

Submission no. 1
(AWM Eastern Precinct Development
and National Service Memorial)

M.R. 04/09/08



Australian War Memorial

AUSTRALIAN WAR MEMORIAL

Eastern Precinct Development and National Service Memorial

STATEMENT OF EVIDENCE TO THE PARLIAMENTARY
STANDING COMMITTEE ON PUBLIC WORKS

September 2008

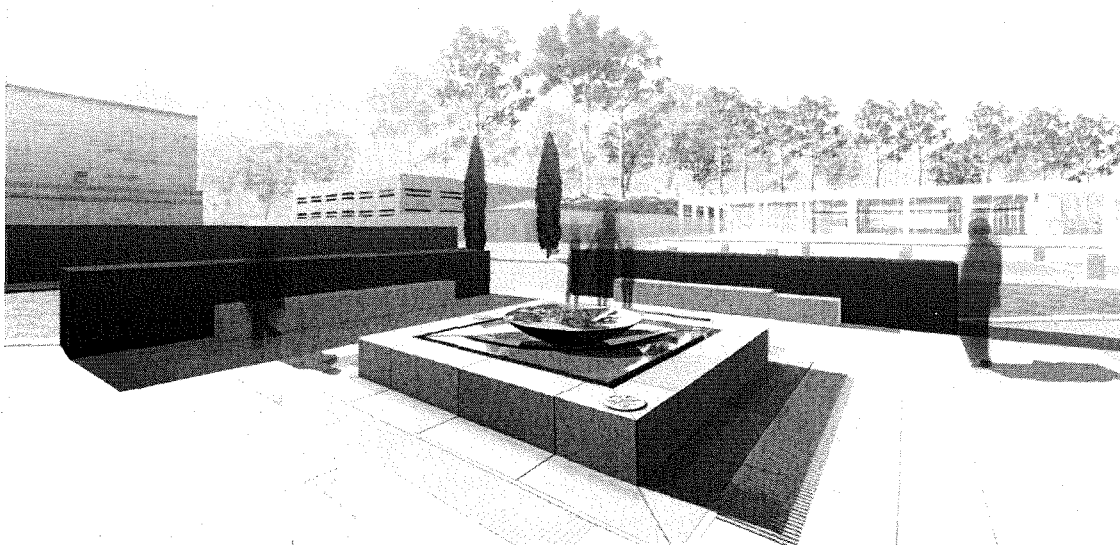


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INTRODUCTION

1 The Australian War Memorial is a unique national institution. In the last decade the Memorial precinct has been extensively transformed including development of the Western Precinct/Sculpture Garden, ANZAC Hall, the Parade Ground and the CEW Bean Building. The current proposal to develop the Eastern Precinct represents the next stage in a program of planned site development and will deliver a new formal Memorial Courtyard, much improved and safer coach and car parking, improved outdoor areas and toilet facilities and the replacement of the existing café with an accessible facility more suited to the requirements and significance of the site.

2 The development is necessary to improve visitor safety, access and amenity in the Eastern Precinct and to bring the substandard Eastern Precinct up to the high standard of the remainder of the site. The new Memorial Courtyard also provides a site for the National Service memorial.

IDENTIFICATION OF THE NEED

Objectives

3 This submission seeks approval for the Australian War Memorial to redevelop its Eastern Precinct. The development has the following major objectives:

- Be consistent with the Memorial's Commonwealth and National Heritage Listing and realise the final stage of the Site Development Plan.
- Bring this important area of the site into line with the overall objectives and quality established for the Western Precinct and the Parade Ground.
- Reinforce and rejuvenate the character of the open natural landscape in contrast to the more formal Western Precinct.
- Provide a more appropriate setting for the main memorial building by relocating coach parking from the east side, beside the main memorial building entrance, to the north-east of the site.
- Significantly improve access, safety and amenity, particularly for groups arriving by coach and for those with mobility issues, and deal with current OH&S issues.
- Provide a more accessible and flexible café and functions venue with on-grade access to the main memorial building, the schools' entrance and the outdoor areas of the site.
- Provide additional and planned opportunities for additional memorials; e.g. the National Service memorial and additional plaque placements
- Provide an underground car park with approximately 200 parking spaces close to the main memorial building entrance and reduce dependence on surrounding residential streets for 'overflow' parking.
- Remove the temporary car park and reinstate the degraded landscape.

- Provide additional facilities and access for major events and ceremonies.
- Provide an improved setting for the recently constructed CEW Bean Building.

Historical Background

4 The Memorial was established by the Australian War Memorial Act 1925 as a national memorial to those Australian men and women who have died while on active service. In 1980 the Memorial's functions were re-defined to reflect the Memorial's role in commemoration, as a museum and as a research centre housing a rich and diverse collection of seminal events in Australian history. Since its opening in 1941, the main memorial building has been modified and extended on several occasions to accommodate a growing collection and to provide space for new exhibitions. To date, no complete site development plan has been realised.

5 In 2001 the Australian War Memorial engaged the architects Johnson Pilton Walker (JPW) to prepare a Site Development Plan for the Memorial precinct. The Plan draws on the National Capital Authority Site Master Plan and earlier development of the Western Courtyard and Sculpture Garden. It provides an overall vision enabling all future works to be seen in the context of a completed development. The JPW Site Development Plan considers three precincts: the Western Precinct, the Parade Ground and the Eastern Precinct.

6 Since completion of the Site Development Plan, major works have occurred to redevelop the Parade Ground, the site entry pathway, and a number of commemorative sculptures and plaque positions have been installed in the renewed Western Precinct/Sculpture Garden. Some enhancement of access, lighting and outdoor furniture has also occurred. The Memorial has now also completed construction of the CEW Bean Building in the Eastern Precinct.

7. Recognising its responsibility for a national heritage precinct, in 2007 the Australian War Memorial engaged Godden Mackay Logan (GML) to assist with preparation of a Heritage Strategy and Register. The Strategy has been endorsed by the Australian Heritage Council and the Department of Environment Water Heritage and the Arts (DEWHA). A draft Heritage Management Plan has been prepared with GML in 2008.

Need

8 In 2006, Johnson Pilton Walker reviewed the Site Development Plan and identified that the Plan had been substantially implemented in the Western Precinct and the Parade Ground. The third precinct, the Eastern Precinct, by contrast was inconsistent in quality with the rest of the site and presented complex design issues associated with the visual and physical link of the precinct to the rest of the site and provision of the appropriate level of amenity for increasing visitor numbers whilst maintaining the character of the precinct.

9 The current amenity and condition of the Eastern Precinct is not in keeping with the high quality of the rest of the site:

- The current location of coach parking adjacent to the main memorial building detracts from the significance of the precinct and architectural and landscape integrity of the site.
- The café location is a pre-eminent position on the site and the design and elevated placement of the existing café does not meet visitor needs well or enhance the architectural integrity of the developed site. The new café design, whilst not elaborate, is in keeping with the standard expected of the site.
- The existing temporary car park is an unsatisfactory facility not in keeping with the Site Development Plan and has degraded the landscape.

10 The development of the Eastern Precinct is required to improve visitor safety, access and facilities in the Precinct, particularly for school children and coach groups. Schools are attending the Australian War Memorial in record numbers (currently almost 120,000 booked school students per year) and initiatives both in Federal and State Governments are aimed at increasing student visits. The schools' entrance is on the eastern side of the Main Building close to current coach parking. Under the proposed design, the current coach parking is relocated and replaced by a Memorial Courtyard containing the National Service memorial. Students will be dropped off next to the new courtyard from where they can safely access the schools' entrance for their visit. Students will also be able to safely access the café and picnic areas and take their lunch and recreation in appropriate surroundings.

11 Coach groups are a significant audience to visit the Memorial, making up one fifth of all visitors. Dropping students and coach groups off at a safe location close to the front of the main memorial building at the Memorial Courtyard and National Service memorial will provide all visitors with a better introduction to the site and the commemorative nature of the Memorial. In addition, the courtyard surrounding the National Service memorial will provide ideal gathering spaces for arriving visitors and groups including students about to enter the Education Space. This is a much better alternative than the current mix of visitors and arriving coaches at the coach parking area.

12 All visitors will benefit from easier and safer access to external facilities which currently are difficult to access for mobility impaired and some older visitors due to steep inclines to the existing café. The new café will include public toilets and shaded outdoors areas where coach and school groups can be properly serviced with access meeting current codes for elderly and mobility impaired visitors.

13 Capacity for car parking at the Memorial site has been an issue for many years and overflow parking during peak operation currently reaches into the suburb of Campbell, which has drawn complaints from residents. Additionally, there is no all weather parking available on the site which again, can be difficult for many visitors. A large capacity (approximately 200) underground car park close to the entrance will bring parking at the Memorial up to the standards enjoyed by most other national institutions whilst retaining the landscape integrity of the site.

Description of proposal

14 Following an Expression of Interest procurement process, based on the Royal Australian Institute of Architects Qualifications Based Selection Process, Johnson Pilton Walker were selected to provide Architectural and Landscape Architect design services for the Eastern Precinct development. Johnson Pilton Walker is a well established and experienced architectural and landscape firm that has successfully completed similar works, including the redesign of the Parade Ground at the Memorial, the National Portrait Gallery and re-invigoration of the Sydney Opera House. Their demonstrated appreciation of the task and involvement in the Site Development Plan makes them an appropriate choice to undertake the architectural and landscape services for the development of the Eastern Precinct.

15 The Eastern Precinct development is made up of several key elements including; Memorial Courtyard incorporating the National Service memorial; Eastern Café Court and Café; underground car parking with accessible parking spaces; coach parking; and landscaping.

16 **Memorial Courtyard** – The Memorial Courtyard is a formal architecture and landscape design which includes geometric paved and grass areas and facility for placement of commemorative plaques on the perimeter. The Courtyard will provide both safe and logical egress between the main memorial building entrance and coach drop-off points. The relocation of coach parking from this area and development of the area into a formal landscaped space appropriately links the main memorial building and the Eastern Precinct and provides visitors with an aesthetic and safe landscape and commemorative experience prior to entering the main memorial building.

17 **National Service Memorial** – In August 2002, the Council of the Australian War Memorial agreed that a request from the National Servicemen's Association of Australia for formal recognition of national service would be appropriate within the grounds of the Memorial. The proposed Memorial Courtyard was considered the most suitable site and the location was approved contingent on the larger development of the Eastern Precinct. The National Service memorial is the centerpiece of the Memorial Courtyard and will be a simple and dignified fountain complementing the existing architecture. Water will be used sparingly and is proposed to be recycled and collected from building runoff. The memorial has been designed to stand alone without the fountain element should it be necessary in periods of prolonged drought. The cost of the National Service Memorial will be funded by the National Servicemen's Association of Australia.

18 **Eastern Café Court and Café** - The Eastern Café Court links the Eastern Precinct and café to the Memorial Courtyard and main memorial building. It will provide; a coach drop off point; logical and accessible egress between the main memorial building and eastern precinct facilities including the café and public toilets, an assembly point for groups and outdoor seating.

The primary function of the café is to provide quality, quick turnover mid-range café style food services for Memorial visitors in an appropriate dining and service arrangement. A key element of this is increasing the internal café seating area by 20

percent and designing the service arrangement to cope with the broad demographic mix of visitors to the Memorial and the different service requirements they have i.e. large coach groups, school groups, individuals, couples and families. The kitchen and service design has been given detailed consideration by a specialist catering consultant who has also considered the broader role the café will play in site function catering preparation and as an after hours venue. The building itself is an energy efficient design with innovative heating and cooling arrangements and orientation to take advantage of solar efficiencies, seasonal dining preferences and site views. The architectural design focuses on the use of natural light to enhance the simple classic themed but contemporary architecture and predominately uses glass, preformed concrete columns and external concrete trellis. Capacity is approx 100 seats inside and 120 seats outside. The building will be less dominate in the site than the existing café and compliment the existing elements of the site.

19 **Underground car parking** – The current temporary carpark detracts from the landscape and overflow parking occurs on adjacent residential streets. The new underground car park will provide under-cover car parking for approximately 200 vehicles, including a number of accessible car parking spaces. This brings the Memorial up to the standards enjoyed by most other national institutions and ensures ability to deliver the best possible visitor experience through good access and increased parking (under-cover) close to the main memorial building. The size of the underground car park has been established by a combination of factors including known parking pressure and impact of the footprint on established trees in the precinct. The design of the car park will use natural light and ventilation where possible and decrease the need for mechanical ventilation and associated energy use. Access to the underground car park will be from the east access road off Fairbairn Avenue. Traffic studies conducted by our traffic consultant advise no changes are considered necessary to local intersections to accommodate the development and that the approximately 35% increased parking delivered on the current capacity (which includes the current temporary car park capacity) has no significant adverse traffic impacts. Visitor statistics collected by the Memorial show overall visitation at the Memorial has increased by 5% since 2005-06 (10% since 2002-03). We estimate that increases of 2-3% over three years will continue based on recent observed increases in visitor numbers during particular times throughout each year or when new galleries or events are launched. The proposed new underground parking effectively meets this demand and, in addition, the Site Development Plan has identified potential for future additional car parking.

20 **Coach parking** – The development of the Eastern Precinct will see the relocation of coach parking from the area immediately adjacent to the main memorial building where currently embarking and disembarking passengers are mixed with coach and disabled parking. This situation creates an unsatisfactory access point to the Memorial for which there are real safety concerns particularly for school children who are visiting in record numbers. Coach parking so close to the main memorial building also detracts from the solemnity and architectural presence of the building and intrudes on views within the Parliament House Vista. Under the new design, designated coach parking will be increased from the current six to eleven coaches located in a designated parking area, off Treloar Crescent, in the north east of the site. A drop-off zone will be provided at the Memorial Courtyard/Eastern Café Court

location with adequate room for several coaches. In addition, the Site Development Plan has identified potential for future additional coach parking.

21 **Landscaping** – The landscape proposal for the Eastern Precinct follows the principles of the Site Development Plan which acknowledges the fundamental counterpoint between the formal, exotic and commemorative nature of the Western Precinct and the informal, native species and recreational nature of the Eastern Precinct. The Memorial Courtyard and National Service memorial adjacent to the main memorial building is a formal commemorative landscape whilst the balance of the Eastern Precinct is an informal native landscape allowing for low maintenance and low water consumption. There will be increased plantings of endemic eucalypts in the informal landscape to supplement existing trees. The development of the site will include the reinstatement of landscaping to replace the temporary car park and verge screening for the coach park.

Options considered

22 The development of the Eastern Precinct covers a number of elements to enhance the site, access and visitor safety concerns and improve visitor amenities. A range of design and delivery options have been considered from the initial Site Development Plan and concept design stages.

23 A tunnel accessing the main memorial building from the underground car park, with a new internal lift to the entrance foyer, was considered. After consideration of potential heritage and engineering requirements including the importance of visitor entry experience to the main memorial building and loss of valuable floor space in the building this element has been deleted. The underground car park design still allows the potential to revisit the tunnel concept in the future.

24 Site potential for additional coach and above ground car parking has also been considered. The new parking capacity proposed for the development has been estimated to satisfy demand and sit comfortably in the site. However the design does allow for future extension if felt necessary. Extension would involve significant modification to an open storm water channel in the north east of the site and was not considered cost effective at this stage.

25 During initial planning stages options for delivering a staged construction program were considered. The possibility of undertaking the works in two stages by completing new coach parking under stage one, before closure of the existing coach park and the remainder of the site, was considered. This would have added up to three months to the duration of the project and meant higher establishment costs and longer general site, visitor and café business disruption. The impact of a longer construction period on significant ceremonies e.g. ANZAC Day was also considered (the project schedule is currently expected to fit between ANZAC Day 2009 and ANZAC Day 2010).

26 The provision of alternative coach parking and safe egress to the main memorial building for coach visitors and school groups during construction has been considered by the project Traffic Consultant. Appropriate coach parking can be

established on the southern side of Treloar Crescent behind ANZAC Hall with safe egress to the site and the main schools' entrance from that location. This additional on-road coach parking has been approved by the ACT Government and could be implemented on a permanent basis in the future if demand requires it.

Reasons for adopting proposed course of action

27 A single stage construction program has been selected as the most efficient and cost effective method to undertake the works. This strategy takes advantage of the opportunity to undertake all works concurrently and as a result; minimise costs; reduce the overall project impact on day to day operations and use of facilities; and maximise construction scheduling efficiency opportunities.

28 The works proposed for the Eastern Precinct represent the next stage in a decade long program of site development which has included the Western Precinct, ANZAC Hall, the Parade Ground and the new CEW Bean building.

29 A proposal to government in 2007 secured funding of \$12.5 million over three years to redevelop the Eastern Precinct to the same high standards as the rest of the Memorial appropriate to its Commonwealth and National Heritage status. The Memorial has identified further funds from its budget to include the development of the café as part of the concurrent works.

30 The National Service memorial, to be located in the proposed Memorial Courtyard, is a significant element of the project and has been in planning since 2002. The National Service memorial will be constructed as part of the Eastern Precinct development however, the National Servicemen's Association of Australia will pay for its design and construction.

Environmental impact assessments

31 The development of the Eastern Precinct is expected to have no adverse impact on the environment and water quality once construction works have been completed. During the construction period preventative measures including soil and erosion control will be taken to ensure that any impact to the environment is controlled in accordance with environmental and construction standards, policies and regulations. Noise created during the development is not considered to be significant.

32 The new café and underground car park are unobtrusive and well away from residential areas. The coach park design includes measures to soften and screen its visual presence in the north east corner of the precinct. Traffic studies advise no changes are considered necessary to local intersections to accommodate the development and that the development has no significant adverse traffic impacts.

33 The Australian War Memorial lies at the upstream end of the overall catchment. There is an open channel located on the north-east of the site and runs across to the east and under Fairbairn Avenue. It is proposed to part cover the channel to allow for coach parking.

34 The proposed stormwater design will use kerb and gutters and inlet pits to drain stormwater into the existing pipe network and ensure all existing overland flows are maintained and any additional flow is controlled within the road reserves or landscape areas. Stormwater drainage will be designed in accordance with relevant Australian Standards and Territory and Municipal Services (TAMS) design codes.

35 The environmental design concepts for the project consider energy efficiency, water efficiency, the use of natural daylight and energy efficient heating and cooling systems. The café will use natural light and natural ventilation whenever outside conditions allow and use energy efficient hydronic slab tempering to provide radiant heating and cooling. This enables building temperature control bands to be set at wider parameters meaning significant energy savings. The underground car park design also features use of natural light and natural ventilation with Carbon Monoxide Monitoring controlled variable speed drive exhaust fans. Water efficiencies include the use of best practice plumbing infrastructure and native plantings with sub-soil drip irrigation where required. Rain, and waste and storm water collection for reuse is also being investigated.

36 Although a small number of existing trees will be lost they are not significant trees identified in a tree survey of the precinct and the size of the underground car park has been carefully considered to reduce impact on existing trees. Significantly, the overall number of trees will be increased by the removal of the temporary car park and reestablishment of vegetation in this area.

Heritage considerations

37 The Memorial precinct is a place entered in the Commonwealth and National Heritage Lists, the Register of the National Estate and the Royal Australian Institute of Architects (ACT Chapter) Register of Significant Twentieth Century Architecture.

38 As required by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) the Memorial, with the assistance of Godden Mackay Logan Heritage Consultants, has developed a Heritage Strategy and undertaken a program to identify and assess heritage values and prepare a Heritage (Asset) Register for the Memorial. Godden Mackay Logan has also assisted with the preparation of the Memorial's draft Heritage Management Plan. The draft Heritage Management Plan outlines the Johnson Pilton Walker Site Development Plan, acknowledging the high standard of landscape design and presentation in the Western Precinct and Parade Ground; however, the Eastern Precinct is in need of renewal to provide a cohesive landscape setting for the Memorial. The draft Heritage Management Plan provides management guidance to protect and enhance the heritage values of the Memorial. It specifically mentions that the current bus parking is undesirably close to the main memorial building and that the temporary car park requires upgrading (reinstatement to open woodland) befitting the national significance of the place. The draft Heritage Management Plan also recommends ensuring that any parking and traffic arrangements do not have an adverse affect on the setting of the Memorial's Campbell Precinct.

39 Johnson Pilton Walker has demonstrated their capability to further progress the Site Development Plan and their appreciation and understanding of the heritage significance of the site. In addition, the Memorial has engaged Godden Mackay Logan to provide independent advice on any heritage issues associated with the development of the Eastern Precinct, assist with discussion and consultation with relevant authorities and prepare a Heritage Impact Assessment of the completed design. An initial review of the Eastern Precinct concept by Godden Mackay Logan based on the assessment and management policy developed in the draft Heritage Management Plan, confirms that the concept provides opportunities to enhance the heritage values of the Australian War Memorial through a lasting quality design which complements its heritage values and fits in with the broader precinct setting and the Parliament House Vista conservation area.

40 Based on advice from Godden Mackay Logan and their continuing input into the design process and consultation with Department of the Environment, Water, Heritage and the Arts (DEWHA) we are confident that the Eastern Precinct design enhances the heritage values of the site.

Details of consultation

41 The consultation process for the development of the Eastern Precinct will consist of awareness raising, briefings with key stakeholders, a Public Forum (27 August 2008) and one-on-one meetings where appropriate. The provision of information to the community and stakeholders will be ongoing for the period of consultation and construction.

42 Community and stakeholder awareness of the project will be raised using a variety of mechanisms including letterbox drop, correspondence, print media, and a project website. The project website will be maintained throughout the project. Briefings with key local stakeholders will be undertaken to explain the development and discuss their position on key issues.

43 Key stakeholder groups identified include:

- National Capital Authority (NCA)
- Department of the Environment, Water Resources, Heritage and the Arts (DEWHA) – Heritage Division
- Department of the Environment, Water Resources, Heritage and the Arts (DEWHA) – Government Energy Efficiency team
- ACT Planning and Land Authority (ACTPLA)
- Territory and Municipal Services (TAMS)
- Memorial Staff
- Local Residents
- RSL
- Friends of the Memorial
- National Trust of Australia (ACT)

- National Service memorial Advisory Group (includes members of the National Servicemen's Association of Australia).
- Visitors
- School groups
- Australian Capital Tourism
- AWM Catering contractor
- Coach Companies
- Tour Operators

44 The Memorial has had initial consultation with DEWHA and the National Capital Authority (NCA) and consultation will continue during development of the design. The Memorial will refer the development (action) to the Minister for DEWHA for consideration in line with the EPBC Act. The Memorial will continue to consult with the NCA prior to submitting the final plans to them for works approval after the PWC process is complete. The Government Energy Efficiency Team in DEWHA was briefed on the proposal 15 August 2008.

45 The National Servicemen's Association of Australia is a key stakeholder for the Eastern Precinct development. Since the Council of the Australian War Memorial endorsed the concept of a Memorial within the grounds of the precinct in 2002, consultation with the association has been ongoing. The association continues to play an integral role in the design of the National Service memorial.

TECHNICAL INFORMATION

Location

46 The Australian War Memorial Campbell Precinct is located in a crucial symbolic location at the terminus of the land axis of Walter Burley Griffin's plan for Canberra. It is located in the Australian Capital Territory suburb of Campbell, on a site bounded by Limestone Avenue, Fairburn Avenue and Treloar Crescent. The Precinct has an area of approximately 14 hectares, including the whole of Section 39, Campbell, and is located at the foot of Mount Ainslie. The Eastern Precinct occupies approximately half this area.

Scope

47 The scope of the Eastern Precinct proposal incorporates the following:

- Structural elements of reinforced and pre-stressed concrete to form the underground car park with the car park roof forming the base of the Memorial Courtyard, coach drop off area, café and forecourts.
- Civil works including modifications to existing roads, surface coach parking, an access road to the café service area and conversion of part of an existing open drain to an underground pipe drain to enable the coach parking to be constructed above the drain.
- Landscaping including re-establishment of grassed areas and trees, paving, crushed aggregate surfaces and some other plantings.
- Building works including the café comprising pre-cast concrete structural elements, glass facades and a metal roof surrounded on all sides by prominent concrete band beams. A separate waste enclosure is also proposed.
- Mechanical, electrical and hydraulic services to support the facilities including lighting, electronic security, power supplies, gas supplies, fire services, drainage including rain water collection, cooling, heating, ventilation, water supplies, sewerage and trade waste for the café.

Planning and Design Concepts

48 Master Planning

The development is in accordance with the Australian War Memorial Site Development Plan and draft Heritage Management Plan.

49 Codes and Standards

All building and access areas will be designed in accordance with the Building Code of Australia (BCA) and all other relevant codes and Australian Standards.

50 Provision for People with Disabilities

The development will be designed to meet accessibility provisions of the BCA and AS 1428 – Design for Access and Mobility, to further improve universal access for all visitors to the Memorial. The proposed cafe building and forecourt area sits much lower than the existing building, providing easier access across the site. A unisex accessible toilet will be provided within the new cafe building.

Car parking spaces for persons with disabilities will be located in the basement car park. It is designed to comply with AS 2890.1 with a wheelchair accessible entry ramp located close to the entrance of the main memorial building. The main memorial building has existing lift access from ground level and lift access within the building.

51 Occupational Health and Safety measures

The development will improve access and safety for visitors, including school children and elderly people by the relocation of coach parking from the existing area immediately adjacent to the main memorial building. Currently, embarking and disembarking passengers are mixed with coach and parking spaces for persons with disabilities.

External paving and internal floor finishes will be selected to minimise the risk of slipping. The general forecourt and cafe areas will be designed to meet minimum slip resistance of R10 with the ramps and stair nosing to R11. The kitchen areas will also be designed to meet the requirements of AS 4674.

The Cafe is designed for natural ventilation that provides for high air change effectiveness. The 100% fresh air delivery with no air recirculated within the building will minimise the passing of airborne contagion. Building materials including paint and furniture will be selected to meet low-VOC emission benchmarks.

Heritage Issues

52 The Memorial has engaged a specialist heritage consultant to review the design to ensure consistency with the draft Heritage Management Plan for the site and to confirm that the design retains the heritage values of the Memorial. Presentations have been made to the NCA and the DEWHA and at this stage of consultation there are no known heritage related issues.

Landscaping

53 Most of the landscaping works for the development will be informal and native in character in keeping with the Site Development Plan. As many trees as possible will be retained in the site development with careful consideration given to design options to minimise disruption to existing vegetation. There will be increased planting of endemic species to supplement existing trees in providing shaded outdoor recreation and picnic areas.

Landscaping works for the development are spread across a large area of the eastern side of the site. Landscape reinstatement, development and services will include;

- New parking facilities and any new drainage structures;
- Memorial gardens;
- Areas around the café; and
- Reinstatement of the landscape affected by the project works.

Structure

54 The geotechnical investigation has shown that the sub-surface conditions on the site generally comprise sandy silts and clays with weathered rock at depth. No construction difficulties are expected.

55 The typical basement column grid of 8.1m has been selected to optimise car parking bays. The forecourt and Memorial Courtyard slab will be post-tensioned to minimise structural beam and slab depth.

56 The precast concrete column and beam elements on a 5.4m grid for the cafe structure have been designed for structural efficiency, planning simplicity and modularity. Efficient planning and standardisation of construction techniques means minimal material and wastage with reduced construction time.

57 The main cafe roof is designed with a perimeter concrete edge and steel framed structure for the internal column free wide span. This roof design is also integral to the sustainability initiatives of using the heated ceiling cavity to drive the passive ventilation system and skylights for increased daylighting.

Site Works

58 Stormwater Channel

It is proposed to part cover the stormwater channel located on the north-east of the site for the new coach parking area. On-Site Detention (OSD) will be investigated and, if required, will be provided according to the Territory and Municipal Services (TAMS) stormwater policy. The proposed stormwater design will use kerb and gutters and inlet pits to drain stormwater into the existing pipe network. The design will ensure that all existing overland flows will be maintained and any additional flow will be controlled within the road reserves or landscape areas.

59 Water Quality, Verge Management and Erosion Control

To maintain the water quality during the construction stage, soil and erosion control measures will be implemented including silt fences around the site and sand bags upstream of existing kerb inlet pits. A “Verge Management and Erosion Control Plan” showing the proposed environmental protection measures will be prepared in accordance with the principles specified in the Environment ACT “Erosion and Sediment Control During Land Development”. This plan will form the basis of the Environmental Protection Agreement if the contractor does not already hold an Environmental Authorisation with the Environmental Protection Authority.

Materials and Finishes

60 Materials and finishes have been selected to complement the heritage values of the main memorial building and associated buildings with emphasis on quality, durability, cost effectiveness and low maintenance.

61 Basement Car park

The floor in the basement car park will be concrete slab with a clear seal. The underground walls will consist of block work walls and off-form concrete retaining wall where visible. The columns will be off-form concrete with parking bay signage and the ceiling will also be off-form concrete with exposed services.

62 Memorial Courtyard and National Service Memorial

The Memorial Courtyard features precast concrete pavers and grass areas. The paving (and plinths) surrounding the National Service memorial in the centre of the Memorial Courtyard will be granite and Wondabyne sandstone. The National Service memorial itself will be constructed of noble materials in sympathy with the site; bronze for the fountain as used in the Roll of Honour, sandstone paving and outer plinth as used in the main memorial building, and black granite fountain base as used in other memorials in the Western Precinct.

63 Café Forecourt

The materials proposed for the café forecourt include the use of precast concrete pavers and steps, stabilised decomposed granite gravel and a precast concrete plinth walls. The café forecourt will include a pergola off the café structure fabricated from precast concrete columns and beams.

64 Café Pavilion

The floor in the new café will be a hard wearing polished concrete slab. The current design proposal allows for walls to be fabricated from double glazed modules and framed doors. There will also be double glazed top light and motorised louvers. The roof will be constructed from metal similar to the ANZAC Hall and CEW Bean buildings with skylights to introduce natural light. The pergola structure in the pavilion will be the same precast concrete columns and beams with cast-in services.

65 Coach Parking and Service Road.

The coach parking will have flush concrete kerbs with an asphalt roadway. The service road will be bitumen sealed roadway with a surface treatment sympathetic to the surrounding landscape colour. The garbage enclosure along the service road will be a rendered block work wall.

Environmentally Sustainable Design

66 The Eastern Precinct development presents a unique opportunity to create a space that demonstrates leadership in sustainability. The initiatives are integral to the design and achievable within the cost parameters established by the brief. The design aims to deliver an integrated ESD and services solution that provides cost effective operation and demonstrates a responsible use of capital.

- 67 Initiatives to minimise the development's environmental footprint include;
- Water Conservation and Management (including stormwater);
 - Daylighting;
 - Ventilation and Thermal Comfort; and
 - Indoor Air Quality
 - Energy Efficiency - the reduction of non-renewable energy sources;

68 Water Conservation and Management

Rain water, waste water and storm water have been identified for possible reuse in the development. In addition to water re-use options, efficient waterless urinals, dual flush toilets, six star rated tap ware, and native plantings with drip irrigation (using collected rain water) are proposed for the project.

69 Daylighting

The design of the building provides the opportunity to introduce a high degree of natural light and visual access to the Outpost café and underground car park. Natural light will be provided to the café through glass walls and openings and the integration of skylights in the roof. Natural light will be provided to the underground car park through openings for passive makeup air and at perimeters where possible.

70 Ventilation and Thermal Comfort

Canberra has a diverse climatic range and it is important to design a building that is thermally comfortable at all occupied times. The design is for a "mixed mode" building which operates in a purely passive natural ventilation mode and switches to a heating or cooling mode only when required.

71 Indoor Air Quality

A mixed mode ventilation system can provide very high levels of indoor environment quality (IEQ) while maintaining high levels of thermal comfort for occupants. Another IEQ benefit besides thermal comfort is increased outdoor air flow which is due to the lack of recycled air.

72 Energy Efficiency

Air conditioning and ventilation for the building will be designed to maximise energy efficiency. A mixed mode system can greatly reduce energy demand compared to a fully mechanically ventilated system thus reducing the associated costs and greenhouse gas emissions.

- 73 The initial design concepts will be further developed including;
- review the benchmark design targets as well as requirements of BCA Section J Energy Efficiency;
 - modelling and computer simulations for overall building energy performance and energy efficiency;
 - further coordination with the design team to develop detail design of the building fabric, insulation, glazing and shading;

Mechanical Services

74 Café Air Conditioning System

Mixed mode ventilation will maximise the opportunity for the building occupants to feel a connection to the outdoors, benefiting from high fresh air rates and better air quality. This results in a significant energy saving by not requiring the operation of fans or heating/cooling equipment when they are not required.

Widening of typical temperature control bands and mixed mode ventilation means that the café will use natural ventilation whenever the conditions outside allow. For the café, the use of wider temperature control bands of 19°C-26°C has been proposed as occupants are typically more tolerant of wider control bands with the utilisation of a well designed natural ventilation system.

75 Car Park Ventilation

The car park is designed to maximise natural ventilation assisted by a CO sensor controlled exhaust system. The Memorial's car park usage pattern suggests most parking is for longer durations with low traffic movement. The use of sensor control enables the exhaust fan to come on during peak periods operating at low speed to reduce energy use.

76 Toilet Ventilation

The toilets will be naturally ventilated where possible and in accordance with AS1668.2 (1991)

77 Kitchen Ventilation and Air Conditioning

A dedicated kitchen supply air system will provide tempered outside air for makeup of kitchen exhaust air, whilst maintaining a negative pressure in the kitchen to prevent migration of odours into the café. A kitchen air conditioning system will also be provided to maintain acceptable working conditions.

78 Smoke Control Systems

The mechanical car park ventilation system would operate in fire mode for smoke purging at full speed with control provided at the fire control panel.

Electrical Services

79 The scope of electrical services proposed for this project comprises of the following main items:

- New main switchboard
- Distribution switchboards
- Lighting
- Emergency lighting
- General power
- Communications

80 The electrical supply to the new café and underground car park is through a new supply from the existing substation on the eastern side of the site. A new main switchboard will be installed with a distribution board to supply power to the underground car park, plant and external areas of the building. An additional distribution board shall be dedicated to the kitchen and also supply the café for general power and lighting.

81 All lighting shall utilise efficient lamp sources such as compact fluorescent, T5 linear fluorescent and metal halide lamp sources. All areas will also be provided Emergency and Exit lighting as required. Lighting for the coach parking facility will be provided in the form of pole mounted external area flood type luminaries. The lighting installation will be designed to comply with the relevant Australian Standards and the power supply will be provided from the existing distribution board in the CEW Bean Building.

Hydraulic Services

82 The scope of hydraulic services proposed for this project comprises of the following main items:

- Sanitary plumbing and drainage;
- Kitchen grease waste systems;
- Cold water supply;
- Domestic hot water supply;
- Storm water, rainwater collection, harvesting and reuse supply;
- Fire hydrant and hose reel; and
- Natural gas supply.

83 The existing ActewAGL sewer system will be adjusted to allow sufficient capacity to service the proposed new works. The commercial kitchen will be serviced with a grease waste treatment and pipe work system to allow discharge to the authority sewer. All systems shall be designed to minimise maintenance and maximize accessibility to the pipelines, plant and equipment.

84 An adjustment to the route of the existing site water main will be required to service the development. All cold water will be reticulated to all required points including a proposed alternative supply from a rainwater tank. A gas fired hot water generation plant is proposed with further investigation into alternate options to supplement the hot water supply including harvesting solar heat from suitably located solar collectors.

85 Drainage for the site will gravitate to either the existing site drainage or the TAMS system located in Treloar Crescent/Fairbairn Avenue. It is proposed that stormwater from the roof is collected to provide alternate water supply for non-drinking points including; irrigation; National Service memorial fountain; and wash down and toilet flushing.

86 Fire hydrant and fire hose services will be provided to comply with the requirements of the BCA. The water supply for the development will come from the existing fire hydrant service accessed for all existing Australian War Memorial buildings. The water supply for the hose reels will be serviced separately through a metered supply.

87 The gas supply will be provided by a separate meter and regulator. The system shall provide gas to the commercial kitchen, mechanical plant, hot water heater and outdoor dining space heater provision.

Acoustics

88 The aural quality to the National Service memorial is enhanced by the water fountain which assists in masking external noise in the central (contemplative) garden.

89 The internal cafe pavilion finishes have been selected for durability and ease of maintenance. The hard wall and floor finishes noise is mitigated by the use of highly absorptive perforated plasterboard and acoustic insulation ceiling.

90 The intrusion of plant noise in the public spaces is minimised by reducing the need for mechanical fan equipment. The naturally ventilated car park and passive ventilation system for the cafe has reduced the extent of mechanical equipment. The supplementary car park exhaust fan is designed as a series of small fans operating at low speed as required.

Fire Protection Services

91 Fire protection services for occupant life safety, asset protection and to facilitate fire brigade operations will be provided as required by the BCA, relevant Australian Standards, and Fire Engineering studies undertaken. Services include:

- Fire Sprinkler System;
- Smoke Detection and Alarm System;
- Occupant Warning System; and
- Portable Fire Extinguishers.

92 Fire Sprinkler System

The fire sprinkler system will be designed to BCA2008 clause E1.5 and AS2118.1-1999. It will be provided with a grade 3 water supply connected to the existing site ring main with automatic diesel booster pump set located in the basement plant room.

93 Smoke Detection and Alarm Systems

A smoke detection and alarm system will be installed to BCA2008 clause E2.2a and AS1670.1-2004. The café will be provided with thermal detectors in the kitchen area and the kitchen exhaust duct and smoke detectors within the café lounge. The FIP will also be connected to ACTFB dispatch centre to notify the fire brigade in a fire event.

94 Occupant Warning System

An occupant warning system will be installed to BCA2008 clause E1.5 and AS1670.1-2004. A network of speakers will distribute alert and evacuation tones throughout the building zones. Visual warning devices will be installed in areas having a high ambient noise level or where required by the BCA for hearing impaired persons.

95 Portable Fire Extinguishers and Fire Blankets

Portable fire extinguishers are to be provided throughout the building in accordance with BCA2008, clause E1.6 and AS 2444-2001. Fire blankets shall be provided to all kitchen areas and similar risk areas.

Security Services

96 A security and access control system is proposed to be provided to the café and underground car park. The proposed system will be consistent and linked to the existing AWM security system. An interface to the car park roller shutter shall be provided to allow designated staff access through the use of proximity cards. The control system allows the roller shutter to be open during business hours for public access to the car park.

CONSULTATION WITH AUTHORITIES

97 The following authorities and Departments have been contacted and/or consulted by the Memorial and its consultants during the preparation of this submission:

- Department of Finance & Administration
- Public Works Committee Secretariat
- National Capital Authority
- Department of the Environment, Heritage, Water and the Arts - Government Energy Efficiency Team
- Department of the Environment, Water, Heritage and the Arts – Heritage Section
- ACT Planning and Land Management
- ACT Building, Electrical and Plumbing Control
- ActewAGL
- ACT Fire Brigade
- ACT Territory and Municipal Services

IMPACT ON COMMUNITY

98 Car parking at the Australian War Memorial has been a problem for many years. Under the current parking situation, parking often overflows into the suburb of Campbell which has been drawing complaints from local residents. In addition, temporary car parking arrangements at the front of the Eastern Precinct are untidy and detract from the overall quality of the site. Under the proposed development, the construction of an underground car park in the Eastern Precinct alleviates the current shortage of parking on the site and the associated need for visitors to seek parking away from the main site during peak periods.

99 As part of a larger consultation process, the Memorial has commenced the consultation process with the local community to advise them of the proposed development, including impacts during construction. A public meeting is planned to

provide a forum to inform local residents of the scope of works planned and provide details of the proposed construction program. In addition, a meeting is planned with the Principal of Campbell High School to inform the school of the proposed works and the extent of construction on the site.

100 While some additional on-street coach parking will be required for about four months during construction, the completed project will reduce the overall impact of the Memorial's operations on the community by providing expanded and improved parking on the site. Options to route construction traffic (including dump trucks carrying spoil from the excavation) away from the main memorial building and surrounding residential streets and to retain temporary visitor and construction worker parking on the site during the construction period are being considered. This will reduce impacts on surrounding streets during the construction period.

101 A traffic impact study commissioned by the Memorial indicated that there are no significant adverse traffic impacts from the proposed parking development, coaches can be adequately accommodated in the proposed parking arrangement and pedestrian access is provided in a safe manner. Intersection counts at the four intersections surrounding the Memorial indicated that all but the main Limestone Avenue/ANZAC Parade/Fairbairn Avenue roundabout are operating well and without delay. The main roundabout is experiencing some delay during peak periods. However, the proposed works will have a negligible impact on traffic using this roundabout with an estimated 0.4% increase during the peak period.

102 As a result of this proposal, local jobs will be created during the construction project. It is estimated that at peak construction and facility fit-out periods a total of approximately 50 trades and labour positions would be operating on the project.

PROJECT COST

103 The budget for the Eastern Precinct Development, inclusive of escalation costs, contingencies, GST, and all professional fees and disbursements is \$19.54 million. The estimate excludes the cost of the National Service memorial, administrative costs and staff salaries.

PROJECT DELIVERY SYSTEM

104 The project delivery system proposed for the Eastern Precinct development is the engagement of a head contractor under a "lump sum" contract. Under this form of contract the design is fully developed and documented by the Memorial's design team for tender by construction contractors. This form of contract affords the Memorial a high level of design control and provides flexibility to manage design changes and unidentified latent conditions through variations managed within a construction contingency allowance.

PROJECT SCHEDULE

105 Expressions of Interest will be called for the construction contractor. Subject to a favourable report from the Public Works Committee and Parliamentary approval,

it is planned to call for tenders, under a Select Tender Process, in February 2009. Construction would be expected to commence after ANZAC Day in 2009 with scheduled completion prior to ANZAC Day 2010.

SUMMARY AND RECOMMENDATION

106 The development will improve visitor safety, access and amenity in the Eastern Precinct, reinforce and rejuvenate the character of the open natural landscape and bring the substandard Eastern Precinct up to the high standard of the remainder of the site. The new Memorial Courtyard will provide a site for the National Service memorial.

107 The architectural and landscape design is consistent with the Memorial's heritage values included in the Commonwealth and National Heritage Listing and realises the final stage of the Site Development Plan.

108 The design is expected to well satisfy the needs of the Memorial's stakeholders and visitors who will continue to be consulted throughout the development process.

109 The Australian War Memorial is satisfied that the proposed works as described in this submission are the most appropriate, timely and cost effective way to improve facilities in the Eastern Precinct as reflected by the Site Development Plan and the Draft Heritage Management Plan.

110 The proposal to develop the Memorial's Eastern Precinct is accordingly recommended to the Committee.

PLANS AND DRAWINGS

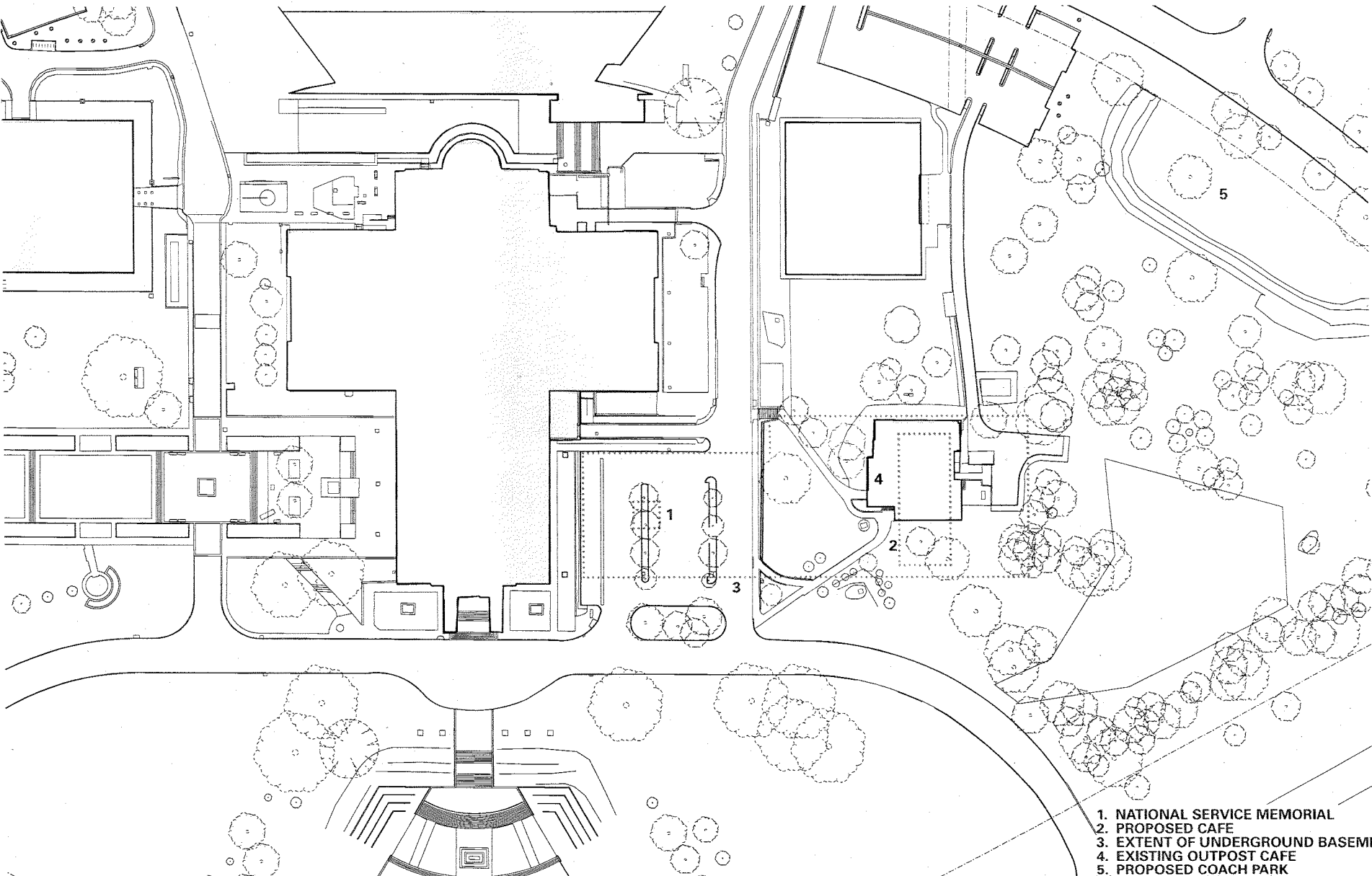
- Locality Plan
- Development Scope
- Proposed Site Plan
- Basement Plan
- Ground Floor Plan
- Roof Plan
- Elevations
- Sections
- National Service memorial
- Perspectives

Locality Plan



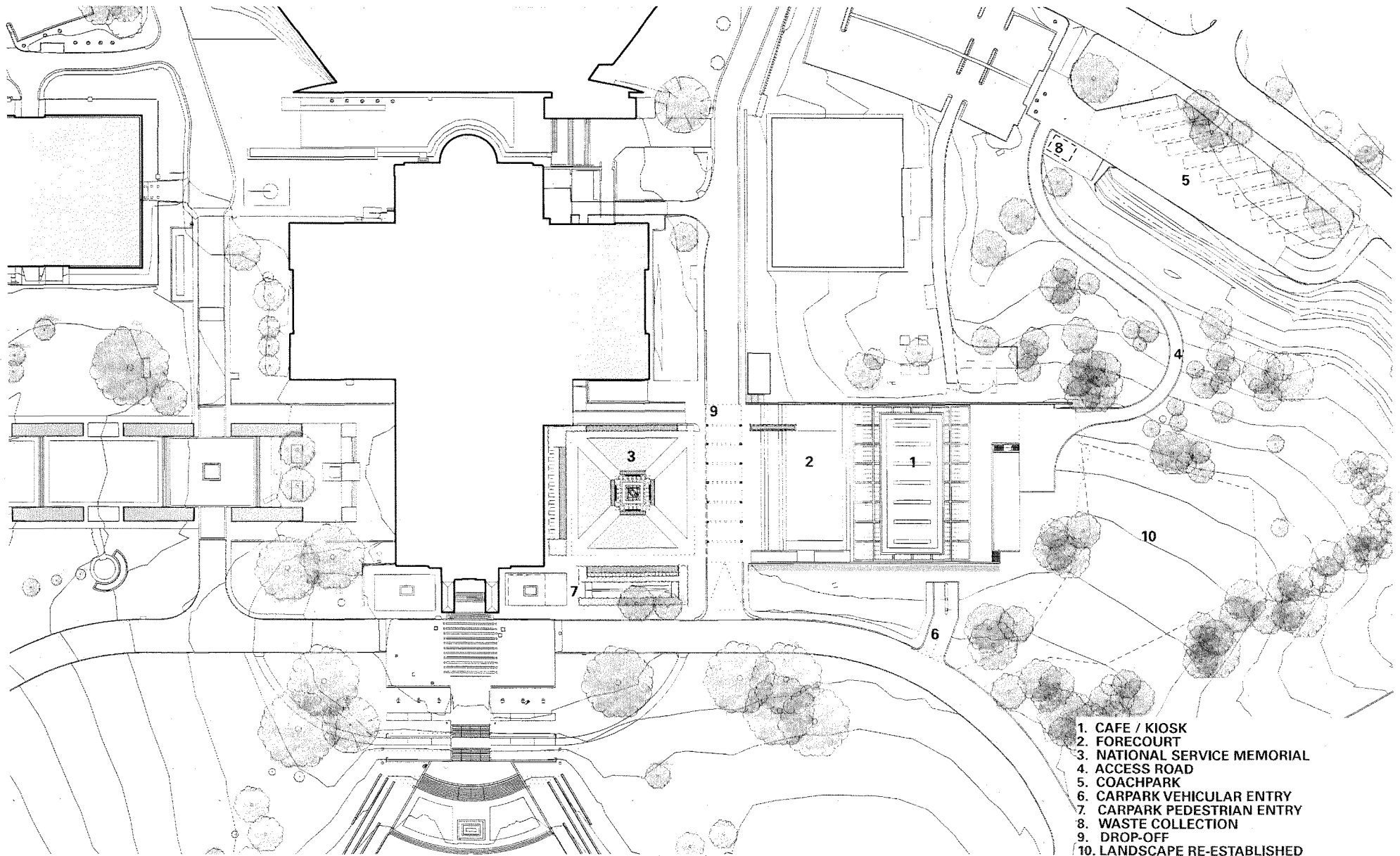
0 0.1 0.2 0.4 1.0km

Development Scope

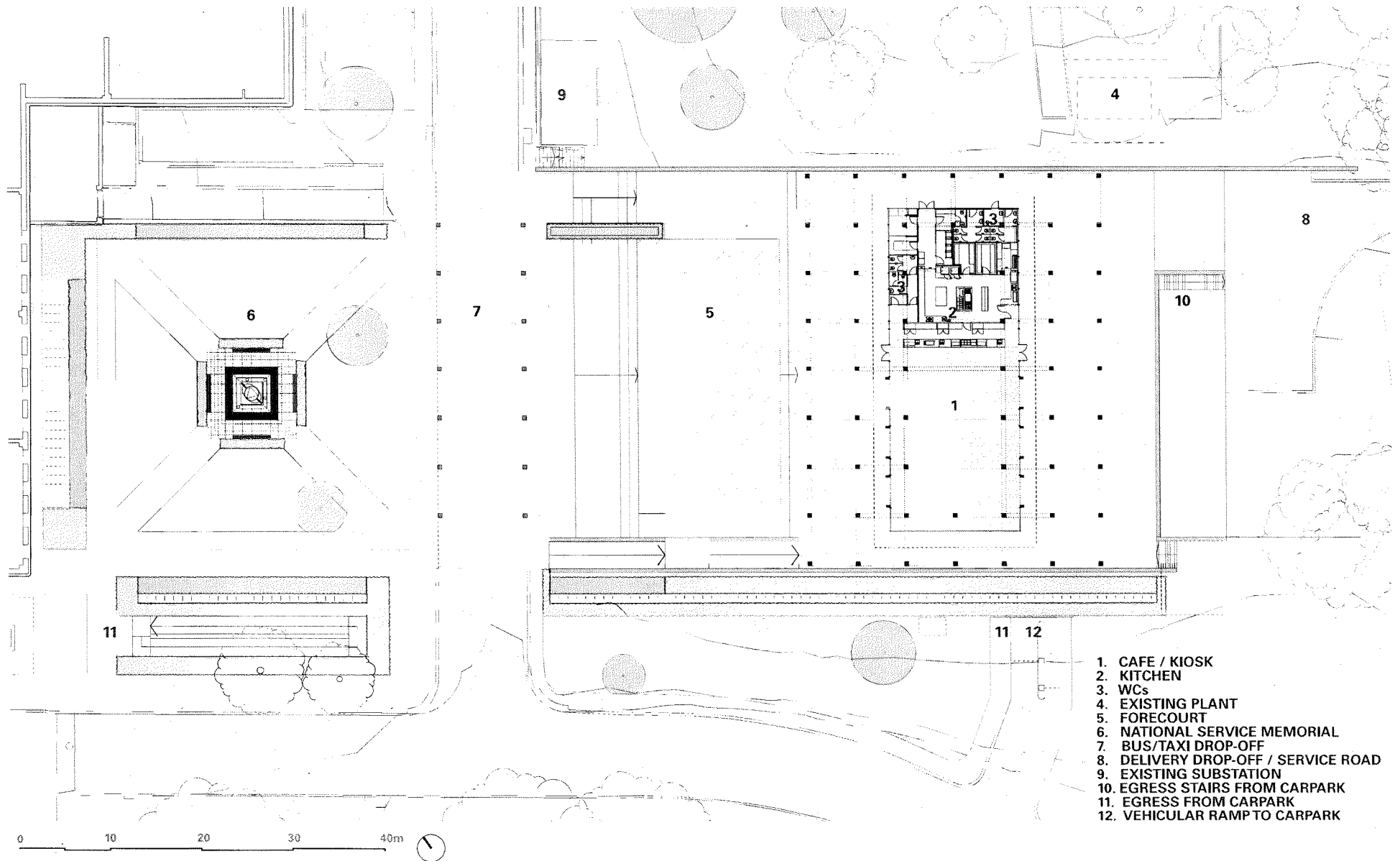


- 1. NATIONAL SERVICE MEMORIAL
- 2. PROPOSED CAFE
- 3. EXTENT OF UNDERGROUND BASEMENT
- 4. EXISTING OUTPOST CAFE
- 5. PROPOSED COACH PARK

Proposed Site Plan

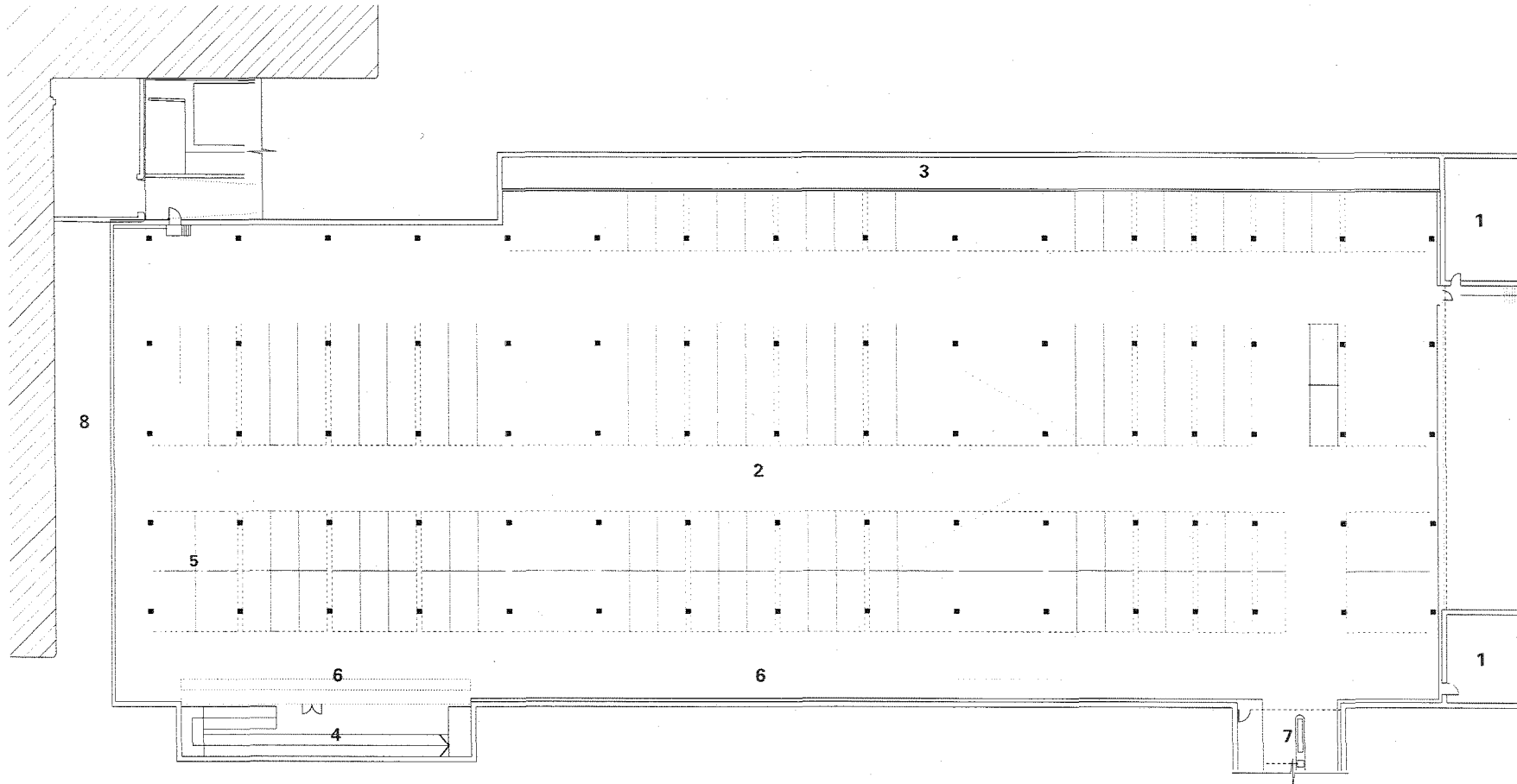


Ground Floor Plan



- 1. CAFE / KIOSK
- 2. KITCHEN
- 3. WCs
- 4. EXISTING PLANT
- 5. FORECOURT
- 6. NATIONAL SERVICE MEMORIAL
- 7. BUS/TAXI DROP-OFF
- 8. DELIVERY DROP-OFF / SERVICE ROAD
- 9. EXISTING SUBSTATION
- 10. EGRESS STAIRS FROM CARPARK
- 11. EGRESS FROM CARPARK
- 12. VEHICULAR RAMP TO CARPARK

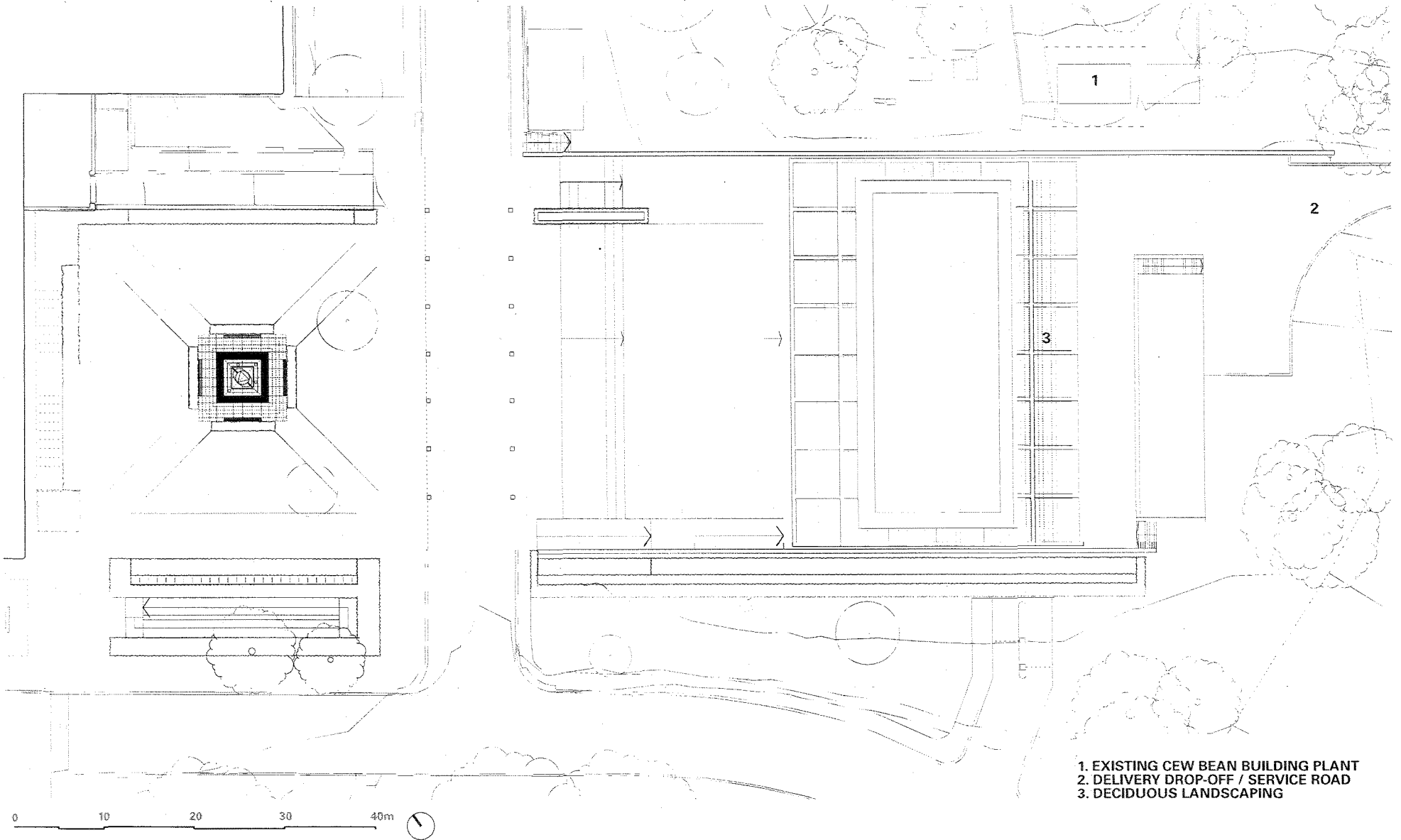
Basement Plan



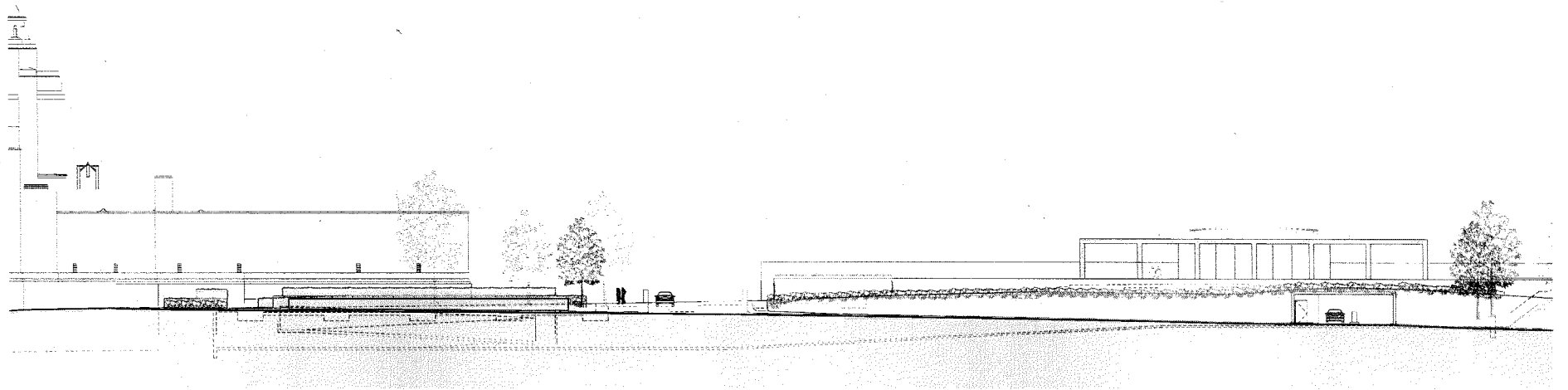
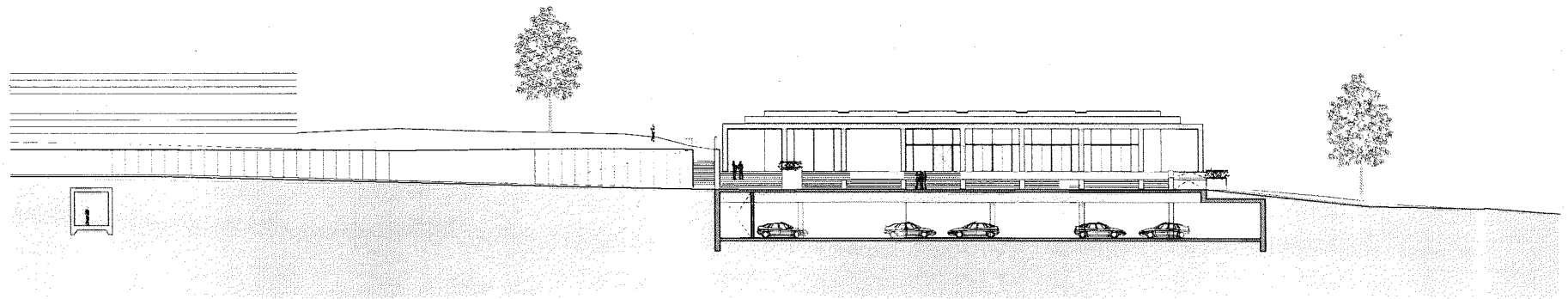
- 1. PLANT
- 2. CARPARK (191 SPACES)
- 3. EXHAUST PLENUM
- 4. OPEN RAMP ACCESS TO GROUND LEVEL
- 5. ACCESSIBLE PARKING (4 No.)
- 6. VENTILATION / LIGHT GRILLE OVER
- 7. ROLLER SHUTTER / GATE TO CARPARK RAMP (1:20)
- 8. VENTILATION GRILLE



Roof Plan

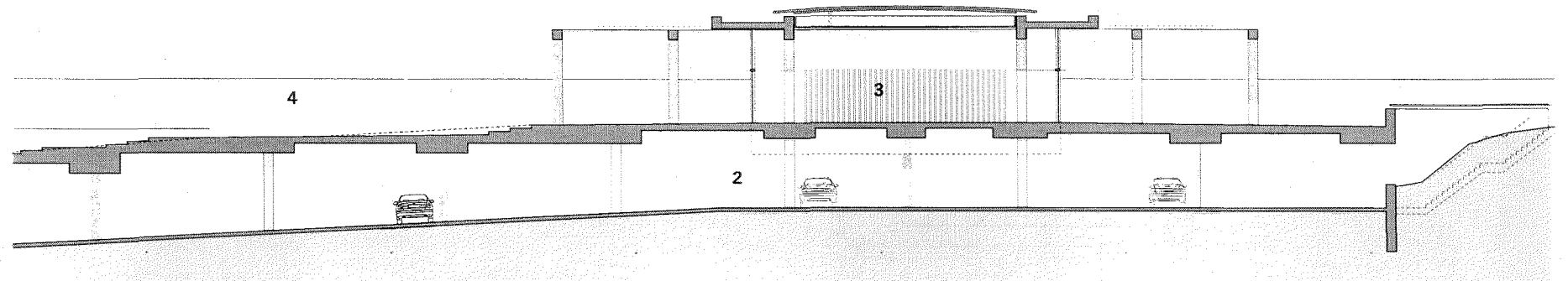
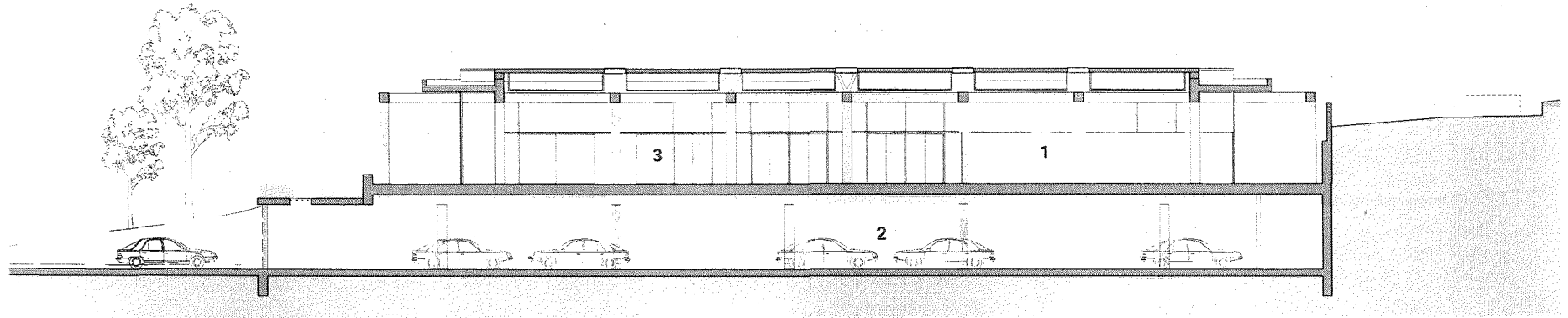


Elevations



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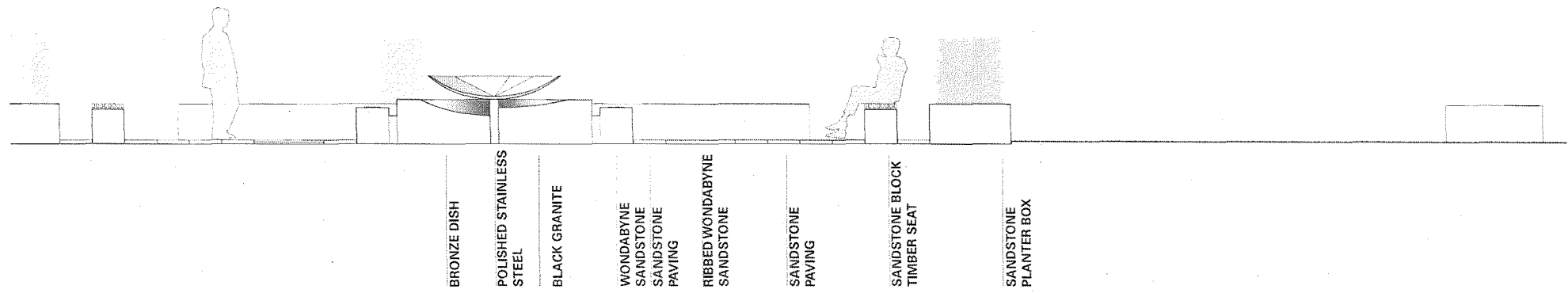
Sections



- 1. KITCHEN
- 2. CARPARK
- 3. CAFE/KIOSK
- 4. FORECOURT

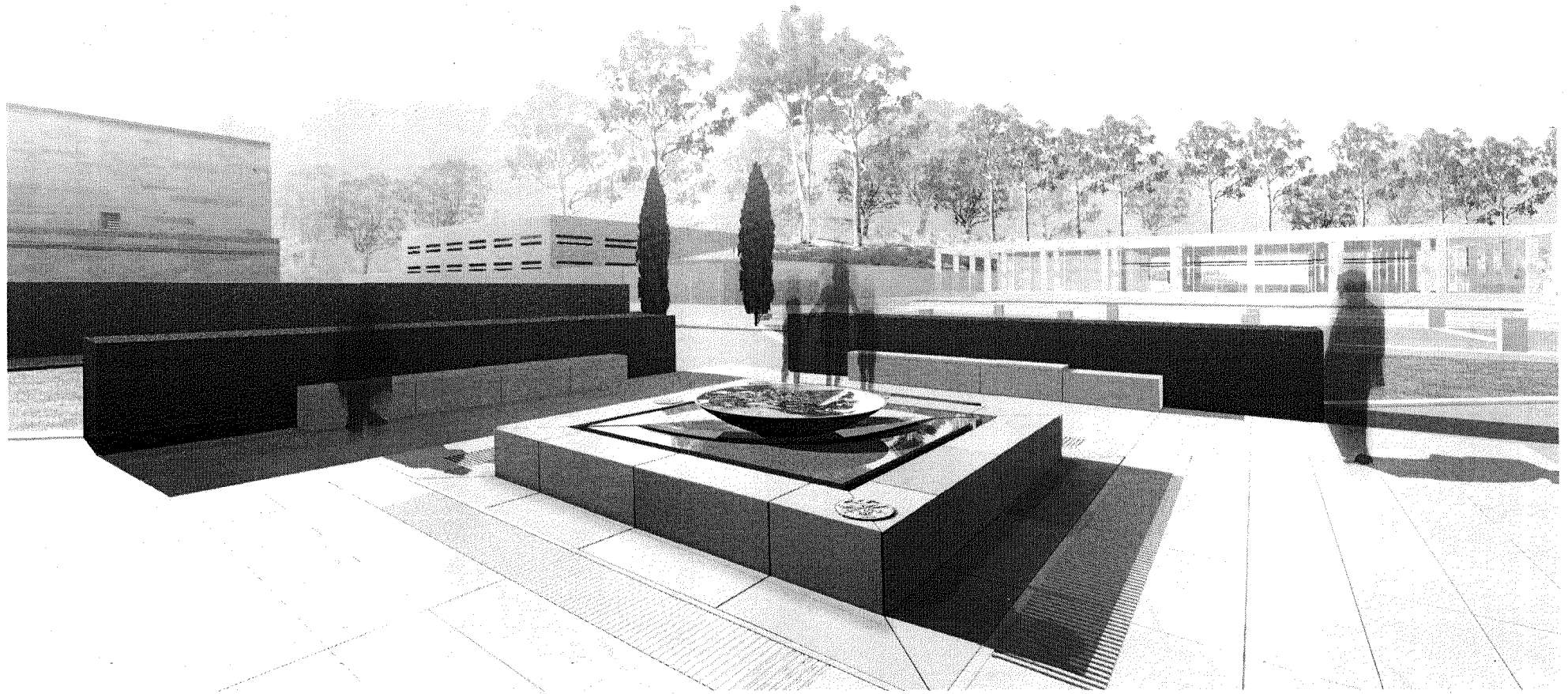
0 5 10 15 20m

National Service Memorial



0 1 2 3 5m

Perspective



Perspective

