refer to Section 4.6 of the report. Refer to Sections 4.5, 4.7 and 4.8 of the report.	√
5.	**Transport, Access and Parking** ▪ A Transport and Accessibility Impact Assessment prepared with regard to the RTA's Guide to Traffic Generating Developments and making reference to the Metropolitan Transport Plan – Connecting the City of Cities, NSW Planning Guidelines for Walking and Cycling and the Integrating Land Use and Transport policy package, considering the following issues: – An estimate of the trips generated by the proposed development, including a breakdown of vehicle types; – Traffic generation including: - daily and peak traffic movements likely to be generated by the project; - the impact on the safety and capacity of the surrounding road network and nearby intersections, including Pyrmont Bridge Road/ Harris St and Fish Market access; and - the need and provision of upgrade, road improvement works, or funding (if required); – parking (including justification of proposed quantum of parking spaces), access and loading dock arrangements, in accordance with relevant Australian Standards and including appropriate levels of onsite car parking having regard to the relevant planning controls, RTA guidelines and public transport accessibility of the site; – details on whether currently used areas on Bank Street will continue to be used for overflow car parking; – details on internal access and circulation arrangements, with particular regard to pedestrian safety; and – details on internal access and circulation arrangements, with particular regard to pedestrian safety; and – Measures to promote sustainability means of transport including public transport usage and pedestrian and bicycle linkages. – Details of access arrangements for workers to/from the site, emergency vehicles and service vehicle movements. – Details of construction vehicle access, movements and queuing.	Refer to Sections 3.6 – 3.14 and 4.1 of the report.	√

Key Issues		Compliance	
6.	**Soil and Water** ▪ Proposed erosion and sediment controls during construction; ▪ Stormwater management during operations, with details of the proposed stormwater infrastructure and connections to Council's system, and incorporating Water Sensitive Urban Design measures; and ▪ Identify whether groundwater would be encountered during excavation, whether dewatering would be required and, if it is likely to be encountered, the existing groundwater quality and an assessment of the potential impacts on groundwater including degradation.	Refer to Section 4.9 of the report. Refer to Section 4.7 and 4.8 of the report. Refer to Section 4.14 – 4.16 of the report.	√
7.	**Noise and Vibration** ▪ A quantitative assessment of the potential construction, operational and traffic noise impacts of the project.	Refer to Section 4.4.2 of the report.	√
8.	**Waste and Odour** ▪ Identify, quantify and classify the likely waste streams to be generated during construction and operation; and ▪ Describe the measures to be implemented to minimise, reuse, recycle and safely dispose of this waste and minimise offensive odours associated with the daily operation of the Fish Market.	Refer to Section 4.10 of the report.	√
9.	**Services** ▪ The capacity of utilities including water, sewer, stormwater, gas, power and telecommunications infrastructure that will service the project.	Refer to Section 4.5 of the report.	√
10.	**Flora and Fauna** ▪ Consideration of potential impacts on any terrestrial and aquatic flora and fauna.	Refer to Section 4.11 of the report.	√
11.	**Staging** ▪ Details of any proposed staging, the extent of the works proposed for each stage and the predicted timing for each stage.	Refer to Section 4.17 of the report.	√
12.	**Contamination** ▪ Demonstration of compliance with the requirements of SEPP 55, including as a minimum providing a Phase 1 Environmental Site Assessment.	Refer to Sections 4.14-4.16 of the report.	√
13.	**Heritage** ▪ Assessment of the likely impacts of the proposal on heritage and archaeological items and proposed conservation – including the existing sea wall, and mitigation measures.	Refer to Section 4.12 of the report.	√