EXTENT

PEOPLE-CENTRED
HERITAGE

HERITAGE INTERPRETATION PLAN
M12 MOTORWAY PROJECT

PREPARED FOR TRANSPORT FOR NSW

OCTOBER 2021 – FINAL

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Document information

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Executive summary

Extent Heritage Pty Ltd was commissioned by Transport for NSW to prepare a non-Aboriginal Heritage Interpretation Plan for the M12 Motorway Project.

This report presents eighteen heritage interpretive devices over five locations. The locations are the **Upper Canal System (Pheasants Nest Weir to Prospect Reservoir)**, the **McGarvie Smith Farm, Fleurs Aerodrome, Fleurs Radio Telescope Site** and the **McMaster Field Station**. These five sites have then been categorised into three themes; **water harvesting**, **agricultural research**, and **technological advancements**.

Themes

Water harvesting:

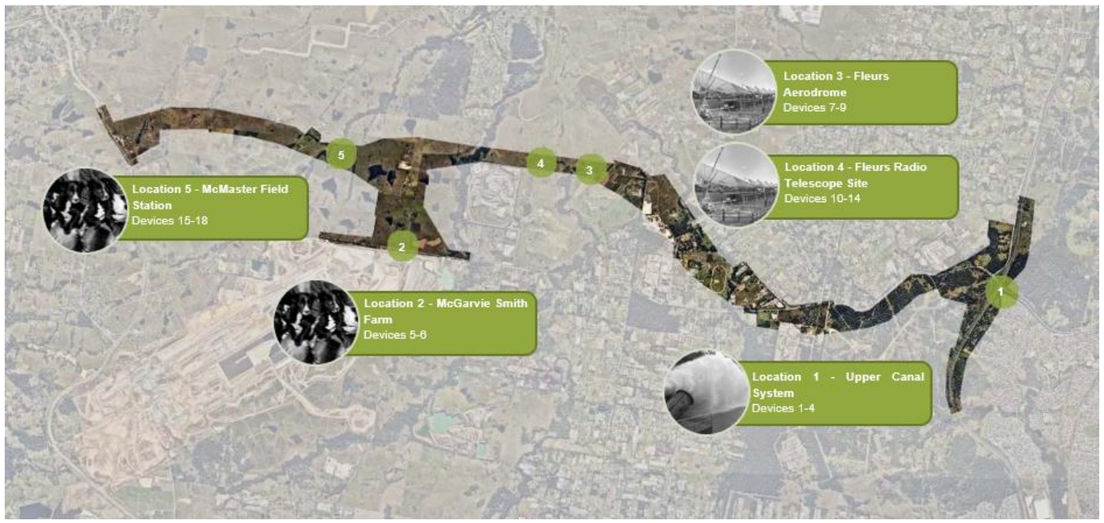
- The Upper Canal System was built in the 1880s to bring water from Sydney's south-west to the city to ensure a stable water supply for the growing city.
- The McGarvie Smith Farm researched practices for better conservation of water in agriculture to provide farmers more reliable water supplies, such as the turkey nest dam.

Agricultural research:

- The McGarvie Smith Farm was Sydney's first veterinary and animal husbandry school in Sydney and worked in the production and distribution of a single shot anthrax vaccine for livestock.
- The McMaster Field Station was a research facility that sought to bring greater scientific understanding to Australian agriculture.

Technological advancements:

- Fleurs Aerodrome was built during World War II as part of the RAAF's strategy of building dispersal airfields and has seen the development of aerial technology in the years since.
- The Fleurs Radio Telescope Site was a CSIRO research station in the 1950s and 60s which pioneered several new forms of radio telescope arrays.



Interpretative devices

This report proposes four interpretive device types for the M12 Motorway Project.

The first type of device is a series of **signs located along the shared pathway**. These signs contain various primary sources as well as a short account of the history and significance of the site.

The second type of device works in tandem with the first, a series of **inlays set into the shared pathway** which are designed to draw attention to the sign as well as alluding to the content of each sign.

The third device is an **interpretive landscape device located on both sides of the carriageway** indicating where the motorway intersects with what was once **Fleurs Aerodrome**.

The final device is an **art installation located along the shared pathway** create an artistic representation to the large cross array installations that were present at the **Fleurs Radio Telescope Site**.

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INTRODUCTION

1.1 Project brief

Extent Heritage Pty Ltd (Extent Heritage) was commissioned by Transport for NSW (TfNSW) to prepare a non-Aboriginal Heritage Interpretation Plan for the M12 Motorway Project (the 'M12 Motorway' or the 'study area'). The M12 Motorway will run over approximately 16 km between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham ('The M12 Motorway Project Boundary' or the 'Project Corridor', Figure 1). It is expected to be opened to traffic in advance of the opening of the Western Sydney International Airport. The road alignment traverses large land parcels that were used for a range of historical activities, including agricultural and astronomical research and contains or is adjacent to several listed heritage items.

Extent Heritage understand that the Aboriginal Heritage Interpretation Plan is being undertaken as a separate scope of works by Balarinji, and so Extent has not included Aboriginal themes and storylines in this report. We have however made consideration of the shared themes between Aboriginal cultural heritage and European heritage, and ensured they are reflected in the non-Aboriginal heritage interpretation where relevant.

Extent Heritage was previously commissioned by TfNSW to prepare the non-Aboriginal Heritage Interpretation Framework for the M12 Motorway. The framework was completed and submitted in February 2021. The Heritage Interpretation Plan will expand on select ideas raised in the Heritage Interpretation Framework as requested by TfNSW.

1.2 Objectives

The primary objective of the Plan is to ensure that the traditional, historical, and contemporary non-Aboriginal values of the study area are integrated into the project in a meaningful, culturally appropriate, and practical way. Interpretation is a way of celebrating and communicating values and can be an effective form of impact mitigation on projects of this scale.

This report aims to further develop the direction set out in the Heritage Interpretation Framework (Extent heritage, 2020) and to progress the scheme towards implementation. While the framework focused on developing a thematic structure for the scheme and decision-making on device selection, this Heritage Interpretation Plan (Plan) will provide detail on specific interpretation devices. This will include content development, concept designs and location advice.

Recognising that specific detailing and specifications for construction and implementation may change as the project evolves, this document provides indicative guidance intended to remain relevant across the life of the project.

1.3 Use of the Plan

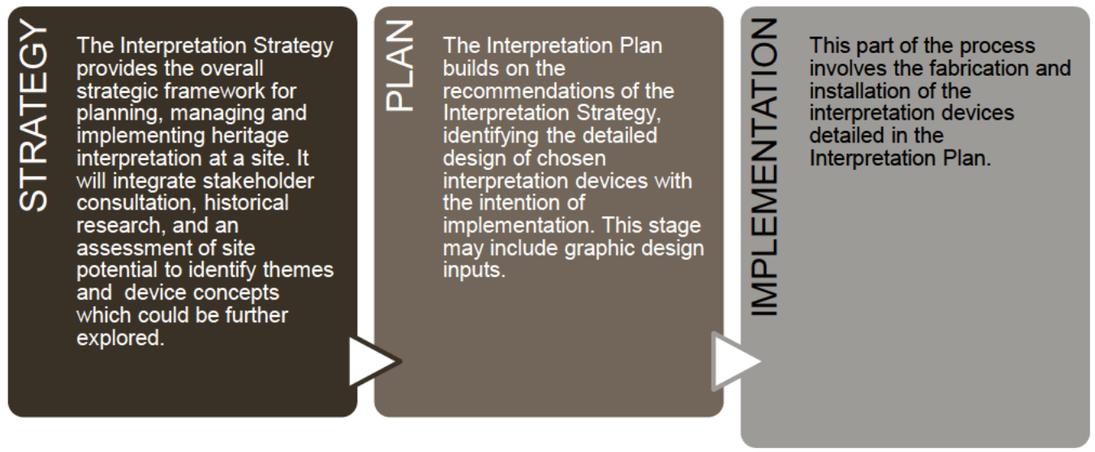
This Plan should be used and consulted to ensure that interpretative initiatives on the M12 are implemented in the cohesive and structured way that has been agreed to in this process. It provides details on all agreed devices, content and a design direction for each of these.

It is anticipated that the Heritage Interpretation Plan will be consulted relating to the following critical decisions and information:

- the significant historical themes and stores that are relevant to the study area;
- the key stories have been selected relating to the study area;
- the specific devices which have been selected across the scheme;
- the locations that have been selected for specific interpretive devices within the study area; and
- the agreed text and graphic design content for the interpretation elements.

1.4 The interpretation process

The following Part outlines the interpretation process and the role of the Interpretation Plan in that process. As shown in the flowchart, this Plan should be followed by Implementation.



1.5 Methodology

Preparation of the Interpretation Plan entailed the following steps:

Summarising the results and key outcomes of the Heritage Interpretation Framework

In 2021 Extent Heritage completed a Heritage Interpretation Framework for the M12 Motorway project. The Framework formed the basis of this Plan, providing specific direction on the development of devices.

Collaborative workshops, meetings and iterative advice

As part of the Heritage Interpretation Framework, Extent Heritage undertook consultation with the local community and relevant stakeholders including Department of Defence, aviation interest groups, local historical societies, and individual persons with an association to the site. Their feedback was recorded and informed our considerations for the Heritage Interpretation Plan.

Extent have attended fortnightly meetings with the TfNSW team as part of an ongoing collaborative process relating to design and content development.

Content development

Development of content for signage, based on the thematic framework and storylines agreed to in the Heritage Interpretation Framework and content from the Thematic History (Extent Heritage, 2020)

Concept designs

Through a collaborative design process, Extent have prepared concept designs for interpretive signage. The graphic layout has shared features and elements across the scheme, so that they read as a cohesive collection of interpretation devices. The graphic direction has also considered design direction of the Aboriginal Heritage Interpretation Plan, so that they are co-ordinated.

Additionally, Extent have progressively kept updated and informed of the developing nature of major infrastructure projects and the urban environment of the area which will include projects such as the Western Sydney International Airport, Sydney Metro West, and the Badgerys Creek Advanced Water Recycling Centre. These projects all have the potential to integrate and have a collaborated response to their individual heritage interpretation design.

1.6 Authorship

This report has been authored by Dr Madeline Shanahan (Senior Associate), Eleanor Banaag (Senior Associate) and Dominic Caron (Research Assistant). Graphic design input and concept designs have been undertaken by Christina Fedrigo. It has been reviewed by Eleanor Banaag and Dr Madeline Shanahan.

Name	Dr Madeline Shanahan
Position	Senior Associate, Archaeology and Cultural Heritage Services Manager
Qualifications	PhD (Historical Archaeology), University College Dublin (2013) B.A. Honours (Archaeology) First Class, University of Sydney (2006)
Project experience	RMC Duntroon Heritage Interpretation Strategy, Department of Defence, 2020. Gunaikurnai Cultural Heritage Interpretation Strategy, ParksVic, 2020. Parramatta RSL Club Heritage Interpretation Strategy, Paynter Dixon, 2019.

Name	Eleanor Banaag
Position	Senior Associate
Qualifications	Masters of Heritage Conservation, University of Sydney (2013) Bachelor of Arts (Hons), Macquarie University (2006) Bachelor of Arts in Ancient History, Macquarie University (2005)
Project experience	Sydenham Metro Station, Interpretation Plan and implementation, Sydney Metro, 2021 Lake Macquarie CUA, Interpretation Plan. Crusaders Union of Australia, 2019 WestConnex Stage 2: interpretation plan, CPB Dragados Samsung Joint Venture, 2016.

Name	Dominic Caron
Position	Research Assistant
Qualifications	Master of Research (Modern History) Macquarie University (2018) Bachelor of Arts with a Diploma of Education, Macquarie University (2016)
Project experience	Canterbury Bankstown Heritage Study, 2021. Bungendore Railway Station Interpretation Study, 2020. Wollondilly Heritage Study, 2020.

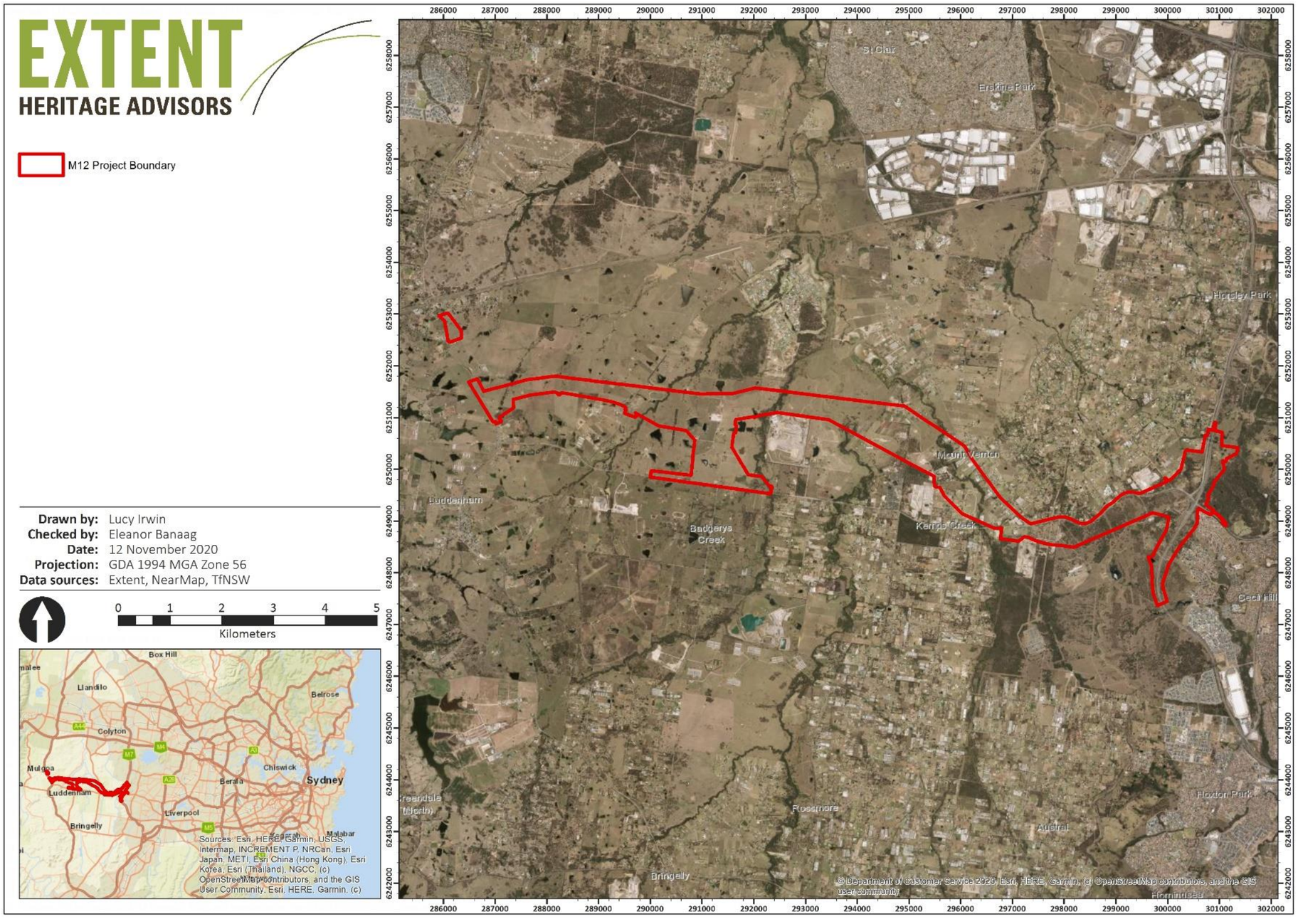


Figure 1. Figure indicating the M12 project corridor.

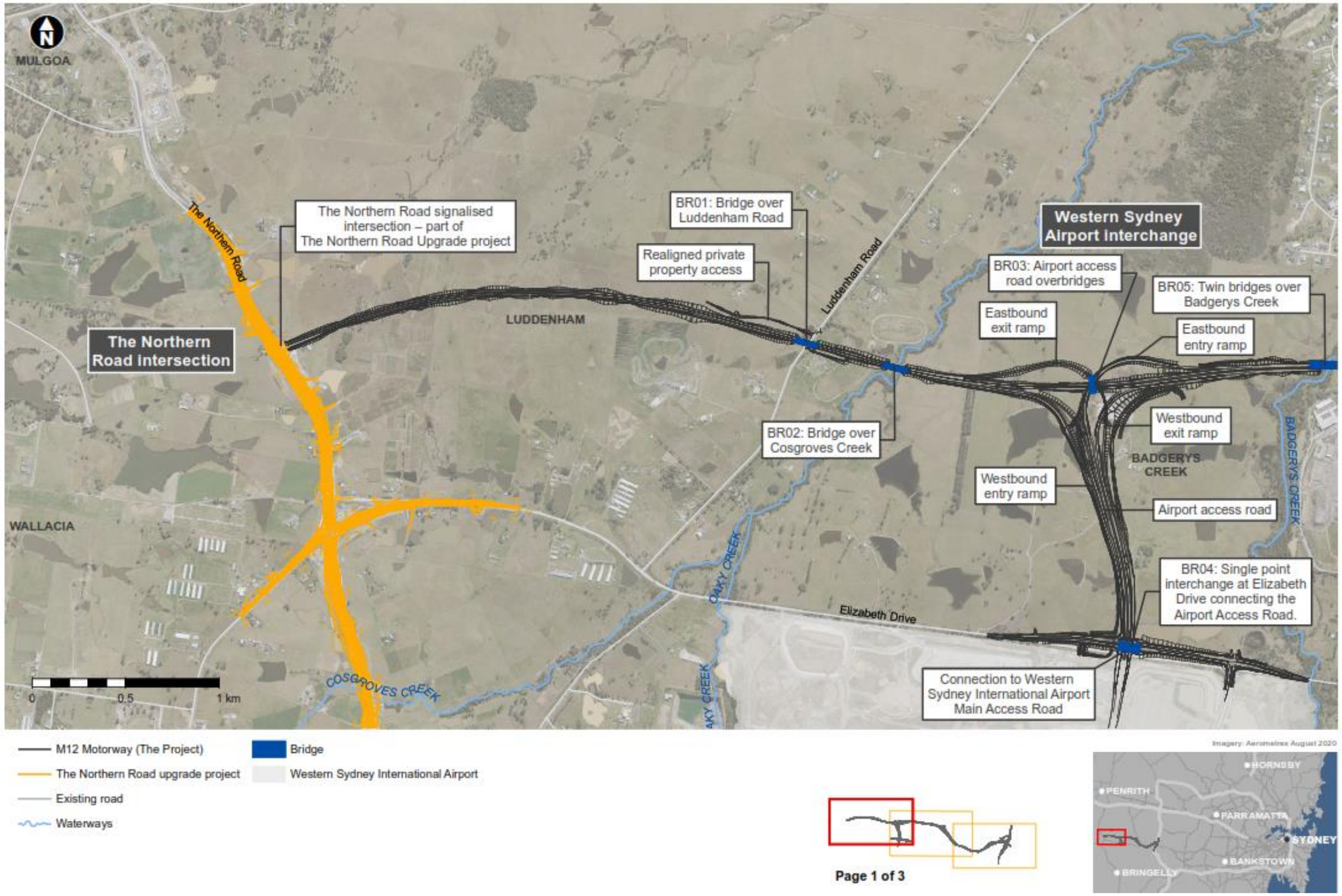


Figure 2. Figure indicating the Project Area for the M12 Motorway, 1 of 3. *Source:* TfNSW (2021).

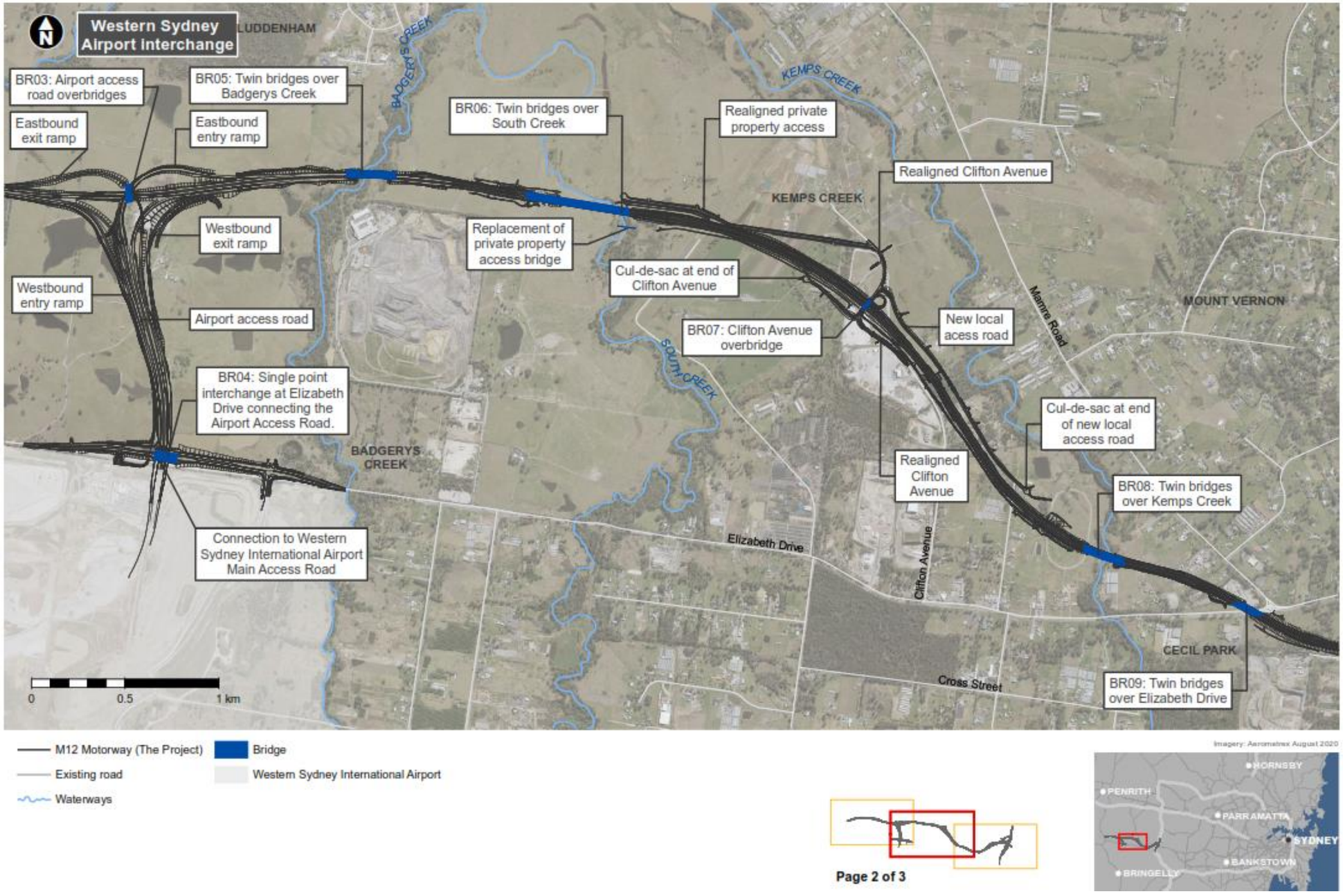


Figure 3. Figure indicating the Project Area for the M12 Motorway, 2 of 3. *Source:* TfNSW (2021).

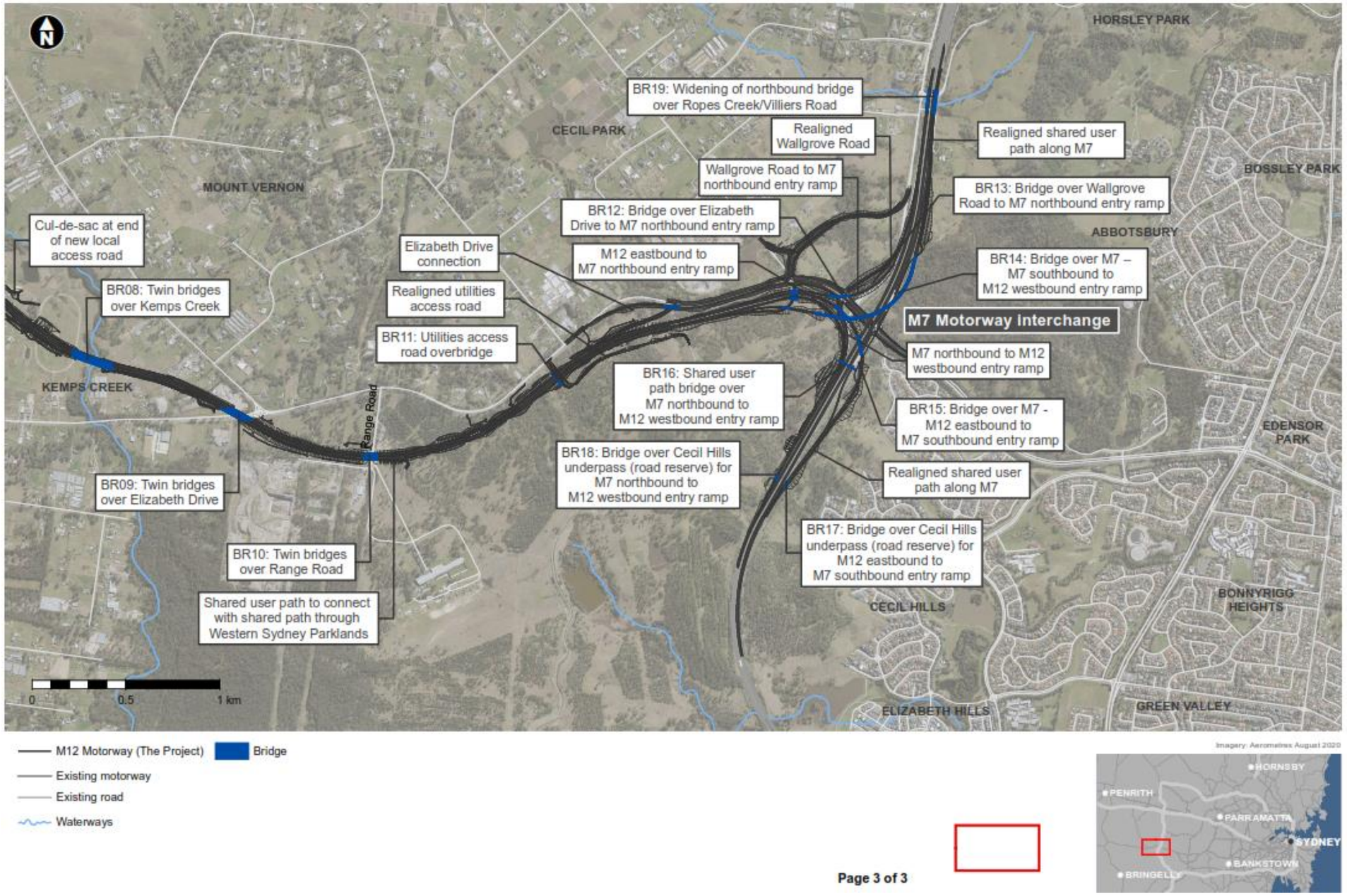


Figure 4. Figure indicating the Project Area for the M12 Motorway, 3 of 3. *Source:* TfNSW (2021).

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PLANNING CONTEXT AND GUIDELINES FOR BEST PRACTICE INTERPRETATION

2.1 Planning context

This Part sets out the planning context and key pieces of legislation associated with the M12 Motorway scheme.

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act* 1999 is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. In accordance with the act, approval is required for works that will have a significant impact on biodiversity matters. Approval for the M12 Motorway was given by the Australian Minister for the Environment on 3 June 2021.

Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) requires that environmental impacts are considered in land-use planning, including impacts on Aboriginal and non-Aboriginal heritage. Division 5.2 of the EP&A Act applies for projects designated as State Significant Infrastructure. This influences the way in which other legislation, including the *Heritage Act 1977* is applied.

The Environmental Impact Statement (EIS) was exhibited in October 2019 and a submissions report was published in October 2020. An Amendment Report was also placed on exhibition in October 2020 and an Amendment Report Submissions Report was published in December 2020.

The M12 Motorway was approved by the NSW Minister for Planning and Public Spaces on 23 April 2021.The M12 Motorway Project was a designated Critical State Significant Infrastructure project by the NSW Minister for Planning and Public Spaces on 23 April 2021 in accordance with Division 5.2 of the EP&A Act.

Heritage Act 1977

The project is subject to certain provisions of the *Heritage Act 1977* (the Heritage Act). The Heritage Act provides several mechanisms by which items and places of heritage significance may be protected. The Act is designed to protect both listed heritage items, such as standing structures and potential archaeological remains or relics.

The Heritage Council of NSW maintains the State Heritage Register (SHR). Only those items which are of state-level heritage significance in NSW are listed on the SHR. Listing on the SHR controls activities such as alteration, damage, demolition and development. Approved projects to which Division 5.2 applies do not require approval under Part 4 of the Heritage Act 1977 (such as a section 60 approval for major works) for items on the SHR. However, Division 5.2 projects must outline proposed heritage management measures.

There is one heritage item on the State Heritage Register that is directly intersected by the M12 Motorway:

- Upper Canal System (Pheasants Nest Weir to Prospect Reservoir), SHR Item # 01373

However, while this site is intersected by the M12 Motorway, it is worth noting that at the point of intersection, the Upper Canal System runs underground and will not be impacted by the construction of the M12 Motorway.

2.2 Conditions of approval

The Instrument of Approval for the M12 Motorway, Application No. SSI 9364 was granted 23 April 2021 by the NSW Minister for Planning and Public Spaces.

The Instrument identified a list of Key Issue Conditions which outlined the following requirements for non-Aboriginal heritage interpretation:

Condition of approval	Response
E26: An experienced and qualified heritage specialist(s) must prepare and/or endorse the: Heritage Interpretation Plan required by Condition E27	See **Part 1.6 Authorship** for a response to this condition.
E27: A Heritage Interpretation Plan must be prepared that identifies and interprets the key heritage values and stories of the heritage items impacted by the CSSI. The Heritage Interpretation Plan must include, but not be limited to: integration of heritage themes and values in the design of the CSSI; design elements (form and fabric) and themes for the CSSI; consideration of the design concepts for Western Sydney International Airport and Sydney Metro Western Sydney Airport; and opportunities for design responses for Aboriginal and non-Aboriginal heritage. The Heritage Interpretation Plan must be provided to Western Sydney International Airport and Sydney Metro Western Sydney Airport to assist in guiding opportunities for integration of heritage themes and values into their design. The Heritage Interpretation Plan must be prepared in accordance with the *Interpreting Heritage Places and Items Guidelines* (NSW Heritage Office, 2005), and in consultation with Heritage NSW, Aboriginal Cultural Heritage Advisory Committee, LALC and relevant council(s). The Plan must be implemented and inform the Place, Design and Landscape Plan required by Condition E69. The Heritage Interpretation Plan must be submitted to the Planning Secretary and Heritage NSW for information prior to finalising the Place, Design and Landscape Plan required by Condition E69. Note: Nothing in this condition prevents the Proponent from preparing separate Heritage Interpretation Plans for Aboriginal and Non-Aboriginal Heritage.	See **Part 1.2 Objectives** for an understanding of the purpose of this plan which reflects the Condition to prepare a Heritage Interpretation Plan. See **Part 3.4 Thematic framework** which demonstrate our integration of heritage themes into the interpretation design and content. See **Part 3.5 Selection of devices** which demonstrate our understanding of the historic themes and how they have informed the design of heritage interpretation elements. See **Part 1.5 Methodology** which demonstrates that stakeholder consultation and consideration of heritage interpretation progress of other major infrastructure project such as the Western Sydney International Airport and Sydney Metro West have been made. See **Part 2.3 Guidelines for interpretation** which demonstrates that NSW Heritage Guidelines for Interpretation have informed the development of this Plan.

E70(b) The Place, Design and Landscape Plan must be prepared by a suitably qualified and experienced person in consultation with relevant councils, Western Sydney Parklands Trust, Heritage NSW, the community and affected landowners and businesses. The Place, Design and Landscape Plan must include, but not be limited to: (b) identification of opportunities for heritage interpretation during design and construction consistent with the Heritage Interpretation Plan required by Condition E27;	See **Part 1.5 Methodology** describing the iterative and regular discussions with the project designers to ensure integration of the landscape and urban design with the Heritage Interpretation Plan..

2.3 Guidelines for interpretation

This Part outlines the international and local guidelines, policies and principles that have guided the approach towards developing a meaningful and successful interpretation plan for this project. These guidelines, along with an understanding of the significance of the place, have assisted in ensuring that the correct audiences and opportunities are identified, and the approach towards heritage interpretation specific to that audience or significance is tailored.

The Burra Charter

The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (the 'Burra Charter') (Australia ICOMOS 2013) is considered the guiding document of best practice standards for the management of cultural and natural heritage within Australia. The Charter states that it can be applied to all types of places of cultural significance including natural, Indigenous and historic places with cultural values.

Table 1. Relevant Burra Charter articles to interpretation

Article	**Number** and **Description**
5. Values	5.1 Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.
6. Burra Charter Process	6.1 The cultural significance of a place and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy. This is the Burra Charter Process. 6.2 Policy for managing a place must be based on an understanding of its cultural significance. 6.3 Policy development should also include consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints, and its physical condition. 6.4 In developing an effective policy, different ways to retain cultural significance and address other factors may need to be explored.
24. Retaining Associations and Meanings	24.2 Significant associations between people and a place should be respected, retained, and not obscured. Opportunities for the interpretation, commemoration and celebration of these associations should be investigated and implemented. 24.2 Significant meanings, including spiritual values, of a place should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.
25. Interpretation	25.1 The cultural significance of many places is not readily apparent and should be explained by interpretation. Interpretation should enhance understanding and engagement and be culturally appropriate.

Interpreting heritage places and items guideline

The *Interpreting Heritage Places and Items Guideline* (Heritage Office 2005) describes at a very broad level why it is important to interpret heritage, the responsibility of governments, heritage practitioners, communities and audiences as people who receive the interpretive message, and how good interpretation can be achieved.

The primary principle of these guidelines is that interpretation strengthens the relationships between communities and their heritage. It is about different ways of communicating significance of an item to many people and a range of audiences. It refers to the *Heritage Interpretation Policy* (Department of Planning [former] 2005) for the individual 'ingredients' to achieve best practice in interpretation. Principles include:

Table 2. Interpreting heritage places and items principles.

#	Principle	Description
1	A sense of place	Interpretation will create an encompassing presence and awareness of the site with a community focus.

2	Tangible and intangible heritage	Interpretation will emphasise both the tangible and intangible heritage of the area to create a comprehensive approach to the site as a whole and its position within the wider community context.
3	Media	Interpretation will integrate a wide range of media and platforms to create sustainable and effective interpretation infrastructure.
4	Community engagement	Interpretation development will engage and incorporate community aspects as appropriate to create a sense of community ownership.

The approach taken in the preparation of this Heritage Interpretation Plan has been guided by the above principles.

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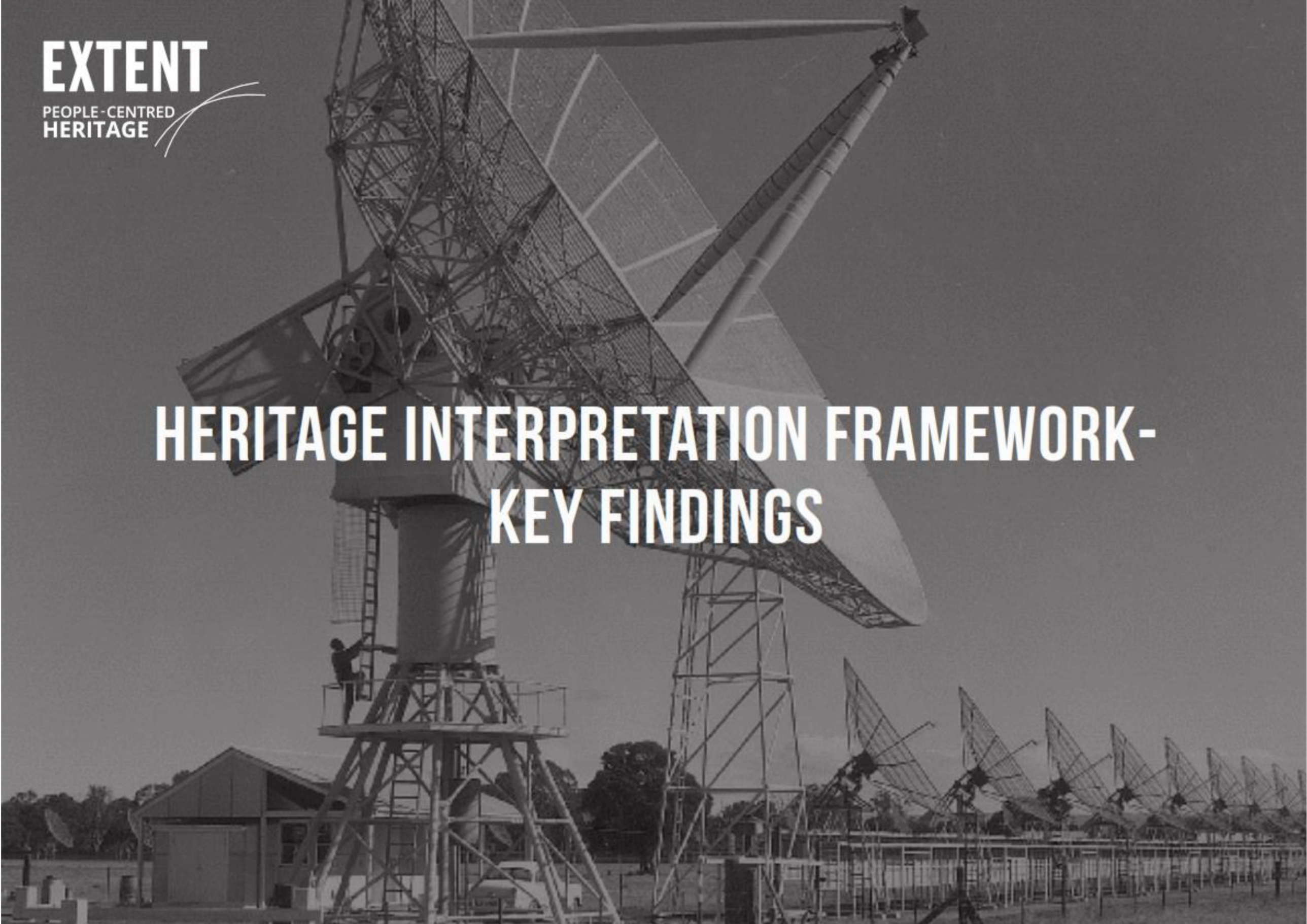
HERITAGE INTERPRETATION FRAMEWORK-

KEY FINDINGS



This Part will summarise the key stages and findings of the Heritage Interpretation Framework. The research and reporting undertaken in that phase of work has determined the direction of this Heritage Interpretation Plan.

This Part summarises the research that took place, the establishment of a thematic framework and identification of key stories, the selection of devices and indicative locations.

3.1 Heritage Interpretation Framework outline

Extent Heritage was engaged by TfNSW to prepare a Non-Aboriginal (Historic) Heritage Interpretation Framework that incorporated significant heritage items identified during the detailed design development of the M12 Motorway project. This framework formed part of a larger framework of historic heritage reporting for the project.

The report was prepared by a multidisciplinary team with a wide range of experience in interpretation planning. In the development of this report, the team worked collaboratively both internally and within the wider M12 Project delivery teams, focusing on integrating and relating history, heritage values, design, and visitation to the process of interpretation planning.

Given how broad the project boundary was, both geographically and in the historic themes and development, the interpretation framework considered the whole of the M12 Motorway project boundary as being the interpretation canvas with opportunities for interpretation installations at specific locations. These locations have been selected for their relationship to a historic site, or for its association with a historic theme, and will assist in the understanding of the place whilst providing audiences with the ability to delve further into the heritage and history as they desire.

3.2 Research undertaken

In the preparation of the history for the framework a range of primary and secondary sources were utilised. As Extent Heritage also prepared a Thematic History for the M12 Motorway Project, which was also used to inform the Framework, and ultimately, this Plan.

Research was also undertaken into different forms of interpretive devices and their differing uses during the Framework stage. High-level audience research and analysis was also undertaken into the people who are most likely to use the M12 Motorway so that the interpretive devices could be developed in a way that best reflects its audience.

3.3 Audience analysis

Research undertaken during the Heritage Interpretation Framework established that there will be three main audiences that will likely interact with the heritage interpretations proposed for the M12 Motorway. The interpretation works have been designed with these three groups in mind.

Greater Sydney

The M12 Motorway will be used by a number of commuters from Greater Sydney. These commuters will be made up of a diverse group of people, some of whom will be regular users of the motorway while others will make more sporadic use.

International arrivals

The Western Sydney International Airport at Badgery's Creek will bring international arrivals to the region who may travel along the M12 Motorway. These people would be made up of international travellers from a range of countries travelling to Sydney for a variety of purposes. The majority of international visitors to Sydney come from China, New Zealand, and the United States, with significant numbers also coming from the United Kingdom and Japan. International arrivals travelling the M12 Motorway will likely be from these countries.

However, given the location of the devices, people passing along the M12 Motorway as motorists or passengers will not have a chance to engage with the devices. The primary audience for the interpretive devices will be people using the shared path, who will most likely be local residents.

Local residents

Many of the interactions with the M12 Motorway and its heritage interpretations will be from residents from the areas the M12 Motorway passes through. Approximately 7000 people live in the vicinity of the M12 Motorway, coming from a variety of backgrounds though the majority of the residents are English speakers.

3.4 Thematic framework

Research and consultation with TfNSW's project team led to the identification of key themes and stories for the Heritage Interpretation Framework. These themes have been applied in this next stage, the Heritage Interpretation plan. The thematic framework is as follows.

The climate of Australia is harsh and in order to build and expand cities we must have access to potable water. Systems of capturing, storing and distributing water are critical to the development and continued functioning of society. Agriculture is likewise dependant on have a reliable source of water to function.

The Upper Canal System and Hudson Brothers temporary scheme are notable examples of some of the innovations developed to provide Sydney with water. These were developed to overcome the worst drought in Sydney's history, ensuring the continued growth of the city.

Turkey Nest dams were developed at the McGarvie Smith Farm to dam water on flat tracts of land. These dams served a dual purpose of storing water and then disributing it to livestock for them to drink.

Relavant Sites:
- The Upper Canal System
- The McGarvie Smith Farm

Water harvesting

Western Sydney has been central to the development of agriculture and agricultural reseach for not only Sydney but Australia. From serving as a food bowl for the growing city to housing centres of scientific research, Western Sydney has served as a vital hub of agricultural knowledge.

Both the McGarvie Smith Farm and the McMaster Field Station are examples of agricultural research centres. The study of disease and conditions affecting livestock that was undertaken at the McMaster Field Station was something rarely seen at the time, an integration of agricultural science and farming knowledge. The work done at this station allowed for better yeilds and healthier livestock.

The McGarvie Smith Insitute was used to develop and manufacture a single shot anthrax vaccine that helped develop Australia's live export industry. It then became Australia's first veterinary school, and was used as a research station by the University of Sydney.

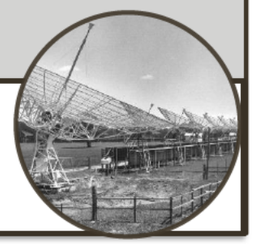
Relevant Sites:
- The McGarvie Smith Farm
- The McMaster Field Station

Agricultural research

In the mid-twentieth century, there were two sites of significance built on the land of the former Fleurs Estate. The first was the Fleurs Aerodrome, built during the Second World War as part of a series of stategic airfields build by the RAAF. The airfield's role and rapid construction served as a testament to the advancing technologies of the Australian Defence Forces.

In the 1950's the Fleurs Radio Telescope Site was established, a home for the new Mills Cross Radio Telescope Array. The array was a new, more powerful way to design a radio telescope array. The site was home to two more milestones in radio astronomy, the Shain Cross and the Chris Cross.

Relevant Sites:
- Fleurs Aerodrome
- Fleurs Radio Telescope Site



Technological advancements

3.5 Selection of devices

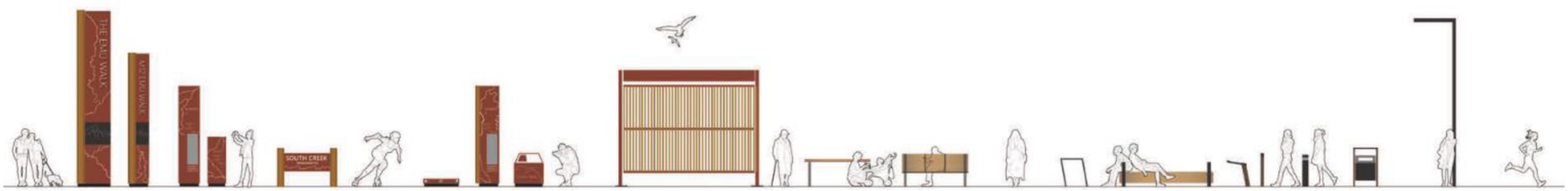
The Heritage Interpretation Framework identified a wide range of ideas and opportunities on the types of interpretation that could be installed for the M12 Motorway project. In collaboration with the project design teams, the following interpretation devices were selected for the shared path of the M12 Motorway.

- **Footpath inlays:** inlays situated on the shared user footpath. Designed to indicate to users of the shared path that they are approaching a signage element and encourage them to stop and engage with the device. Footpath inlays serve as discrete artworks that can sit within a landscape and serve as a traffic calming device, creating awareness of upcoming points of interest.

- **Fleurs Aerodrome landscape works:** landscape works interventions designed to help create a physical connection to and experience of Fleurs Aerodrome, the impressive scale of which is made comprehensible through the large, repeated installation, located alongside the shared path. Using vegetation as an interpretive device is a creative way to provide a non-text-based element that also contributes to the landscape amenity and character of an area. Rows of trees or shrubs can create internal vistas and guide the audience's eye to certain elements or objects in the distance.

- **Fleurs Radio Telescope Site sculptural installation:** a public art installation that is designed to create a physical connection and reminder of the Fleurs cross arrays. While the spatial opportunities are limited, there is potential for engagement with the community through sculptural installations.

- **Signage:** conventional graphic signage with a combination of text and visual content. Designed for audiences using the shared path to interact with closely and in detail. Signage will utilise a range of primary and secondary resources, to produce dynamic, highly informed, accurate information panel. Informative text does not need to be "text-heavy" and can convey the sense of intent through a mixture of image and text.



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DEVICE DESIGN AND PLANNING

This Part progresses the decision making around device selection and storytelling agreed to in the Interpretation Framework into the next stages required for a Heritage Interpretation Plan. It includes the identification of specific device locations, content development and concept design.

4.1 Device detail

As part of the framework a series of specific devices were agreed to. The following table includes an itemised list of these and the summary details of each.

Figure 5 details the proposed locations of each of these devices.

Part 5 includes more information relating to the content of each individual sign and their design direction.

Location	Device and Description
Upper Canal System	**1.** Sign located adjacent to the shared path. The sign is titled Innovation and Ingenuity: A Solution to Sydney's Water Crisis. The sign provides an account of one of Sydney's worst droughts and the Hudson Brother's Temporary Scheme. **2.** Sign located adjacent to the shared path. The sign is titled A Feat of Engineering: The History and Design of the Upper Canal System. The sign provides an account of the design and construction of the Upper Canal System. **3.** A cast iron inlay situated in the shared path in the leadup to Device 1. The text reads Innovation and Ingenuity. **4.** A cast iron inlay situated in the shared path in the leadup to Device 2. The text reads A Feat of Engineering.
McGarvie Smith Farm	**5.** Sign located adjacent to the shared path. The sign is titled Turkey Nests and Milking Sheds: The McGarvie Smith Farm. The sign provides an account of the agricultural research that was undertaken at the McGarvie Smith Farm. **6.** A cast iron inlay situated in the shared path in the leadup to Device 5. The text reads Turkey Nests.
Fleurs Aerodrome	**7.** Sign located adjacent to the shared path. The sign is titled RAAF's Home in Badgerys Creek: Fleurs Aerodrome. The sign provides an account of the construction and use of Fleurs Aerodrome during World War II and the site's post-war use. **8.** A cast iron inlay situated in the shared path in the leadup to Device 7. The text reads RAAF in Badgerys Creek **9.** A site for a potential landscape works on either side of the M12 Carriageway where the Fleurs Aerodrome would have been.
Fleurs Radio Telescope Site	**10.** Sign located adjacent to the shared path. The sign is titled Echoes of Space: Radioastronomy. The sign provides an overview of the concept of radioastronomy and identifies Australian sites of radioastronomy research. **11.** Sign located adjacent to the shared path. The sign is titled Australia Looks to the Stats: Fleurs Radio Telescope Site. The sign provides an account of the development of the Fleurs Radio Telescope Site from the Mills Cross through to the CSIROs sale of the site to the University of Sydney. **12.** A cast iron inlay situated in the shared path in the leadup to Device 10. The text reads Echoes of Space. **13.**A cast iron inlay situated in the shared path in the leadup to Device 11. The text reads To the Stars. **14.** A site for a potential art installation emulating the aesthetic of the Fleurs Radio Telescope Site by erecting timber poles that would resemble the posts that were part of the radio telescope arrays.

Location	Device and Description
McMaster Field Station	**15.** Sign located adjacent to the shared path. The sign is titled Sydney's Food Bowl: Farming and Research at Badgerys Creek. The sign provides an account of the development of Western Sydney and as a centre for agriculture. **16.** Sign located adjacent to the shared path. The sign is titled Agricultural Research and Innovation: McMaster Field Station. The sign provides an account of the McMaster Field Station and the research that was undertaken there. **17.** A cast iron inlay situated in the shared path in the leadup to Device 15. The text reads Sydney's Food Bowl. **18.** A cast iron inlay situated in the shared path in the leadup to Device 16. The text reads Agricultural Innovation.

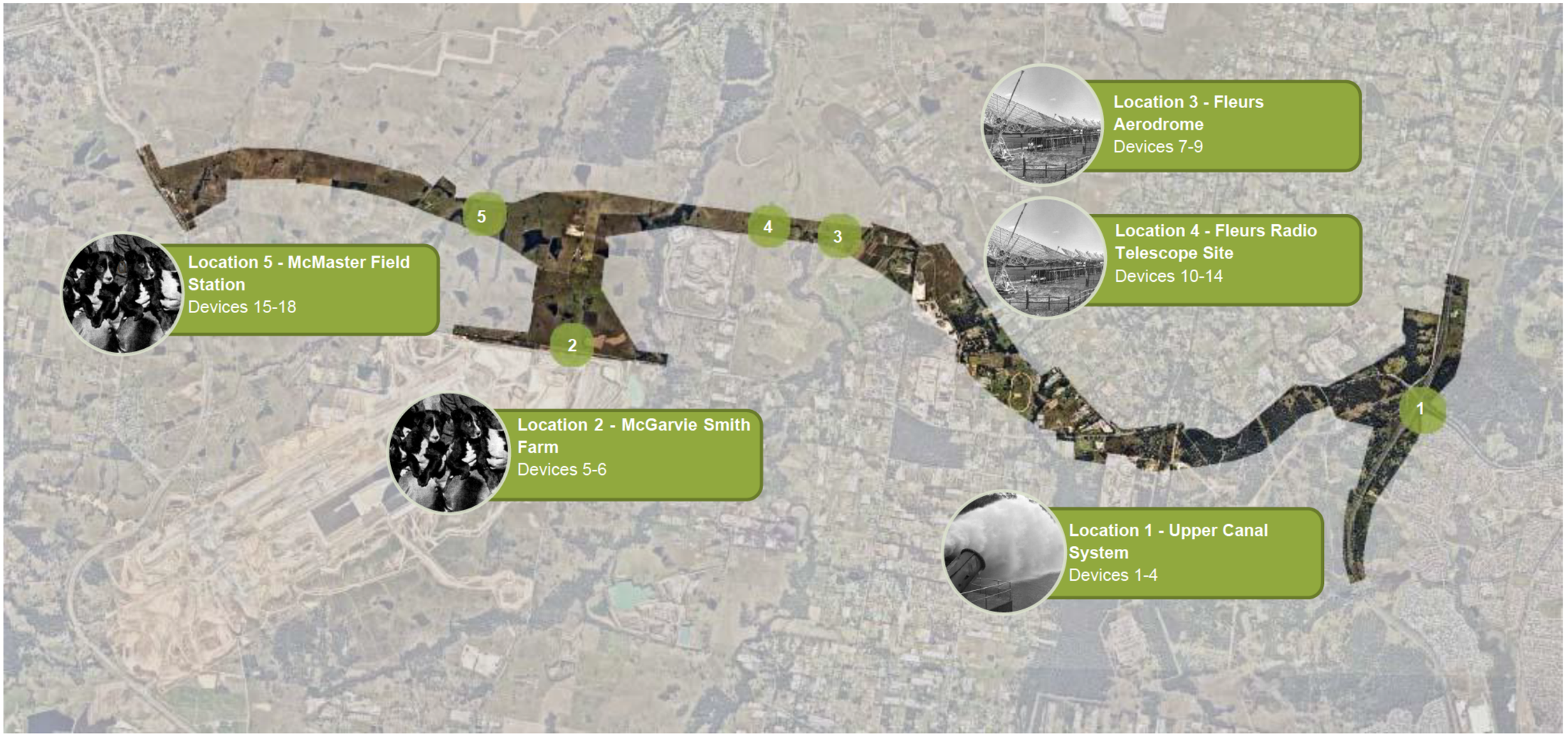

Figure 5. Map of the study area with the five locations marked out, the images attached reflect the site's relation to the site-specific themes **in 3.4 Thematic framework**.

4.2 Concept design directions

Design language: colour and materiality

These colours and materials acted as the inspiration for the design of the signs, their mountings, and the rostered cutout which will be located at each location.

Design language: duality and contrast

The themes of duality and contrast can be seen in the designs of the signs, which makes use of contrasting rounded and angular linework.

4.3 Material specifications

The following Part includes preliminary advice relating to materiality, dimensions a maintenance. Additional detail should be provided during the implementation phase, in collaboration with manufacturers and installers.

Please note that all measurements are guideline and approximate only. Detailed specifications need to be finalised in the implementation stage in collaboration with fabricators.

Figure 6. Impression of the shared path with signage and path inlay.

Signage size and materials advice

Interpretation graphics panel

Size: 1400 x 380mm (approximate)

Printed in vitreous enamel (VE): a glass coating chemically bonded to steel at high temperatures of around 850ºc, providing the hardness of glass and the strength of steel. This process provides a finished product that holds superior UV, scratch and graffiti resistance. Utilised for harsh outdoor conditions or extreme high traffic areas, VE provides the longest lifespan for colour fastness and durability.

Graphics stand

Size: Height of the bottom panel: 750mm (approximate)
Depth of the installed Interpretation graphics panel: 400mm (approximate)

Made from weathered steel (Corten). Corten is steel cladding designed to provide a rusted coating o the face of the steel, while not rusting the internal structure of the steel sheet. Increasingly utilised as an architectural feature, Corten sheets can be laser cut, folded and fabricated to suit nearly any requirement.

Figure 7. Routered cutout pattern in the vertical surface of the graphics stand.

Path inlay size and materials advice

Path theme text

Lettering specifications

- 250mm high
- Widths vary

Concrete specifications

- As per detailed design specifications for concrete shared path

Decorative features

- Cast iron or mild steel lettering inlayed into concrete shared path

EXTENT

PEOPLE-CENTRED HERITAGE

DEVICE CONTENT AND CONCEPT

This Part includes detail relating to each individual device, including location, content and concept designs.

5.1 Device 1 (Location 1): Interpretive sign

Device 1 is an interpretive sign describing one of Sydney's worst water crises and the Hudson Brothers' Temporary Scheme.

Proposed text content

Innovation and Ingenuity: A solution to Sydney's water crisis

The wooden pipes of the Hudson Brothers' Temporary Scheme were sealed with bitumen, making the water smell and taste slightly of tar.

In this climate characterised by drought and flood, the demand for a reliable source of clean water will always be an issue for the development of a city. Since the nineteenth century, Sydney has had to regulate its water consumption, and planners have had to think carefully about how to support the demands of a growing city.

In the second half of the nineteenth century, Sydney was in desperate need of a new water supply. A series of droughts compounded existing problems caused by aging infrastructure and a growing population. In 1869 the Upper Nepean Scheme was first proposed to address the needs of the city. The scheme was designed to draw water from the Cataract, Cordeaux, Nepean, and Avon rivers and began construction in 1880.

The Hudson brothers' ingenious solution

In 1885 Sydney's demand for water was dire, with only ten days' worth of water left in the dams. In response to this crisis, the Minister for Public Works enlisted the help of the Hudson brothers, who suggested using timber to construct a temporary system of flumes to bridge incomplete sections of the Upper Canal. Using timber allowed the Hudson brothers and their team to rapidly build the structure, ensuring Sydney's water supply until the Upper Canal System was completed in 1888.

Quenching an ever-growing thirst

In 1935 the Upper Nepean Scheme expanded further as more of its rivers were dammed. While Sydney is far from immune to the effects of drought, infrastructure like the Upper Canal System helps maintain a consistent and reliable supply of potable water for the city and its inhabitants.

Proposed visual content

Image caption

The Hudson Brother's Temporary Scheme being built alongside the Upper Canal System, 1896. The pipeline on the left is part of the Upper Canal System, while the timber fluming on the right is the Hudson Temporary Scheme bridging the incomplete sections of the Upper Canal System.

Image source

Image file available at: https://dictionaryofsydney.org/media/2580

Graphic Panel Layout

A solution to
Sydney's water crisis

Innovation and Ingenuity

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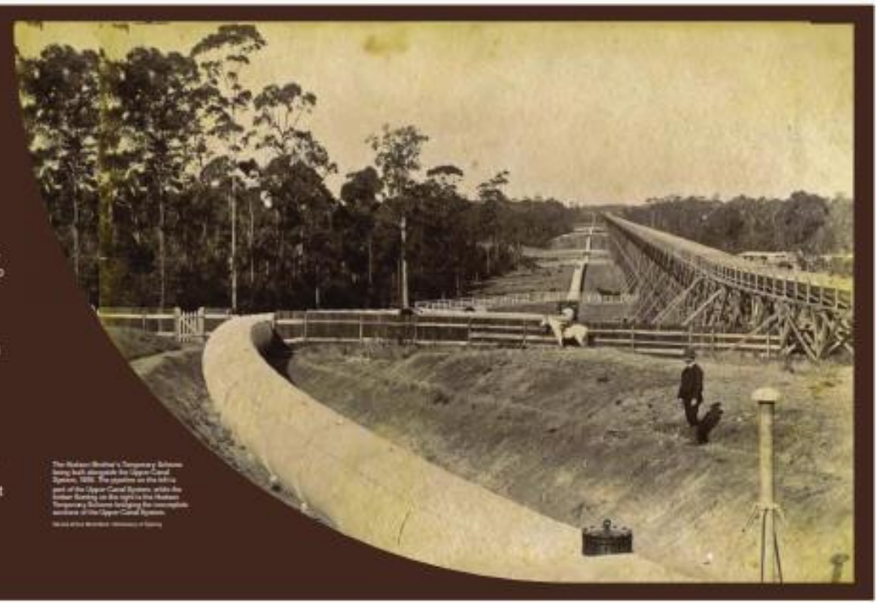


Location within study area

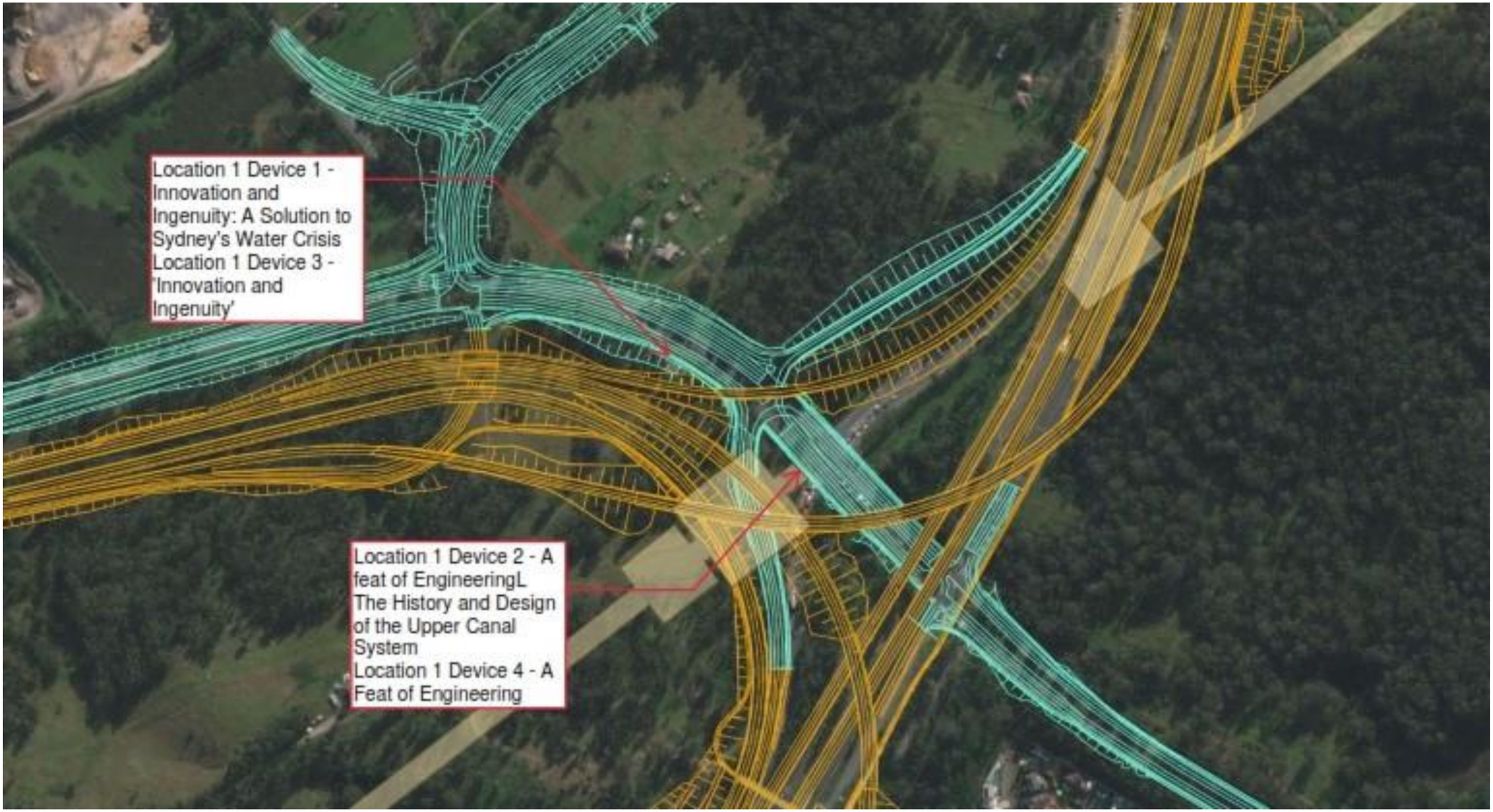


Figure 8. Map showing the location of the Upper Canal System Location 1 signage and concrete inlays. *Source:* TfNSW (2021).

5.2 Device 2 (Location 1): Interpretive sign

Device 2 is an interpretive sign describing the history of the Upper Canal System.

Proposed text content

A feat of engineering: The history and design of the Upper Canal System

> ’After having suffered considerable hardships for many years on account of the inadequate supply of water, the residents in Sydney and suburbs have at length been relieved from anxiety for the future.’ ‘The New Sydney Water Supply,’ *Australian Town and Country Journal*, 3 September 1887

Constructed in the 1880s, the Upper Canal is a feat of engineering, carrying anywhere from 20 to 40 per cent of Sydney’s water supply on any given day. Channeling the water from four separate dams, the system is made up of 64 kilometers of gravity-fed tunnels, canals, and aqueducts, transporting water from the Upper Nepean Scheme to the Prospect Reservoir. The canal moves all this water without any pumping; instead, the whole system follows an almost imperceptible downward incline, letting gravity do the work.

Traveling from the town of Appin in Sydney’s south-west, the Upper Canal travels through bushland and suburbs, under hills and over rivers. The vast majority of the Upper Canal System, some forty-four kilometers, is visible as a series of open above-ground canals. Nineteen kilometers of the system is made up of underground tunnels, while the remining kilometer consists of culverts and aqueducts, which carries the water across nine creeks and one railway line.

As the canal travels through different terrains, it adapts to its surroundings, using different forms and materials. In some sections the canal is ‘U-shaped’ and lined with sandstone masonry, while in other sections, the canal takes on a trapezoidal shape and is lined with concrete. At times, the canal is carved into solid stone and is unlined, using the natural material to carry the water on its way to Sydney’s homes.

Proposed visual content

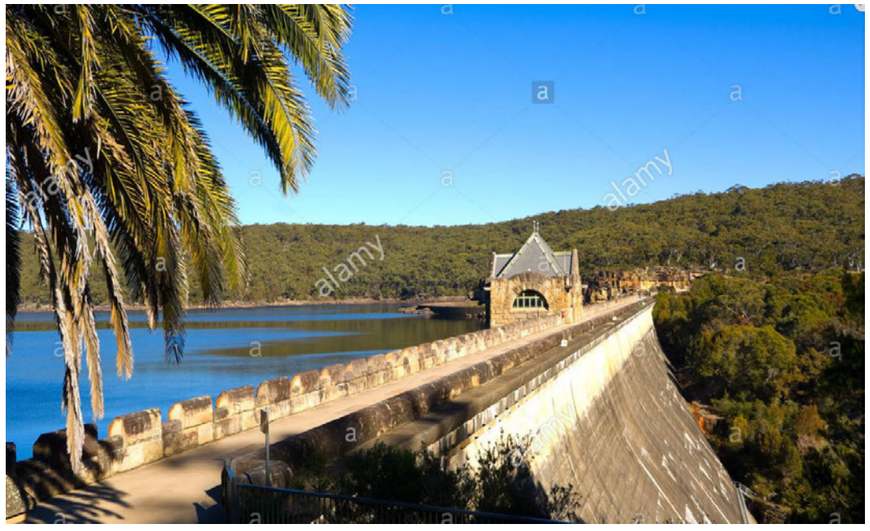


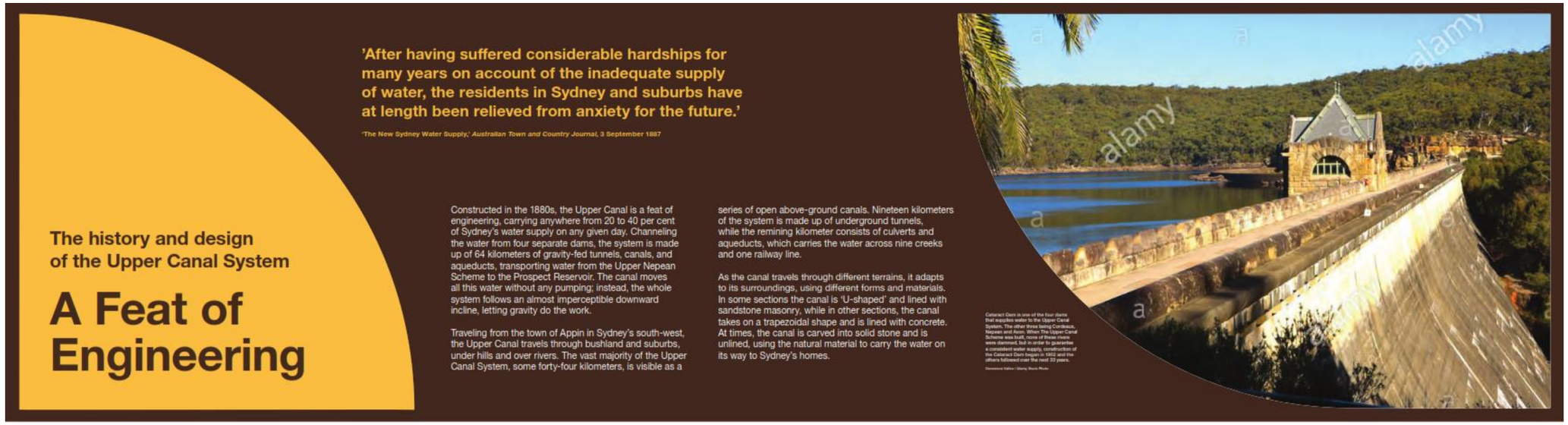
Image caption

Cataract Dam is one of the four dams that supplies water to the Upper Canal System, the other three being Cordeaux, Nepean, and Avon. When The Upper Canal Scheme was built, none of these rivers were dammed, but in order to guarantee a consistent water supply, construction of the Cataract Dam began in 1902 and the others followed over the next 33 years.

Image source

Image file available at: https://www.alamy.com/stock-photo-cataract-dam-appin-new-south-wales-australia-49679737.html

Graphic Panel Layout



Location within study area

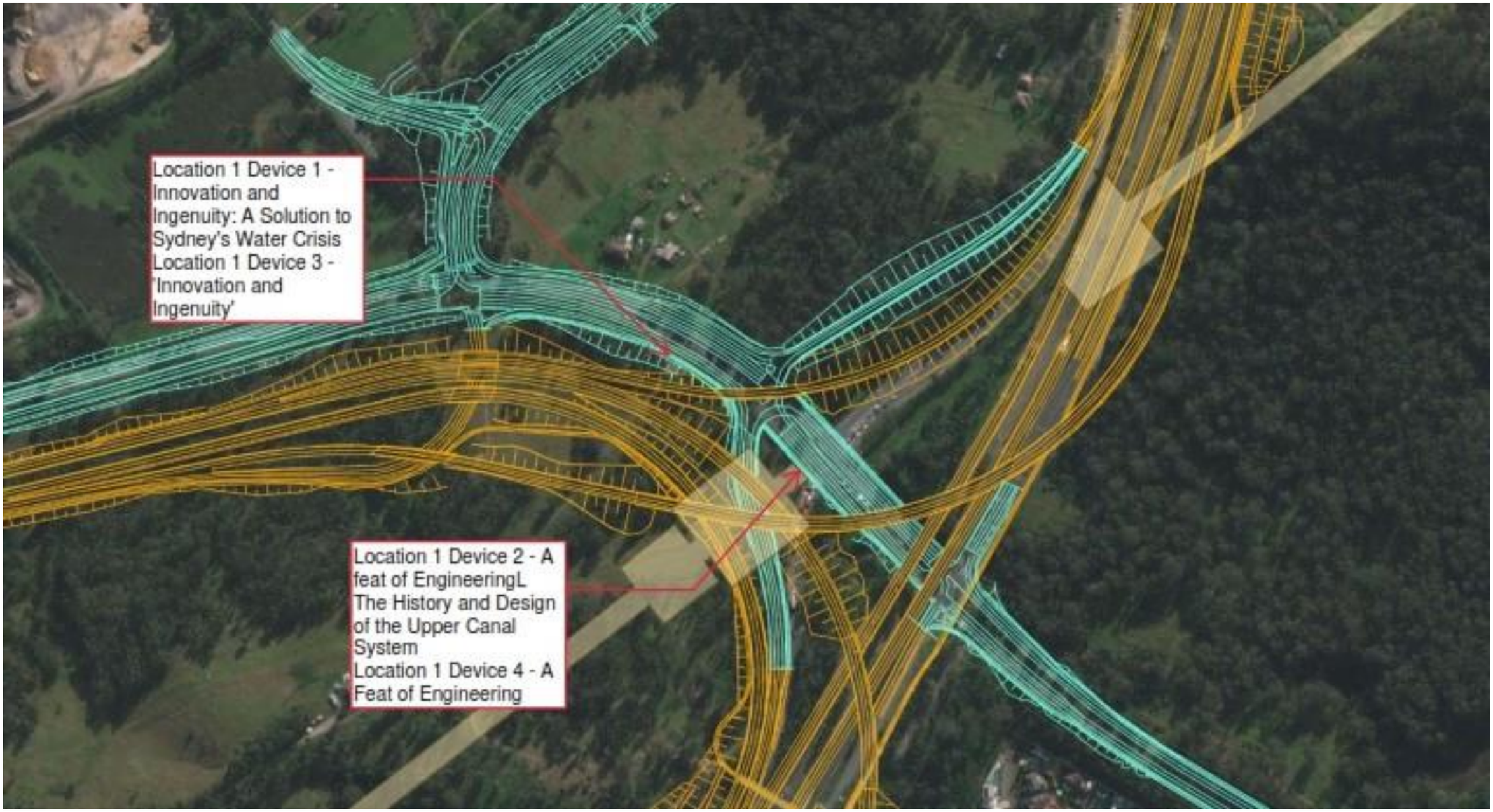


Figure 9. Map showing the location of the Upper Canal System location 1 signage and concrete inlays. *Source:* TfNSW (2021).

5.3 Device 3 (Location 1): Shared path inlay

Device 3 is an inlay in the shared path with the words **'Innovation and Ingenuity'**.

The intention is to alert users to the presence of Device 1.

5.4 Device 4 (Location 1): Shared path inlay

Device 4 is an inlay in the shared path with the word **'A feat of engineering'**.

The intention is to alert users to the presence of Device 2.

5.5 Device 5 (Location 2): Interpretive sign

Device 5 is an interpretive sign that provides information on the history of the McGarvie Smith Farm.

Proposed text content

Turkey nests and milking sheds: The McGarvie Smith Farm

The very first class of veterinarians ever trained in Sydney studied and practiced just meters from here. The McGarvie Smith Animal Husbandry Farm was Sydney University's first veterinary farm, where students were trained in both animal husbandry and veterinary science from 1937 to 1955.

The farm was named after bacteriologist John McGarvie Smith, who not only donated the land for the institute, but was also famous for developing a single dose anthrax vaccine for sheep and cattle in the 1890's. McGarvie Smith gifted his vaccine to the NSW government on his deathbed, and following his death in 1918 the land was, fittingly, used by the CSIRO to produce the vaccine. This played a critical role in the development of Australia's live export industry. Sydney University acquired the land in 1937, and with assistance from the Department of Public Works, developed a farm and a school here. Paddocks were subdivided, milking sheds, stables and barns were constructed, and crops were sown.

A turkey nest for cattle

The farm was also an important research institute, pioneering new agricultural techniques and strategies. One of the most significant developments was a revolutionary new way to store water along flat surfaces known as 'the turkey nest dam'. A turkey nest dam is an above ground, shallow dam which would slowly feed water into a cattle trough using gravity. This served a dual purpose of saving water and providing water for livestock. Turkey nest dams have been used across Australia but are most commonly found in NSW. The dam's rather interesting name comes from the fact that turkeys, unlike most birds, build their nests on the ground.

Proposed visual content

Image caption

A group of Indian farmers studying farming practices at the McGarvie Smith Farm, 1955. As part of the Colombo Plan (a cooperative economic plan) these farmers came to Australia to study a revolutionary new water conservation technology that could store water while also distributing it to livestock: the turkey nest dam.

Image source

Image file available at: https://trove.nla.gov.au/work/231050974

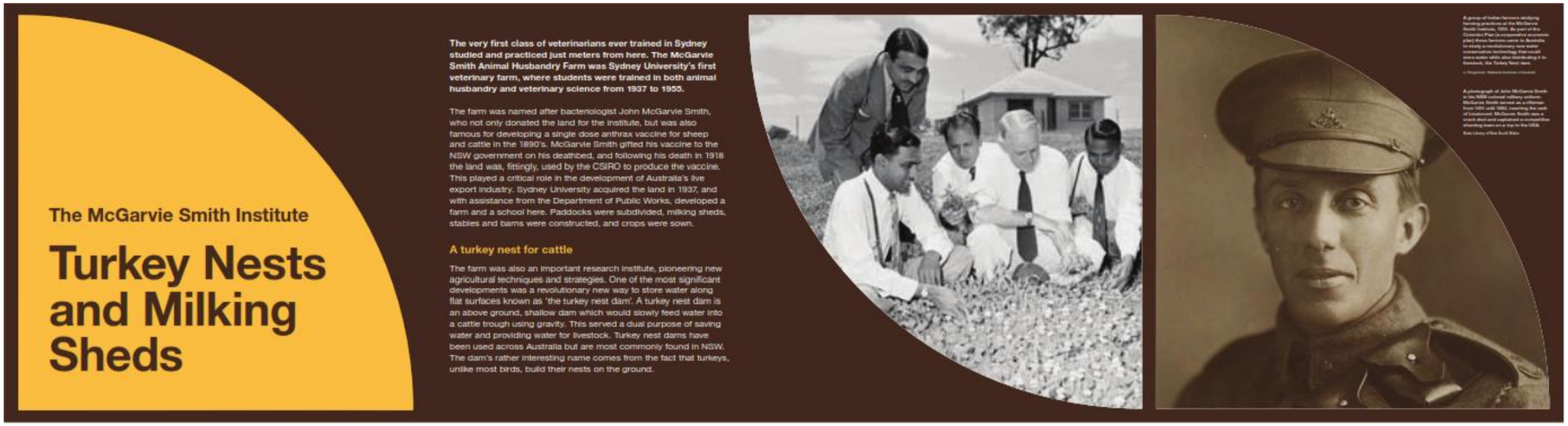
Image caption

A photograph of John McGarvie Smith in his NSW colonial military uniform. McGarvie Smith served as a rifleman from 1874 until 1882, reaching the rank of Lieutenant. McGarvie Smith was a crack shot and captained a competitive shooting team on a trip to the USA.

Image source

Image file available at: https://trove.nla.gov.au/work/235951934

Graphic Panel Layout



Location within study area

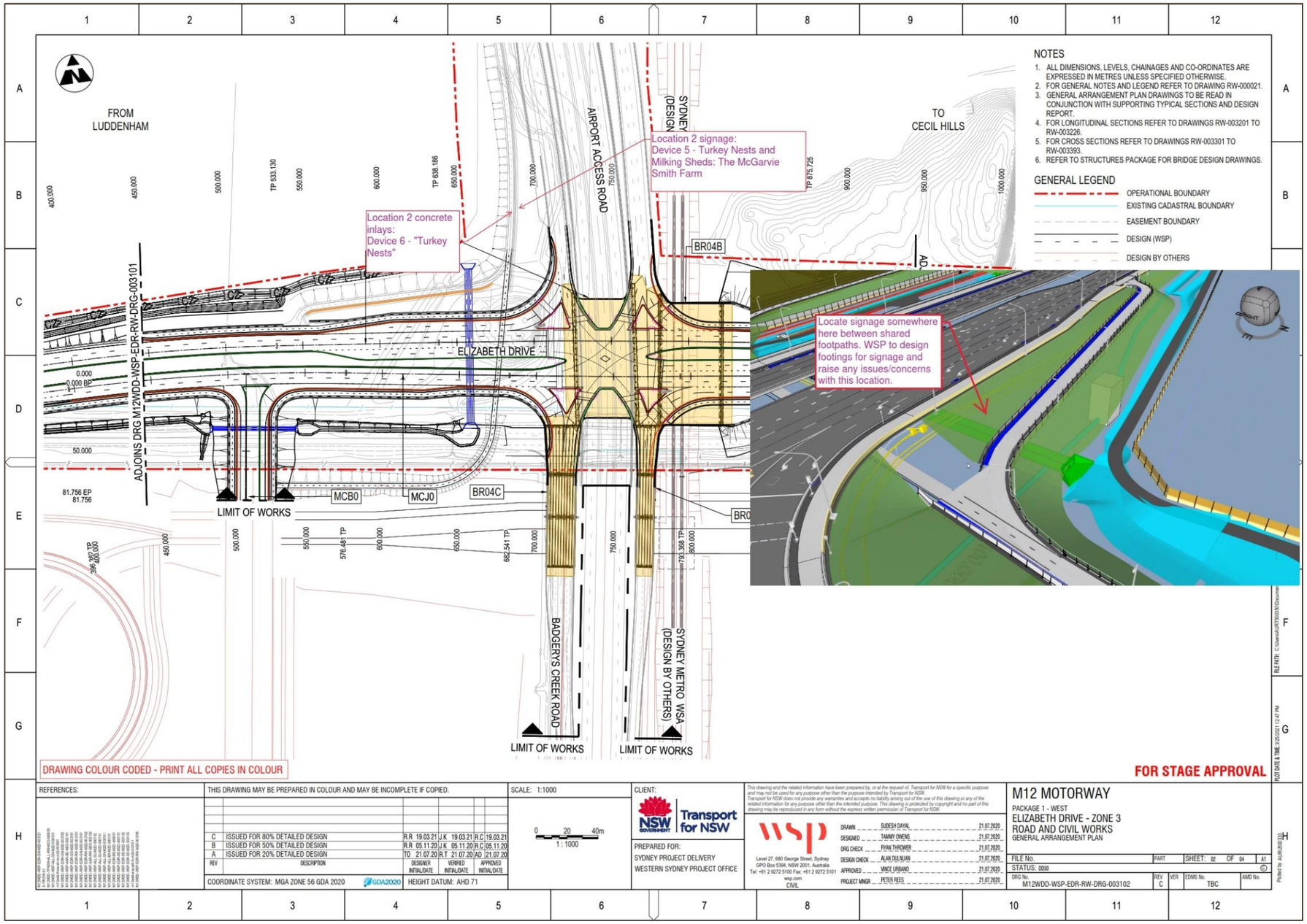


Figure 10. Map showing the location of the McGarvie Smith Farm location 2 signage and concrete inlays. *Source:* WSP (2021).

5.6 Device 6 (Location 2): Shared path inlay

Device 6 is an inlay in the shared path with the word **'Turkey nests'**.

The intention is to alert users to the presence of Device 5.

5.7 Device 7 (Location 3): Interpretive sign

Device 7 is an interpretive sign that provides information on the construction and uses of the Fleurs Aerodrome.

Proposed text content

The RAAF's Home in Badgerys Creek: Fleurs Aerodrome

> 'Per Ardura ad Astra – Through Adversity to the Stars'
> - RAAF Motto

Airpower played a critical role in the Allies' tactics during World War II, with advancements in aerial technology meaning that planes were faster and more versatile than ever before. With the Pacific War drawing ever closer, it became increasingly obvious that Australia lacked the airpower or infrastructure to defend itself. In response to this threat, aerodromes were rapidly built across Australia.

Building the Aerodrome

In 1942, construction began on Fleurs Aerodrome, which was named after the historic estate located here. This new aerodrome was a joint project between the Royal Australian Air Force (RAAF) and the US Naval Air Force, which was originally intended to serve as a land base for American planes during the Second World War. Fleurs operated as one of two 'parent' aerodromes in the Greater Sydney region, meaning that it oversaw several 'satellite' aerodromes that fell under its control.

To accommodate the large number of planes that the US Army and Naval Airforce would have needed to land, initial plans for the site included three runways, although only two of these were ever constructed. One of the original farmhouses from the earlier estate was repurposed into accommodation for soldiers stationed on site.

The post-war years

After the war, Fleurs Aerodrome remained in use as an Emergency Landing Ground until 1954, when the nearby Fleurs Radio Telescope Site was established. In 1969 the aerodrome was considered as a potential site for Sydney's second airport, but Badgerys Creek was ultimately selected as the preferred location.

Proposed visual content

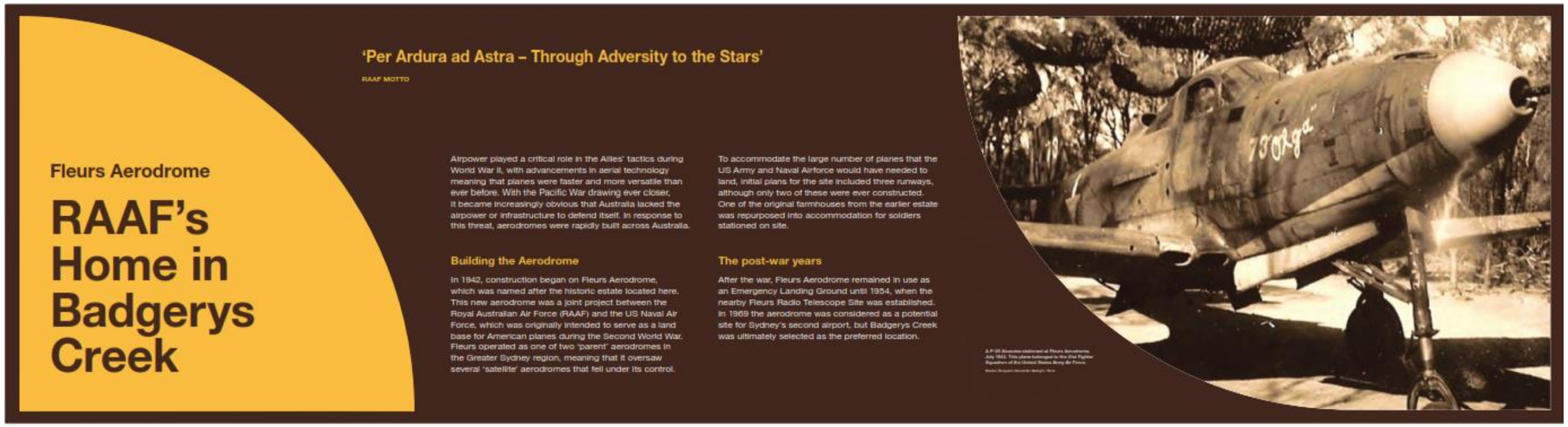
Image caption

A P-39 Airacoba stationed at Fleurs Aerodrome, July 1942. This plane belonged to the 41st Fighter Squadron of the United States Army Air Force.

Image source

Image file available at: https://www.flickr.com/photos/peacelovescoobie/5632844267/in/photostream/

Graphic Panel Layout



Location within study area

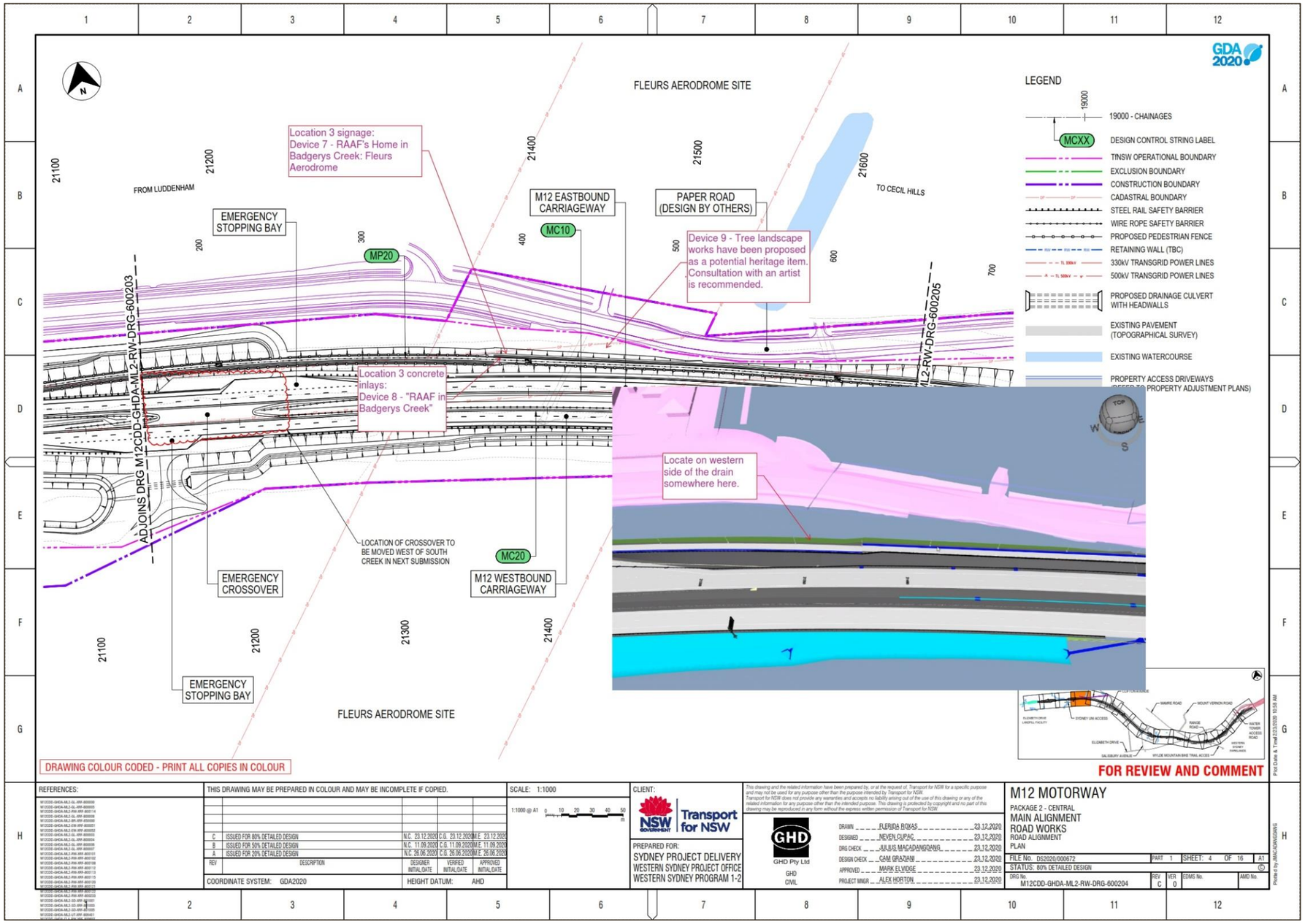


Figure 11. Map showing the location of Fleurs Aerodrome location 3 signage, concrete inlays, and tree landscape works. *Source:* GHD (2021).

5.8 Device 8 (Location 3): Shared path inlay

Device 8 is an inlay in the shared path with the word **'RAAF in Badgerys Creek'**.

The intention is to alert users to the presence of Device 7.

5.9 Device 9 (Location 3): Fleurs Aerodrome landscape works

The intent of this interpretation device is to create a physical and visual indicator of the location at which the Fleurs Aerodrome intersects with the M12 Motorway. This physical marker will be done through the planting of tree landscape works bordering both sides of the M12 carriageway.

Limitations

Given the nature of this device, further input should be sought from a landscape designer to understand the site requirements for an installation of this type, technical specifications (i.e., tree species, soil, and bedding requirements), and potential budget.

Draft design brief

Fleurs Aerodrome was built during World War II as part of a series of airfields made during the war to help defend Australia in the event of an invasion. Fleurs Aerodrome was one of only two 'parent' aerodromes operating in the Greater Sydney region; parent aerodromes oversaw smaller, 'satellite' airfields in a strategy known as aircraft dispersal. After the war the aerodrome was used for recreational flights.

The M12 Motorway will directly intersect with Fleurs Aerodrome. The purpose of this planting would be to indicate the location of where the aerodrome would have been. The planting would run the width of the runway at the point where it would have intersected with motorway. This tree planting would run parallel to the shared path on both sides of the carriageway, positioned near Devices 7 and 8. The purpose of this planting is to commemorate Fleurs Aerodrome and its association with this important chapter in Australian History.

Figure 12. Veil of Trees, The Domain, Sydney. *Source:* Janet Laurence.

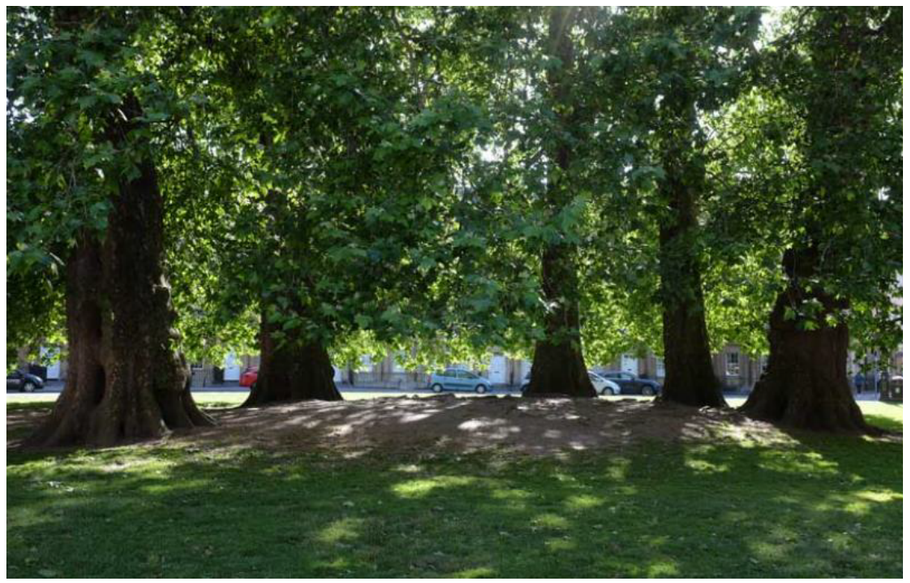


Figure 13. Circle of Trees. *Source:* The Bath Magazine.

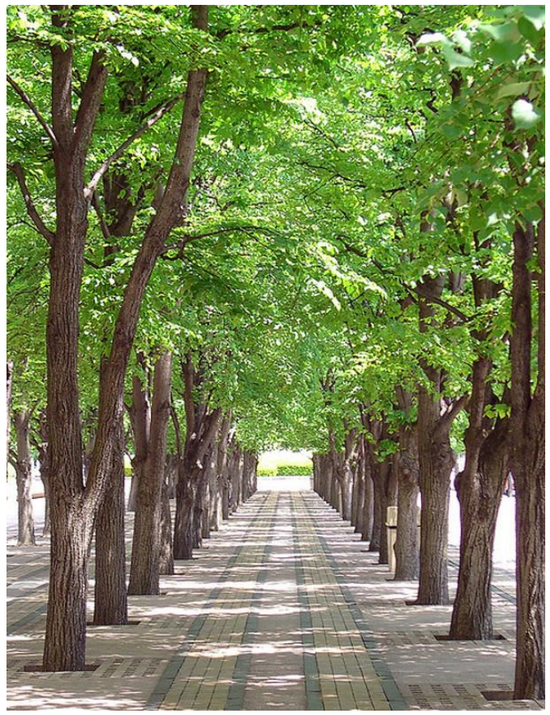


Figure 14. Row of trees from Boston's Christian Science Plaza. *Source:* Deeproot.

Location within study area

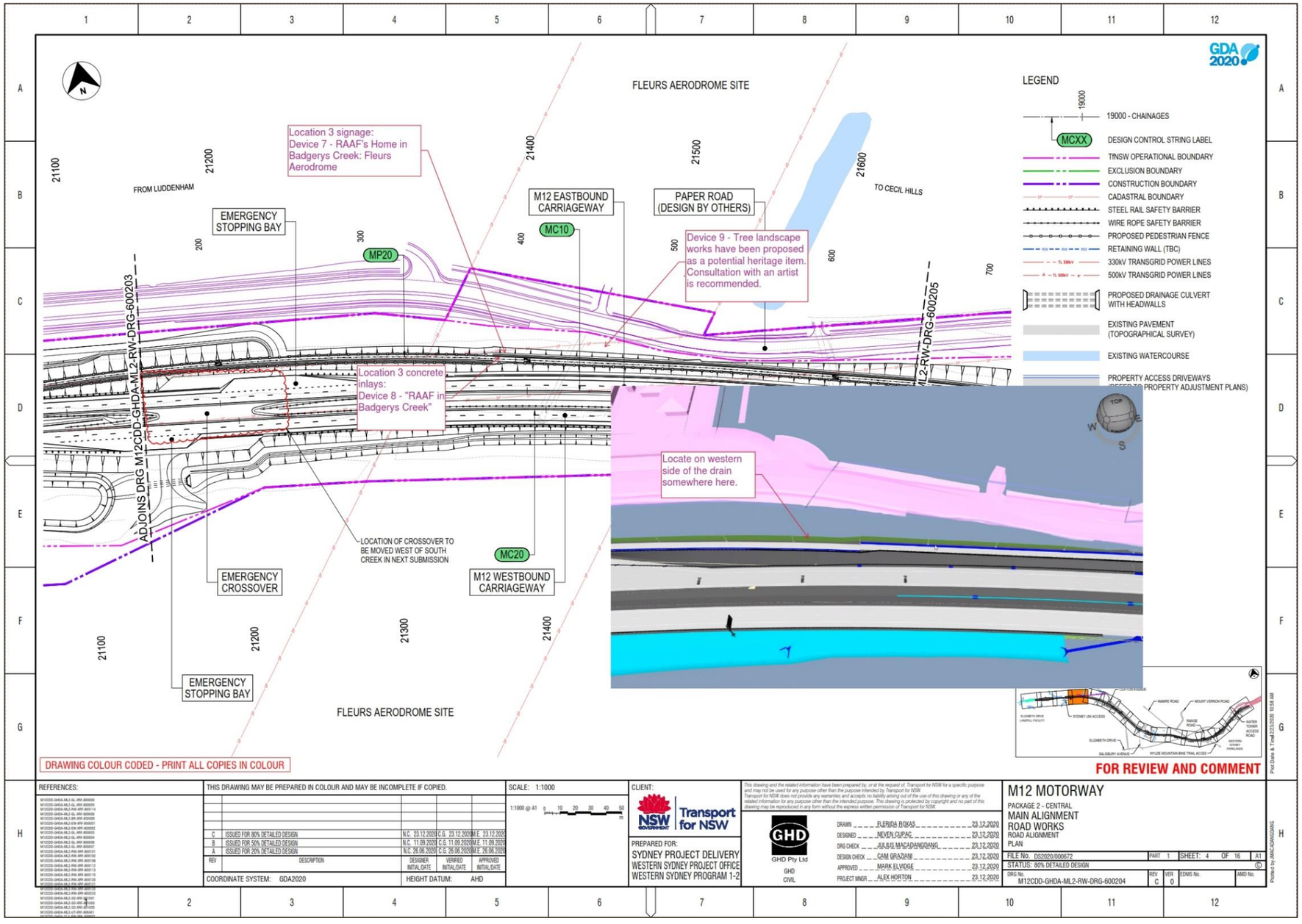


Figure 15. Location 3, Device 9: A proposed planting of trees at the intersection of the M12 Motorway and Fleurs Aerodrome. *Source:* GHD (2021).

5.10 Device 10 (Location 4): Interpretive sign

Device 10 is a sign that provides a basic explanation on the science of radiophysics.

Proposed text content

Echoes of space: Radioastronomy

Australia has had several cutting-edge radio telescope stations, including the Fleurs Radio Telescope Site here in Badgery's Creek, and 'The Dish', located in Parkes.

Radiophysics is the study of radiation; looking at where it comes from and how it interacts with matter. It covers a number of sub-fields, including radio communications, radiology, radiolocation, and radio astronomy, which was an important area of research practised nearby at the Fleurs Radio Telescope Site.

Radio astronomy

Radio astronomy is the study of radio waves from space. Celestial bodies emit specific signals that can be detected by specialised equipment called radio telescopes. Radio telescopes resemble satellite dishes, concave sheets of metal pointed at the sky. The Fleurs Radio Telescope Site located to the north of here, housed several arrays of radio telescopes. Where traditional optical telescopes use lenses to magnify light, radio telescopes receive, boost, and record faint radio signals from deep space. Individual radio telescopes can be quite small and weak, but because they are electronic, they can be networked together across the country—or even across the globe—to get more accurate results. Also, unlike optical telescopes, which need the dark of the night sky, radio telescopes can receive signals 24 hours a day.

The final frontier

Radio astronomy has helped to identify entirely new celestial objects, such as quasars, pulsars, masers, and radio galaxies. They have even picked up a very subtle form of radiation called 'cosmic microwave background radiation', which is thought to date back to be beginnings of the universe. Fleurs Radio Telescope Site helped pioneer the field of radio astronomy and served as a precursor to the iconic Parkes Radio Telescope.

Proposed visual content

Image caption

The Chris Cross radio telescope array at the Fleurs Radio Telescope Site, 1964. Made up of a networked series of 64 dishes, this radio telescope was at the cutting edge of its time. It was also the last CSIRO radio telescope developed at Fleurs Radio Telescope Site before they moved their operation to Parkes.

Image source

Image file available at: https://trove.nla.gov.au/work/231299042?keyword=fleurs%20radio

Graphic Panel Layout

Location within study area

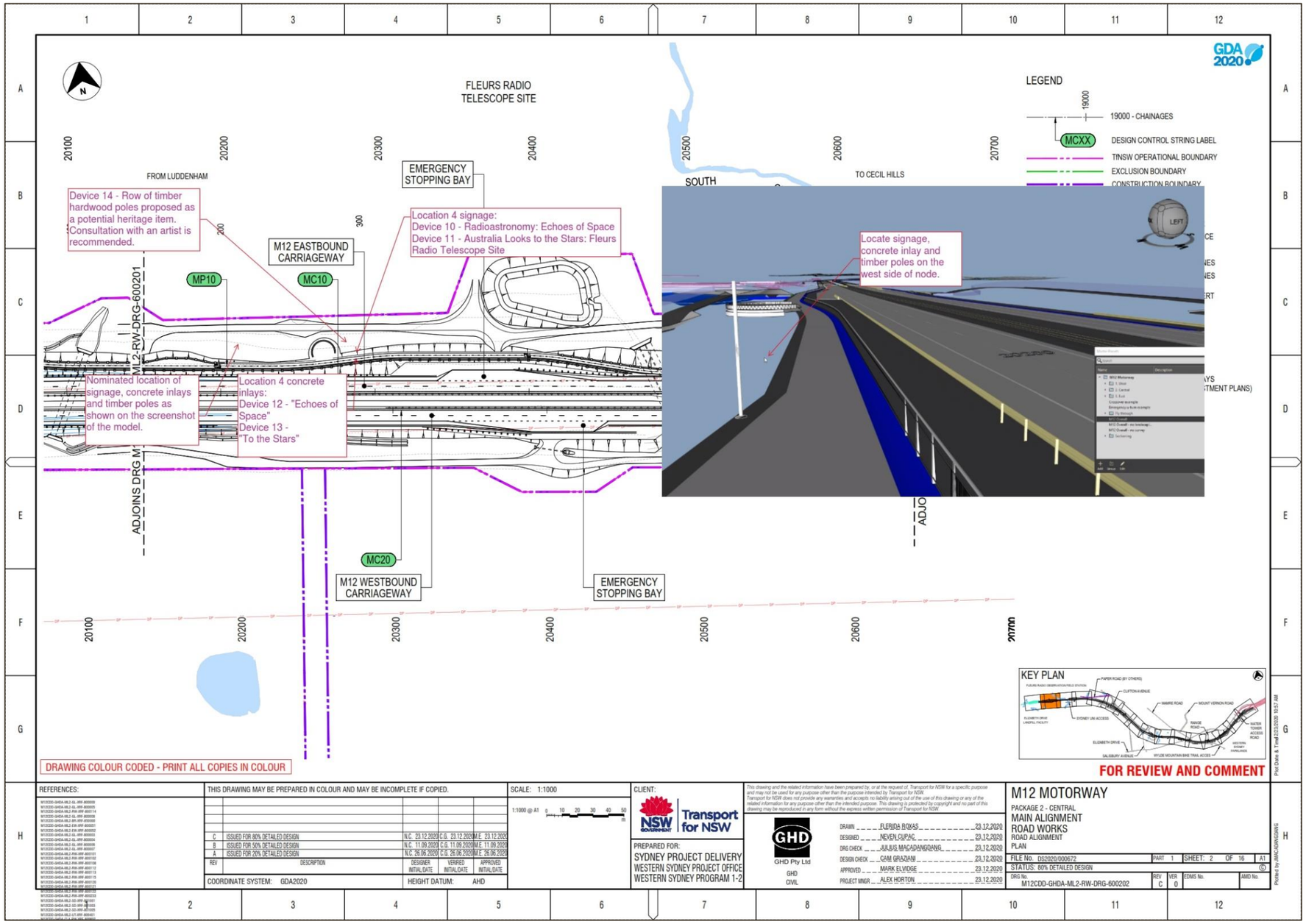


Figure 16. Map showing the location of Fleurs Radio Telescope Site, location 4; signage, concrete inlays, and timber pole installation. *Source:* GHD (2021).

5.11 Device 11 (Location 4): Interpretive sign

Device 11 is a sign that provides information on the development of the Fleurs Radio Telescope Site and its eventual decommission.

Proposed text content

Australia Looks to the Stars: Fleurs Radio Telescope Site

> ‘Through these radio telescopes Australia was able to maintain its place at the forefront of international radio astronomy.’
>
> - *The Flowering of Fleurs: An Interesting Interlude in Australian Radio Astronomy*, by Wayne Orchiston and Bruce Slee, 2002

In 1953, radio physicist Bernie Mills and his team of CSIRO scientists created a prototype for a new, more powerful radio telescope array, the Mills Cross. After constructing a prototype, the CSIRO needed a location to build their new design, and a part of the historic Fleurs Estate was selected.

A hub for research

Fleurs Radio Telescope Site was established in 1954 as the site of the new Mills Cross, which surveyed the sky and catalogued sources of radio emissions from objects in the Milky Way and beyond until 1957. Soon, other radio telescopes were pioneered here too. In 1955 another radio physicist, Alex Shain moved his new aerial array telescope the Shain Cross to Fleurs in order to further test and develop his model. Working alongside the Mills Cross, the Shain Cross carried out surveys of the Milky Way, as well as cataloguing the rotation of Jupiter. In 1956 Fleurs also became home to the Chris Cross a radio telescope, invented by Wilbur Norman ‘Chris’ Christiansen. The Chris Cross required ample space, with sixty-four dishes, each measuring 6 metres wide, and was used to produce maps of the sun and investigate solar bursts.

The end of an era

The University of Sydney acquired Fleurs in 1963, where they continued to develop radio telescope technology. They launched the Fleurs Synthesis Telescope (FST) in 1973, which remain in operation until its closure in 1988. The Fleurs Radio Telescope Site was totally closed down in 1996.

Proposed visual content

Image caption

Bruce Slee examining one of the chart recorders for the Mills Cross, 1955. The Mills Cross generated controversy when the data it collected contradicted the data collected by a team at Cambridge. It was eventually shown that the information collected by the Mills Cross was, in fact, correct.

Image source

Image file available at: https://www.atnf.csiro.au/ATNF-DailyImage/archive/2016/25-Aug-2016.html

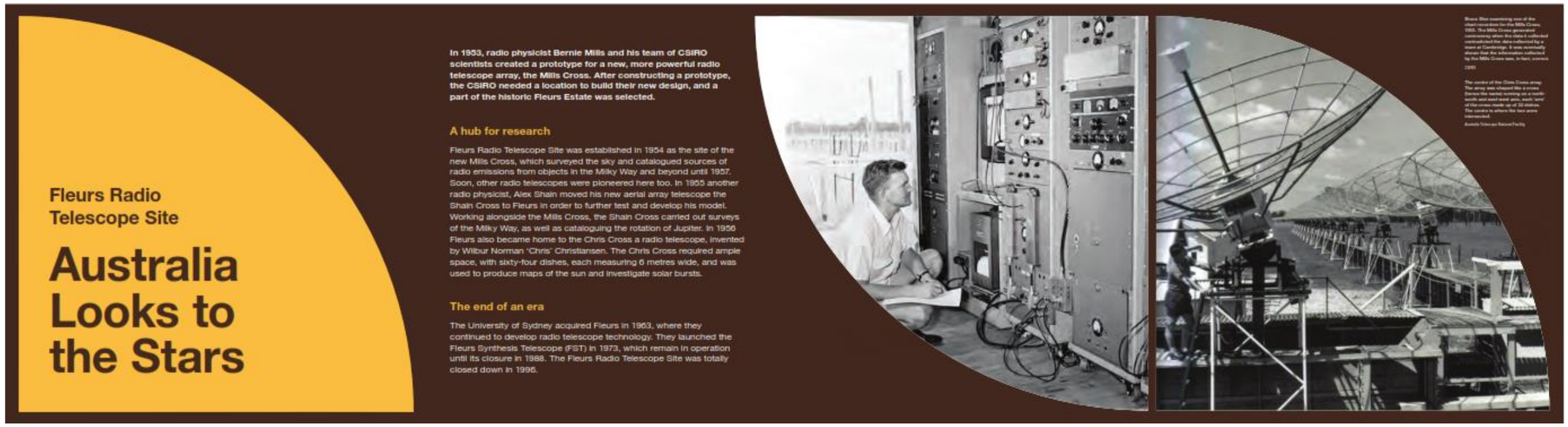
Image caption

The centre of the Chris Cross array. The array was shaped like a cross (hence the name) running on a north-south and east-west axis, each ‘arm’ of the cross made up of thirty-two dishes. The centre is where the two arms intersected.

Image source

Image file available at: https://www.atnf.csiro.au/news/newsletter/jun02/fig4.jpg

Graphic Panel Layout



Location within study area

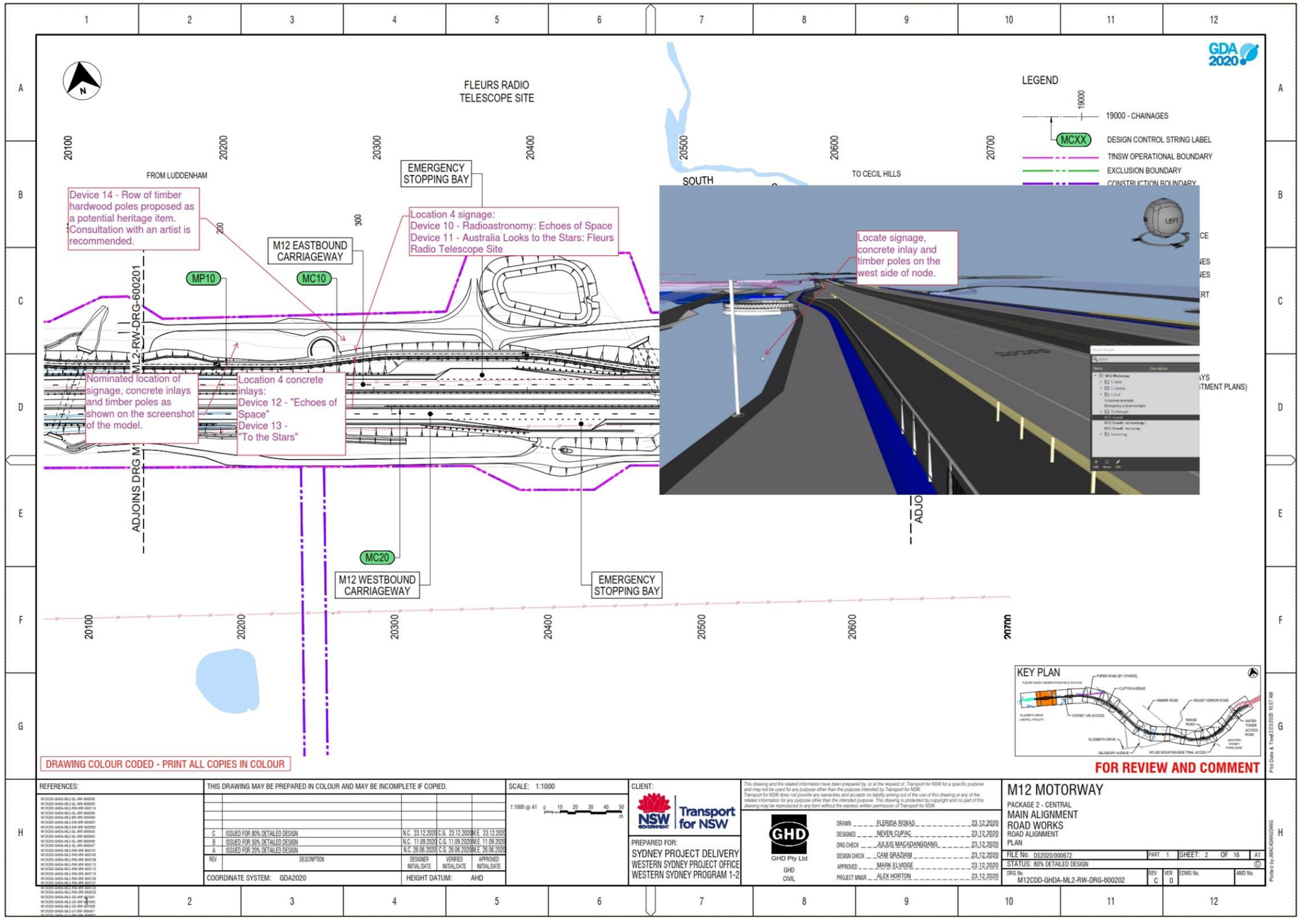
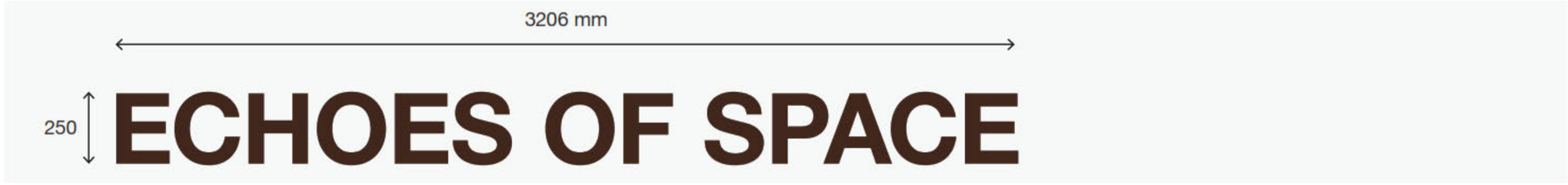


Figure 17. Map showing the location of Fleurs Radio Telescope Site, location 4 signage, concrete inlays, and timber pole installation. *Source:* GHD (2021).

5.12 Device 12 (Location 4): Shared path inlay

Device 12 is an inlay in the shared path with the word **‘Echoes of space’**.

The intention is to alert users to the presence of Device 10.



5.14 Device 13 (Location 4): Shared path inlay

Device 13 is an inlay in the shared path with the word **‘To the Stars’**.

The intention is to alert users to the presence of Device 11.

5.15 Device 14 (Location 4): Fleurs Radio Telescope Site installation

The intention of this interpretation device is to create an artistic representation to the large cross array installations that were present at the Fleurs Radio Telescope Site.

Motorway installations are a specialist public art area, given the safety constraints and complexity in achieving the desired result. A public art consultant should provide advice relating to the installation given the through the use of a repeated hardwood pole which is stylised to emulate the cross array poles. This same approach has been used at the Lighthorse Interchange between the M4 and M7 motorways, where the repeated orange poles are a clear landscaping element with subtle, esoteric meanings.

Brief for public artist

Fleurs Radio Telescope Site was a CSIRO research facility in the 1950s and 60s which was used to pioneer several new radio telescope arrays. The technology developed at this site was cutting edge for its time and competed with some of the best in the world. The site was then sold the Sydney University who took over the site, while the CSIRO invested in the radio telescope at Parkes.

The installation would be a row of timber hardwood poles utilising a design interpreting cross array poles and equipment. Sculptural pieces could be designed and constructed with an approach that references the recycled and ad hoc nature of equipment at Fleurs, which was constructed under post war rationing. This could include the use of recycled materials. The poles reflect one of the few extant visual features of the Fleurs Radio Telescope Site and these may or may not remain for much longer, so the purpose of this work is to enshrine their image.

Figure 18. The ‘power poles’ mark part of the N-S arm of the Shain Cross. Behind it are the Mills Cross and then the Chris Cross. *Source:* ATNF Historic Photographic Archive (5192-9).

Figure 19. Remnant pole at Fleurs. The original installation would have involved hundreds of these poles in a straight row. They would have supported various wires and insulators relating to the Shain Cross. *Source:* Extent Heritage.

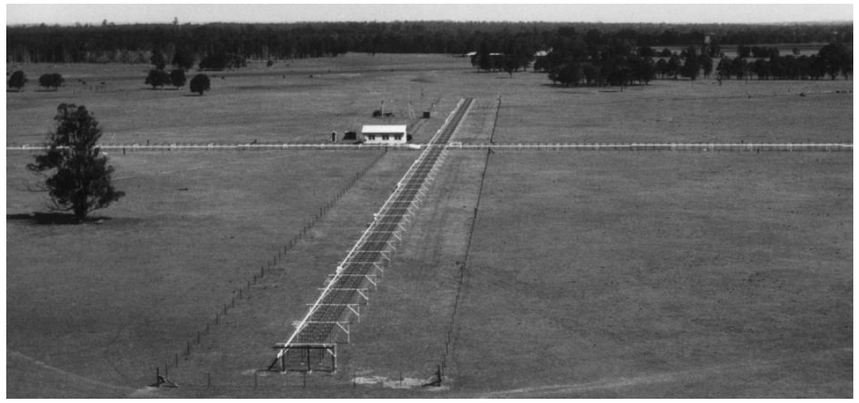


Figure 20. View looking south showing the N-S arm and most of the E-W arm of the Mills Cross, with the receiver hut at the centre of the array. *Source:* ATNF Historic Photographic Archive (3476-3).

Location within site

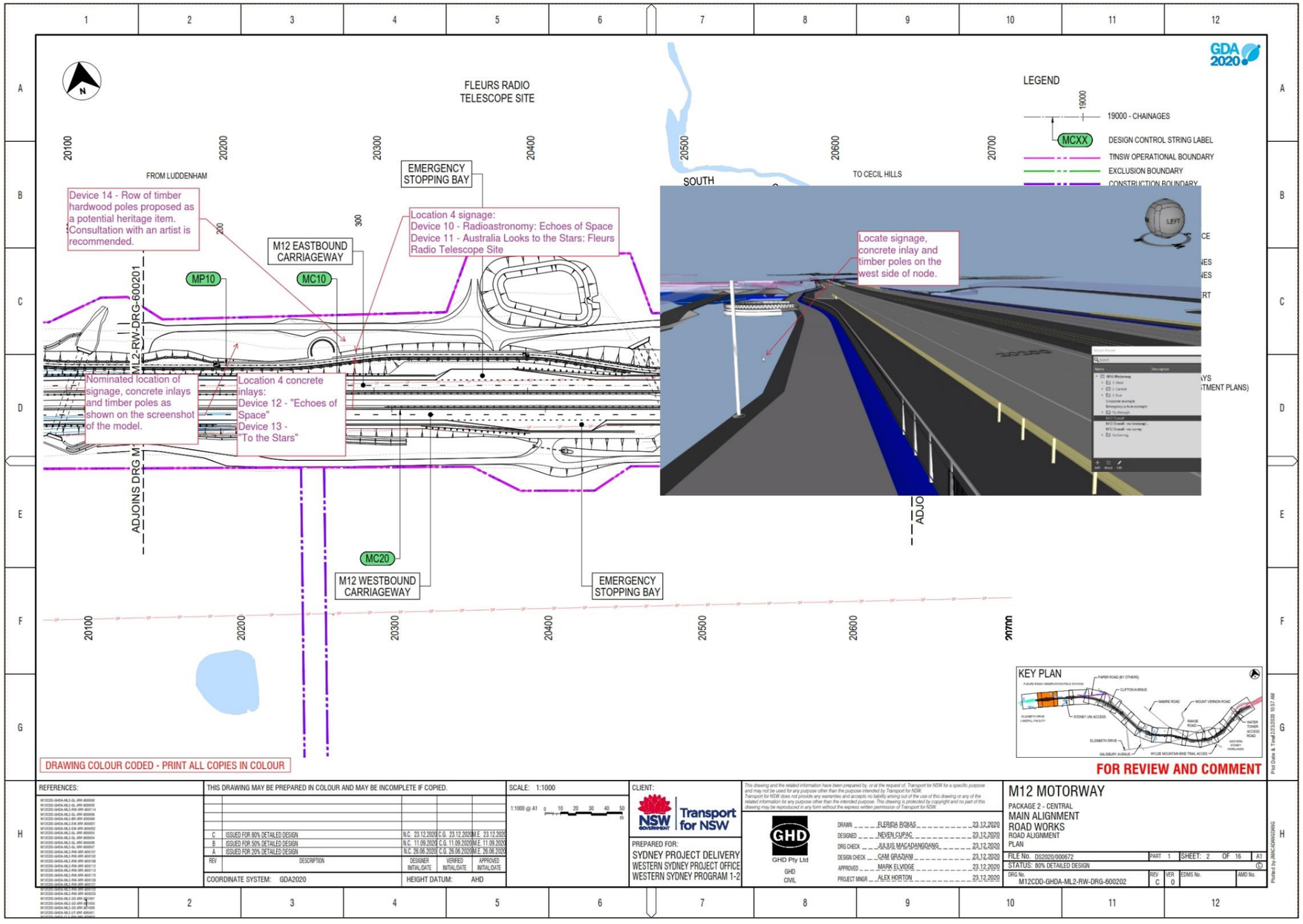


Figure 21. Location 4, Device 14, a proposed installation of a row of timber hardwoods reflecting the poles that would have stood at the Fleurs Radio Telescope Site. *Source:* GHD (2021).

5.16 Device 15 (Location 5): Interpretive sign

Device 15 is an interpretive sign that provides information on the agricultural history of Western Sydney and the M12 area.

Proposed text content

Sydney's food bowl: Farming and research at Badgerys Creek

After the British arrived in Sydney Cove in 1788, they immediately set about trying to find suitable land for agriculture. Soon they spread west, displacing the Darug people from their traditional lands, and moving the colony's official heard of cattle here to roam and graze. Large land grants were made that allowed the colonists to establish productive farms, but this in turn had a devastating impact on the Darug people's access to food resources.

Exeter Farm

James Badgery, who was the first European to reside in the area established 'Exeter Farm', where he grew wheat and bred sheep, cattle, and racehorses. Exeter Farm extended northward from Elizabeth Drive, and Badgery gave his name to both the waterway and suburb. The M12 cuts through a notable portion of what was once Exeter Farm. Wheat was a popular crop in the region in the early nineteenth century, but this changed when the crops began suffering from a fungus known as 'rust'. After this outbreak, many farmers switched to growing citrus fruit and planting vineyards, though livestock remained popular.

A hub for agricultural research

This area soon became an important hub for agricultural research. CSIRO, its predecessor CSIR, and the University of Sydney all had important research stations here, such as the McMaster Field Station and the McGarvie Smith Animal Husbandry Farm. The McGarvie Smith Farm provided veterinary science students with the opportunity to work with large animals such as horses and cattle, and promoted a medical and scientific approach to animal care.

Proposed visual content

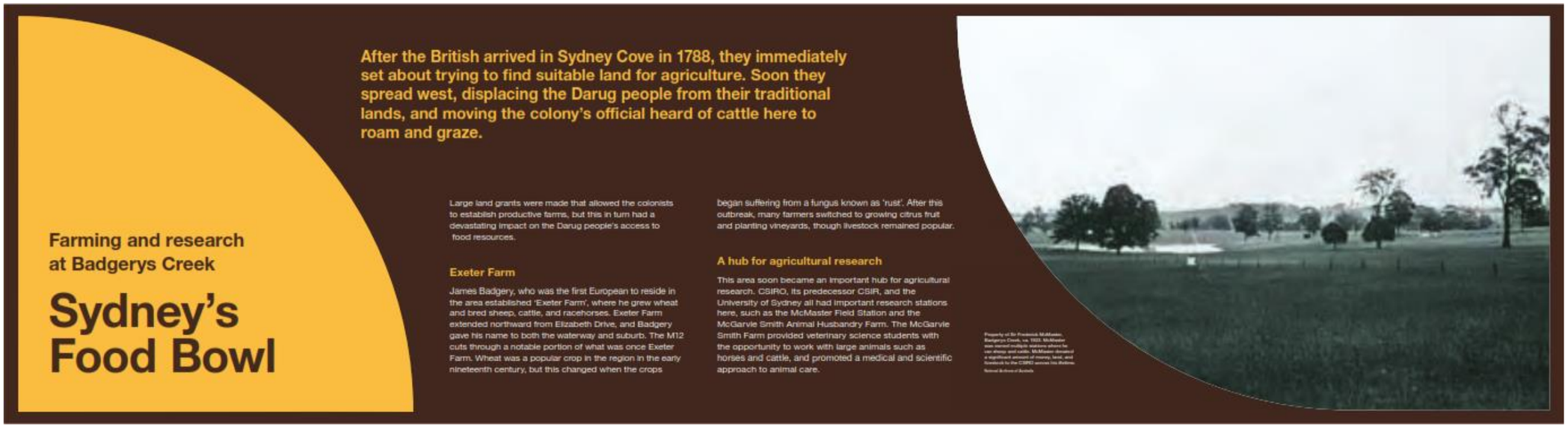
Image caption

Property of Sir Frederick McMaster, Badgerys Creek, c.1923. McMaster was owned multiple stations where he ran sheep and cattle. He donated a significant amount of money, land, and livestock to the CSIRO across his lifetime.

Image source

Image file available at: https://trove.nla.gov.au/work/231176974?keyword=mcmaster%20field%20station

Graphic Panel Layout



Location within study area

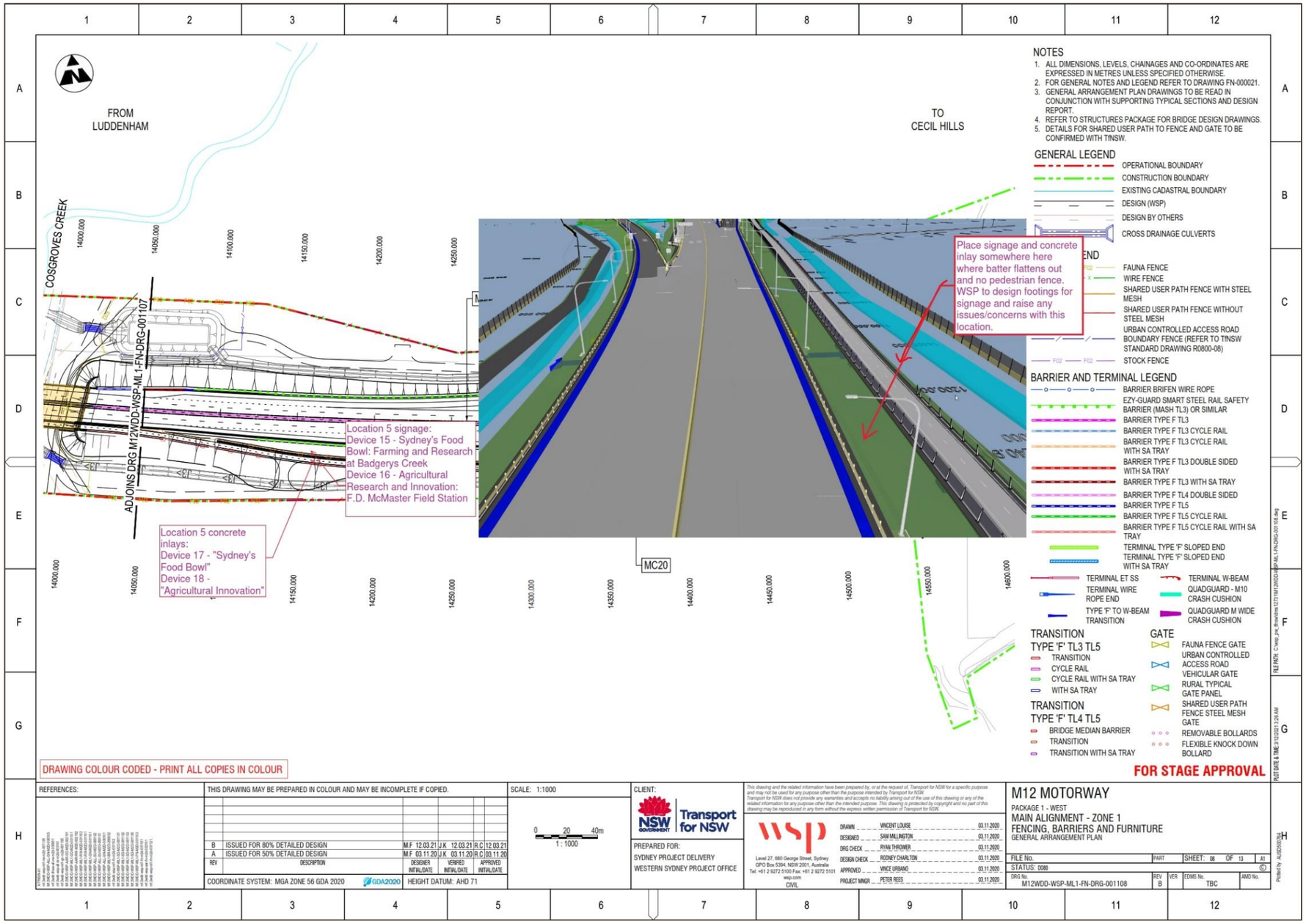


Figure 22. Map showing the location of McMaster Field Station, location 5 signage and concrete inlays. *Source:* WSP (2021).

5.17 Device 16 (Location 5): Interpretive sign

Device 16 is an interpretive sign that provides information on the research undertaken at the FD McMaster Field Station.

Proposed text content

Agricultural Research and Innovation: McMaster Field Station

> ‘At a time when many primary producers were openly critical of the value of science in agriculture, Sir Frederick saw the need for the scientific approach and did everything possible to promote it.’
>
> - ‘McMaster’s Aid to Science on Land’, *The Sydney Morning Herald,* 3 December 1954

The F D McMaster Field Station opened here in 1938, and was one of Australia’s earliest agricultural research stations. Named after prominent pastoralist and philanthropist Frederick McMaster, the station aimed to pursue targeted research into Australian agriculture. Researchers recognised that many of Australia’s agricultural practices had been inherited from Europe, and were not necessarily suited to the local climate and soils. By introducing a scientific approach, and gathering significant bodies of data, facilities like the McMaster Field Station were able to revolutionise Australian farming.

In search of the perfect fleece

Sheep were a particular focus for the scientists here, who wanted to find out how to grow the optimal fleece and sustain healthy, fertile flocks. Wool texture and chemistry, as well as bacterial issues like fleece rot, were studied to better understand their causes. This research was able to create a demonstrable change in the yield and quality of wool for multiple generations of sheep.

The Australian Milking Zebu

Their work on cattle also helped to shape the future of dairying in Australia. Jersey cows, which were a favoured breed in the cold damp British climate, had long struggled in Australian conditions. In the 1950s the CSIRO began developing a new breed of cattle at the McMaster Field Station by cross breeding the British Jersey cattle with Pakistani Sahiwal and Sindhi cattle, creating the Australian Milking Zebu (AMZ). The AMZ was a breed of dairy cattle that was adapted to the heat and resistant to cattle ticks. This program was hugely successful not only in Australia, but also internationally, with AMZ cattle being exported to other countries.

Proposed visual content

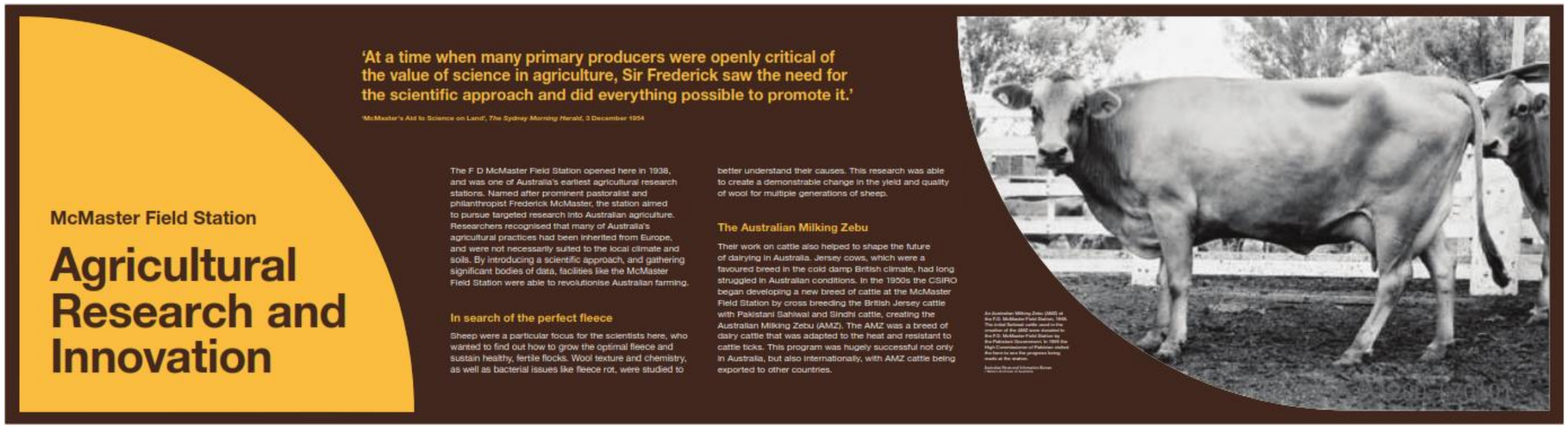
Image caption

An Australian Milking Zebu (AMZ) at the McMaster Field Station, 1968. The initial Sahiwal cattle used in the creation of the AMZ were donated to the McMaster Field Station by the Pakistani Government. In 1959 the High Commissioner of Pakistan visited the farm to see the progress being made at the station.

Image source

Image file available at: https://trove.nla.gov.au/work/231117149?keyword=mcmaster%20field%20station

Graphic Panel Layout



Location within study area

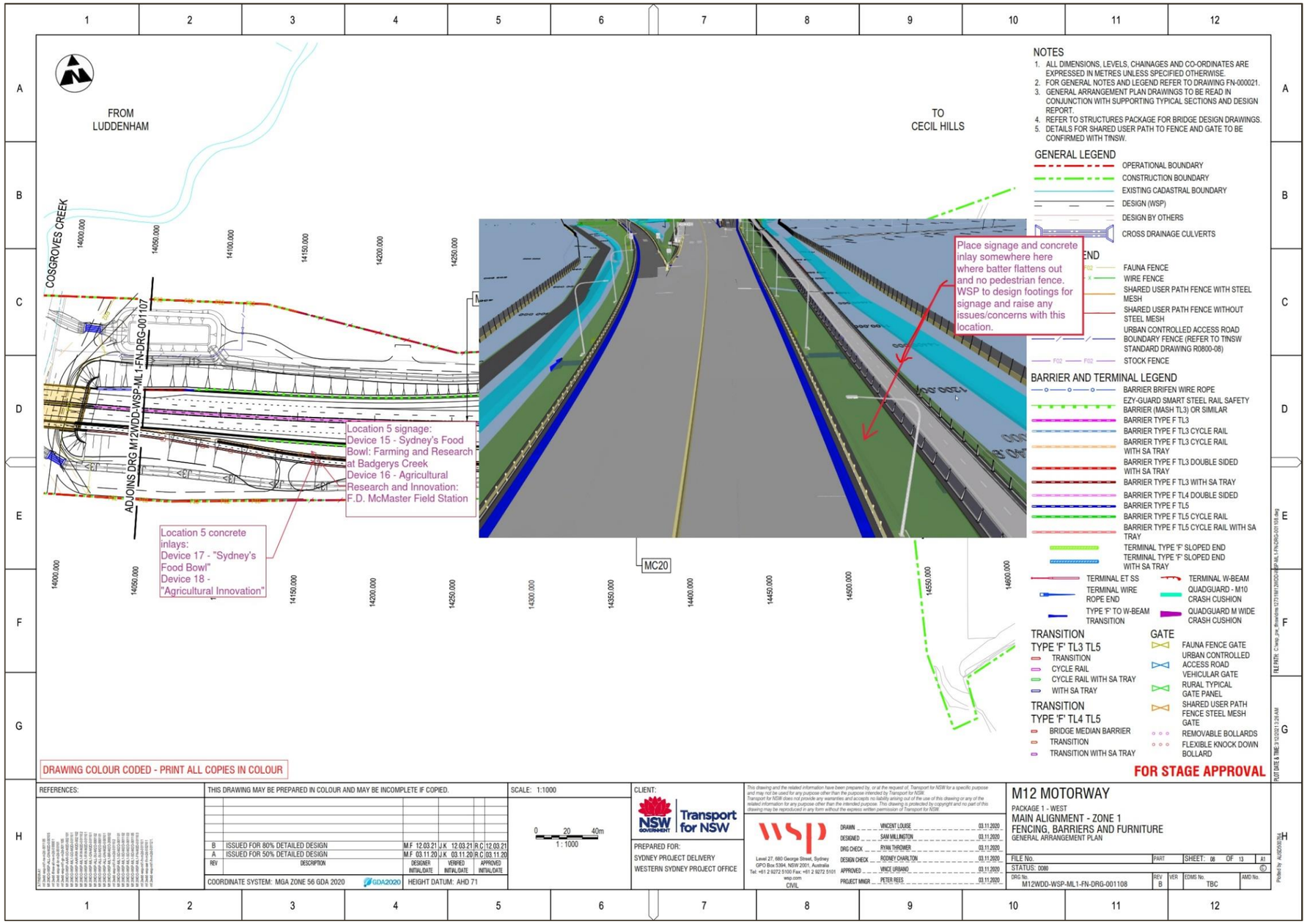


Figure 23. Map showing the location of McMaster Field Station, location 5 signage and concrete inlays. *Source:* WSP (2021).

5.18 Device 17 (Location 5): Shared path inlay

Device 17 is an inlay in the shared path with the word **‘Sydney’s food bowl’**.

The intention is to alert users to the presence of Device 15.

5.19 Device 18 (Location 5): Shared path inlay

Device 18 is an inlay in the shared path with the word **‘Agricultural innovation’**.

The intention is to alert users to the presence of Device 16.

Next steps

This Plan has included detailed advice relating to the specific devices recommended for the M12 Motorway non-Aboriginal Heritage scheme. Details provided include:

- locations of proposed devices;
- text and graphic content;
- concept designs (where applicable); and
- content for consultant briefs (where applicable).

The next step in the finalisation of this Plan is to undertake consultation with relevant stakeholders and consent authorities, namely Heritage NSW. Once the Plan is finalised the next stage will be implementation.

In order to implement the plan the following steps should be taken:

- allocation of budgets for fabrication and installation;
- preparation of final content and final print ready artwork;
- securing of copyright clearances and permissions; and
- commissioning of public artists and landscape designers to design and implement Devices 9 and 14.

Management of interpretation installations

The physical interpretive works and infrastructure proposed in this study are intended as self-guided, physically robust and secure elements that will require minimal ongoing supervision and maintenance. The proposed interpretation and infrastructure are intended to have a physical/technological lifespan of approximately fifteen years.

Ongoing inspection of interpretive works should be conducted on a twelve-monthly basis to review element condition, conservation conditions, and security. As some of the interpretation will be located in outdoor public spaces, they may require occasional maintenance or replacement due to the effects of UV exposure, vandalism, and accidental damage.

Signs

- Signs should be wiped down.
- Signs should be checked for graffiti.

Inlays

- Inlays should be checked for damage.
- Shared paths should be swept.

More detailed and accurate advice relating to maintenance should be obtained from fabricators and designers during the implementation process. The advice here, is indicative only.

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Appendix A. Consultation Correspondence

In accordance with CoA A5, below details a log of engagement or attempted engagement with relevant project stakeholders.

Stakeholder	Initial Engagement	Follow up	Comments
Penrith City Council	Briefing: 19/08/2021 ▪ Emailed interpretation plan for review: 20/08/2021	▪ 13/09/2021 - Phone call to Ari Fernando. Left a voice message ▪ 13/09/2021 - Emailed Ari Fernando ▪ 22/09/2021 – Called Ari Fernando left a voice message ▪ Called Ari Fernando and Adam Wilkinson on 29.09.2021 and left voicemails 29.09.2021 ▪ Adam Wilkinson called back and confirmed Ari was correct contact for M12 and confirmed he had asked Ari to call TfNSW. No call received. ▪ Emailed on 7/10/2021 notifying that TfNSW intended to close the consultation period	N/A
Fairfield City Council	Briefing: 12/08/2021 ▪ Emailed interpretation plan for review: 20/08/2021	N/A	Comments received on 26/08/2021 in regards to the title of the Upper Canal interpretation.
Liverpool City Council	Briefing: 19/08/2021 ▪ Emailed interpretation plan for review: 20/08/2021	▪ 13/09/2021 – Phone call to Thomas Wheeler (Heritage Officer). Left a voice message. ▪ 22/09/2021 – Phone call to Thomas Wheeler (Heritage Officer). Left a voice message. ▪ 22/09/2021 – Phone call to Charles Wiafe. Left a voice message. ▪ 29/09/2021 - Called Charles Wiafe 29.09.2021 to follow up	

Stakeholder	Initial Engagement	Follow up	Comments
		on comments. Charles asked TfNSW to resend plan. TfNSW resent plan on 29.09.2021 via email requesting confirmation of whether comments would be provided ▪ 07/10/2021 – Phone call from Charles Wiafe. Advised he would follow up on comments ▪ 12/10/2021 – Emailed Charles Wiafe and Thomas Wheeler noting that consultation period has closed.	
Heritage NSW	Briefing: 19/08/2021 ▪ Emailed interpretation plan for review: 20/08/2021	▪ 13/09/2021 – Phone call to Hendry Wan. Left a voice message ▪ 22/09/2021 – Phone call to Hendry Wan. Discussed interpretation plan feedback on this phone call. Hendry confirmed he was happy to provide verbal comments only.	Issues raised in phone call: 1) Heritage NSW raised Aboriginal Cultural Heritage and Non-Aboriginal heritage are included in two separate interpretation plans. **Response:** TfNSW noted this and explained that while they are in separate plans, there has been work to make sure they are integrated. This will be evident in the Place, Design and Landscape Plan. 2) Fleurs Radio-telescope site interpretation. Heritage NSW suggested advice about interpretation for Fleurs Radio telescope site should come from a specialist with expertise on the site, for example Alice Gorman.

Stakeholder	Initial Engagement	Follow up	Comments
			Response: TfNSW agreed with this suggestion and confirmed that Alice Gorman has peer reviewed additional heritage assessment TfNSW has recently completed for the Fleurs Radio telescope site.

Suzette Graham

Subject:	M12 Motorway - Heritage Interpretation discussion
Location:	Microsoft Teams Meeting
Start:	Thu 12/08/2021 1:00 PM
End:	Thu 12/08/2021 1:30 PM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Suzette Graham
Required Attendees:	Kerren Ven; Vanessa Holtham
Optional Attendees:	Katie Xia

Hi Kerren and Vanessa,

Some time to discuss the heritage interpretation plan for M12 Motorway.
Please let me know if it suits, happy to move around.

Thanks,

Kind regards,
Suzette Graham
Senior Environment Officer
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

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Microsoft Teams meeting

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1

Suzette Graham

Subject:	M12 Motorway - Heritage Interpretation
Location:	Microsoft Teams Meeting
Start:	Thu 19/08/2021 10:00 AM
End:	Thu 19/08/2021 11:30 AM
Recurrence:	(none)
Meeting Status:	Meeting organizer
Organizer:	Suzette Graham
Required Attendees:	Suzette Graham; Eleanor Banaag; [redacted] Greg Jackson; [redacted] Ari Fernando; Sophie Worthing
Optional Attendees:	Foster Walker; Shannon Schofield; [redacted] David Forward; Anthony Price; Karin Felten; Lee McCourt; Denis Gojak; Tiffany LeeShoy; Katie Xia; Dr Madeline Shanahan; Peter Wood

Hi all,

Please accept this invite to a briefing on the proposed M12 Motorway heritage interpretation.
We will cover the following:

1) Brief Project overview
2) Non-Aboriginal heritage interpretation plan
3) Aboriginal Artwork strategy for the project
4) Questions
5) Providing feedback to TfNSW
6) Next steps

I have allowed 1.5 hrs, but may only need 1 hr.

Please let me know if you have any questions.
Thanks,
Kind regards

Kind regards,
Suzette Graham
Senior Environment Officer
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

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[redacted]

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2

Document Transmittal

Transport for NSW

Transmittal No: M12PPW-TFNSW-TX-000393

Date: 20 August 2021 09:40 AM
Reason for Issue: Issued For Review
Subject: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review
Contract No: M12PPW - M12 - Project Wide
Message:

Hi all,

Thank you for attending the recent briefings on the M12 Motorway Non-Aboriginal Heritage Interpretation Plan.
Please find the Final Draft Plan attached for your review and comment.
Please provide comments in the spreadsheet attached and return by **03/09/2021** to:
Suzette Graham [redacted]
Christine Stuart [redacted]

The Aboriginal Artwork Strategy is still in development and will be issued for review in due course.

Any issues with Teambinder or the review time frame, please let me know.

Thanks,

Kind regards,
Suzette Graham
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

I work flexibly. Unless it suits you, I don't expect you to read or respond to my emails outside of your normal work hours.

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Please submit your comments by 03 September 2021

Transmitted to:

Company	Name
NSW Office of Environment & Heritage	Hendry Wan
Fairfield City Council	Vanessa Holtham
Fairfield City Council	Kerren Ven
Liverpool City Council	Thomas Wheeler
Liverpool City Council	Charles Wiafe
Penrith City Council	Ari Fernando
Penrith City Council	Tiffany LeeShoy
Penrith City Council	David Forward
Penrith City Council	Peter Wood

Transmitted cc:

Company	Name
Transport for NSW	Christine Stuart
Transport for NSW	Shannon Schofield
Transport for NSW	Foster Walker
Transport for NSW	Greg Jackson
Transport for NSW	Sophie Worthing

Click here to download all Transmittal files.

Click on Document Nos to download them individually.

Item	Document No	Rev	Sts	Title	Contract No	Design Package No
1	M12PPW-EXTENTHERI-ALL-EN-RPT-000001	B.01	S4	M12 Non-Aboriginal Heritage Interpretation Plan	M12PPW	M12CEN12

Transmitted by: Suzette Graham, Transport for NSW

Attachments:
M12 - Feedback on Document Comments or Responses.xlsx(41KB)

From: Kerren Ven
To: Suzette Graham
Cc: Vanessa Hollham
Subject: RE: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review
Date: Thursday, 26 August 2021 2:46:25 PM
Attachments: image007.png
image001.png
image002.png
image003.png
image004.png
Copy of Copy of M12 - Feedback on Document Comments or Responses.xlsx

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Hi Suzette,

Please find attached the excel sheet with Council's comments in relation to the Non-Aboriginal Heritage Interpretation Plan as required to address the requirements for condition E26, E27 that will also guide the Place, Design and Landscape Plan.

Kind regards,

Kerren Ven
Strategic Planner | Strategic Land Use Planning
City Strategic Planning
PO Box 21, Fairfield NSW 1860
[redacted]
www.fairfieldcity.nsw.gov.au
mail@fairfieldcity.nsw.gov.au

The Bluett Award
FairfieldCity
Celebrating diversity

We acknowledge the Cabrogal of the Darug nation who are the Traditional Custodians of this Land. We also pay our respect to the Elders both past, present and emerging of the Darug Nation.

From: Suzette Graham via InEight Document [redacted]
Sent: Friday, 20 August 2021 9:40 AM
To: Kerren Ven [redacted]
Subject: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review

Document Transmittal

NSW Transport for NSW

Transmittal No: M12PPW-TFNSW-TX-000393

Date:	20 August 2021 09:40 AM
Reason for Issue:	Issued For Review
Subject:	M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review
Contract No:	M12PPW - M12 - Project Wide

Message:

Hi all,

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Please find the Final Draft Plan attached for your review and comment.
Please provide comments in the spreadsheet attached and return by **03/09/2021** to:
Suzette Graham [redacted]

Christine Stuart [redacted]

The Aboriginal Artwork Strategy is still in development and will be issued for review in due course.

Any issues with Teambinder or the review time frame, please let me know.

Thanks,

Kind regards,

Suzette Graham
Environment and Sustainability Manager

Sydney Infrastructure Development | Safety, Environment and Regulation

[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

I work flexibly. Unless it suits you, I don't expect you to read or respond to my emails outside of your normal work hours.

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Please submit your comments by 03 September 2021

Transmitted to:

Company	Name
NSW Office of Environment & Heritage	Hendry Wan
Fairfield City Council	Vanessa Holtham
Fairfield City Council	Kerren Ven
Liverpool City Council	Thomas Wheeler
Liverpool City Council	Charles Wiafe
Penrith City Council	Ari Fernando
Penrith City Council	Tiffany LeeShoy
Penrith City Council	David Forward
Penrith City Council	Peter Wood

Transmitted cc:

Company	Name
Transport for NSW	Christine Stuart
Transport for NSW	Shannon Schofield
Transport for NSW	Foster Walker
Transport for NSW	Greg Jackson
Transport for NSW	Sophie Worthing

Click here to download all Transmittal files

Click on Document Nos to download them individually.

Item	Document No	Rev	Sts	Title	Contract No	Design Package No
1	M12PPW-EXTENTHERI-ALL-EN-RPT-000001	B.01	S4	M12 Non-Aboriginal Heritage Interpretation Plan	M12PPW	M12CEN12

Transmitted by: Suzette Graham, Transport for NSW

TeamBinder Transmittal Reference: {51BEF369-5A06-49F3-8F8B-2B5CCCC46B7F}

From: Suzette Graham
To: Ari Fernando
Cc: Tiffany LeeShoy; M12 Teambinder; M12 Detailed Design
Subject: RE: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review
Date: Monday, 13 September 2021 6:15:00 PM
Attachments: image009.png
image011.png

Hi Ari,

Just following up on whether Penrith City Council proposes to submit comments on the M12 Motorway Non-Aboriginal heritage Interpretation Plan?
And if so, when these would be received?
The below email indicates a consolidated set of comments would be forthcoming.

Thanks,

Kind regards,
Suzette Graham
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

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OFFICIAL

From: Ari Fernando [redacted]
Sent: Tuesday, 31 August 2021 9:51 PM
To: Ari Fernando [redacted]
Cc: Tiffany LeeShoy [redacted] Suzette Graham
[redacted] M12 Teambinder
[redacted]
Subject: Fw: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Sue

pl note below comments from Penrith City Council.

Regards

Ari Fernando
Major Projects & Design Coordinator

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From: Peter Wood [redacted]
Sent: Friday, August 20, 2021 10:13 AM
To: Ari Fernando [redacted] Tiffany LeeShoy [redacted]
David Forward [redacted]
Cc: Alison Veron [redacted] Gavin Cherry [redacted] James
Heathcote [redacted]
Subject: RE: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review

Hi Ari, Tiffany and David.

I suggest we need a co-ordinated PCC response with one set of commentary into the spreadsheet.

Thanks Tiffany I have now just read your message and agree as above.

Council's original submission is on the Planning Portal SSD website, and may be worth referring to for points on heritage, if you haven't seen it, let me know if you can't find it.

Unfortunately a lot of our original submission has not been responded to as far as proper heritage assessment and conservation where possible, mainly due to predetermined
M12 alignment. The response is therefore the emphasis on interpretation and archival recording.

I will be seeking to re-engage Council's Heritage Advisor also to review however given the above I expect he will not have too much to add and we will be appreciative of being informed by
Your comments Tiffany and David around the Interpretation strategy and plans.

For consistency and given I signed Council's previous submission, I am happy to bring together the comments and facilitate a meeting to discuss next week.

Thanks

Peter Wood
Development Services Manager
[redacted]
PO Box 60, PENRITH NSW 2751
www.visitpenrith.com.au
www.penrithcity.nsw.gov.au
PENRITH
CITY COUNCIL
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From: Suzette Graham via InEight Document [redacted]
Sent: Friday, August 20, 2021 9:40 AM
To: Ari Fernando [redacted]
Subject: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review

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Document Transmittal

NSW GOVERNMENT Transport for NSW

Transmittal No: M12PPW-TFNSW-TX-000393

Date: 20 August 2021 09:40 AM

Reason for Issue: Issued For Review

Subject: M12 Motorway - Non-Aboriginal Heritage Interpretation Plan - For Review

Contract No: M12PPW - M12 - Project Wide

Message:

Hi all,

Thank you for attending the recent briefings on the M12 Motorway Non-Aboriginal Heritage Interpretation Plan.
Please find the Final Draft Plan attached for your review and comment.
Please provide comments in the spreadsheet attached and return by **03/09/2021** to:
Suzette Graham [redacted]
Christine Stuart -

The Aboriginal Artwork Strategy is still in development and will be issued for review in due course.

Any issues with Teambinder or the review time frame, please let me know.

Thanks,

Kind regards,
Suzette Graham
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

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Please submit your comments by 03 September 2021

Transmitted to:

Company	Name
NSW Office of Environment & Heritage	Hendry Wan
Fairfield City Council	Vanessa Holtham
Fairfield City Council	Kerren Ven
Liverpool City Council	Thomas Wheeler
Liverpool City Council	Charles Wiafe
Penrith City Council	Ari Fernando
Penrith City Council	Tiffany LeeShoy
Penrith City Council	David Forward
Penrith City Council	Peter Wood

Transmitted cc:

Company	Name
Transport for NSW	Christine Stuart
Transport for NSW	Shannon Schofield
Transport for NSW	Foster Walker
Transport for NSW	Greg Jackson
Transport for NSW	Sophie Worthing

Click here to download all Transmittal files.

Click on Document Nos to download them individually.

Item	Document No	Rev	Sts	Title	Contract No	Design Package No
1	M12PPW-EXTENTHERI-ALL-EN-RPT-000001	B.01	S4	M12 Non-Aboriginal Heritage Interpretation Plan	M12PPW	M12CEN12

Transmitted by: Suzette Graham, Transport for NSW

TeamBinder Transmittal Reference: {51BEF369-5A06-49F3-8F8B-2B5CCCC45B7F}

From: Suzette Graham
To: [redacted]
Cc: M12 Detailed Design
Subject: M12 Motorway Interpretation Plan and Construction Environmental Management Plans
Date: Wednesday, 29 September 2021 11:13:00 AM

Hi Charles,

Following our phone call this morning, just confirming that I have re-sent the following M12 Motorway documents to you via Teambinder:

- Non-Aboriginal heritage Management Plan – comments were due 3 September 2021
- Construction Cultural Heritage Management Plan – comments were due 27 September 2021
- Noise and Vibration Management Plan – comments were due 23 September 2021
- Contaminated Land Management Plan- Comments were due 22 September 2021
- Flora and Fauna Management Plan – Comments were due 22 September 2021

Can you please advise if Council wish to make comments on these documents, and if so when comments can be expected?

Thomas – I have copied you in as an FYI as I know we sent the Interpretation plan to you as well.

Thanks,

Kind regards,
Suzette Graham
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

OFFICIAL

From: [redacted]
To:
Cc: M12 Detailed Design
Subject: M12 Non-Aboriginal heritage interpretation plan
Date: Tuesday, 12 October 2021 1:22:00 PM

Hi Charles and Thomas,

Just wanted to let you know that TfNSW is now finalising the M12 Non-Aboriginal heritage interpretation plan for its inclusion in the Place, Design and Landscape Plan (PDLP). TfNSW intend to exhibit the PDLP on 1 Nov 2021, and LCC will have another opportunity to comment on the interpretation strategy at this stage.

Thanks,

Kind regards,
Suzette Graham
Environment and Sustainability Manager
Sydney Infrastructure Development | Safety, Environment and Regulation
[redacted]
Transport for NSW
27 Argyle Street, Parramatta NSW 2150

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M12 Motorway Heritage Interpretation Briefing - Meeting Summary

Total Number of Participants: 18

Meeting Title: Placeholder: Heritage Interpretation Plan

Meeting Start Time: 8/19/2021, 9:59:29 AM

Meeting End Time: 8/19/2021, 11:59:13 AM

Debug Id: 411118ac-bf0a-4bdb-8119-19e28c6b555

Meeting Details

Full Name: Suzette Graham

Join Time: 8/19/2021, 9:59:29 AM

Leave Time: 8/19/2021, 11:22:31 AM

Duration: 1h 23m

userPrinicpal Name: [redacted]

Role: Organizer

Full Name: Greg Jackson

Join Time: 8/19/2021, 9:59:49 AM

Leave Time: 8/19/2021, 11:22:41 AM

Duration: 1h 22m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Foster Walker

Join Time: 8/19/2021, 10:00:24 AM

Leave Time: 8/19/2021, 11:22:30 AM

Duration: 1h 22m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Shannon Schofield

Join Time: 8/19/2021, 10:00:37 AM

Leave Time: 8/19/2021, 11:06:30 AM

Duration: 1h 5m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: David Forward

Join Time: 8/19/2021, 10:01:00 AM

Leave Time: 8/19/2021, 11:22:30 AM

Duration: 1h 21m

userPrinicpal Name: [redacted]

Role: Participant

Full name: Eleanor Banaag

Join Time: 8/19/2021, 10:01:02 AM

Leave Time: 8/19/2021, 11:22:33 AM

Duration: 1h 21m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Rachael Barrowman - Balarinji (Guest)

Join Time: 8/19/2021, 10:01:02 AM

Leave Time: 8/19/2021, 11:16:45 AM

Duration: 1h 15m

Role: Presenter

Full Name: Tiffany LeeShoy

Join Time: 8/19/2021, 10:01:05 AM

Leave Time: 8/19/2021, 11:22:32 AM

Duration: 1h 21m

userPrinicpal Name: [redacted]

Role: Participant

Full Name: Hendry Wan

Join Time: 8/19/2021, 10:01:39 AM

Leave Time: 8/19/2021, 11:22:32 AM

Duration: 1h 20m

userPrinicpal Name: [redacted]

Role: Participant

Full Name: Rachel Taylor (Guest)

Join Time: 8/19/2021, 10:01:50 AM

Leave Time: 8/19/2021, 11:22:30 AM

Duration: 1h 20m

Role: Presenter

Full Name: Balarinji

Join Time: 8/19/2021, 10:02:18 AM

Leave Time: 8/19/2021, 11:22:32 AM

Duration: 1h 20m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Peter Wood

Join Time: 8/19/2021, 10:03:19 AM

Leave Time: 8/19/2021, 10:31:40 AM

Duration: 28m 20s

userPrinicpal Name: [redacted]

Role: Participant

Full Name: Dr Madeline Shanahan

Join Time: 8/19/2021, 10:03:48 AM

Leave Time: 8/19/2021, 10:43:17 AM

Duration: 39m 28s

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Katie Xia

Join Time: 8/19/2021, 10:04:52 AM

Leave Time: 8/19/2021, 11:22:32 AM

Duration: 1h 17m

userPrinicpal Name: [redacted]

Role: Presenter

Full Name: Thomas Wheeler

Join Time: 8/19/2021, 10:14:23 AM

Leave Time: 8/19/2021, 11:59:13 AM

Duration: 1h 44m

userPrinicpal Name: [redacted]

Role: Participant

Full Name: Ari Fernando

Join Time: 8/19/2021, 10:54:17 AM

Leave Time: 8/19/2021, 11:22:34 AM

Duration: 28m 16s

userPrinicpal Name: [redacted]

Role: Participant

Full Name: Rachael Barrowman - Balarinji (Guest)

Join Time: 8/19/2021, 11:16:35 AM

Leave Time: 8/19/2021, 11:22:32 AM

Duration: 5m 56s

Role: Presenter

Full Name: Sophie Worthing

Join Time: 8/19/2021, 11:18:57 AM

Leave Time: 8/19/2021, 11:22:34 AM

Duration: 3m 37s

userPrinicpal Name: [redacted]

Role: Presenter

M12 Motorway Heritage Interpretation Plan, Review/Comments Log

Section of comment	Comments	Extent Heritage Response	Section Amended
Consultation Feedback			
5.1 Device 1 (Location 1): Interpretive sign	We generally think the interpretation is of an exceptional standard. Whilst we understand the 'keep the taps running' slogan, we feel that it slightly contradicts our culture of trying to save water, telling children to turn off running taps, etc. At first glance it may send a confusing inherent message to people, particularly to children who will be able to read the message. *(Fairfield City Council)*	Extent Heritage has taken this feedback into consideration and has designed an alternative title for Device 1, Location 1: 'Innovation and Ingenuity: a solution to Sydney's worst water crises. The shared path inlay, Device 3 Location 1, has also been changed to accommodate for the new sign and will now read 'Innovation'.	4.1 Device Detail 5.1 Device 1 (Location 1): Interpretive sign 5.3 Device 3 (Location 1): Shared path inlay
Executive Summary	Has been any consideration for interpretation of the significant Colonial landscapes of the Cumberland Plain? *(Fairfield City Council)*	The sites addressed are specific locations intersected by the M12 Motorway. While the Cumberland Plain does have significant colonial history, there are no sites of colonial significance intersected by the Motorway that have been identified.	N/A
5.10 Device 10 (Location 4) 5.11 Device 11 (Location 4) 5.14 Device 14 (Location 4)	Heritage NSW suggested advice about interpretation for Fleurs Radio telescope site should come from a specialist with expertise on the site, for example Dr. Alice Gorman. *(Heritage NSW)*	Extent Heritage can confirm that Dr. Alice Gorman was consulted with, and peer reviewed the historical research prepared for the Non-Aboriginal Heritage Thematic Study, which was the basis for the content formulated in this Heritage Interpretation Plan, specifically for the devices relating to the Fleurs Radio Telescope site.	N/A