

Heritage Council Regulatory Committee

Demonstration Wind Turbine Site (H2462)

395 Blackrock Road, Connewarre, Greater Geelong City, Wadawurrung Country

Hearing – 20 November 2025

Members – Ms Margaret Baird (Chair), Dr Mark Burgess, Dr Ursula de Jong

Determination of the Heritage Council

To include in the Victorian Heritage Register – After considering the Executive Director’s recommendation and all submissions received, and after conducting a hearing, the Heritage Council has determined, pursuant to section 49(1)(a) of the *Heritage Act 2017*, that the ‘Demonstration Wind Turbine Site’ located at 395 Blackrock Road, Connewarre, Greater Geelong City, Wadawurrung Country, is of State-level cultural heritage significance and is to be included in the Victorian Heritage Register in the category of Registered Place. The Heritage Council has determined to include a reduced extent of registration, and has determined, pursuant to section 49(3) of the *Heritage Act 2017*, to include categories of works or activities which may be carried out in relation to the place, for which a permit is not required (specific permit exemptions).

Ms Margaret Baird (Chair)

Dr Mark Burgess

Dr Ursula de Jong

Decision Date – 25 February 2026

Acknowledgement

As a peak heritage body, we acknowledge the Traditional Owners of the Country that we call Victoria, as the original custodians of Victoria's land and waters, and acknowledge the importance and significance of Aboriginal cultural heritage in Victoria. We honour Elders past and present whose knowledge and wisdom has ensured the continuation of Aboriginal culture and traditional practices.

Appearances / Hearing submissions

Executive Director, Heritage Victoria ('The Executive Director')

The Executive Director recommended to the Heritage Council that the Demonstration Wind Turbine, located at 395 Blackrock Road, Connewarre, be included in the Victorian Heritage Register ('Heritage Register') in the category of Registered Place. The Executive Director was represented at the Hearing by Mr Geoff Austin, Manager Heritage Registrations, and Ms Clare Chandler, Senior Heritage Officer (Registrations).

Barwon Water

Barwon Water is the owner of the Demonstration Wind Turbine Site. Barwon Water agreed that the turbine itself is of State-level cultural heritage significance and should be included in the Heritage Register in the category of Registered Object. Barwon Water did not agree that land surrounding the wind turbine and other structures/equipment associated with the wind turbine located on that land should be included in the Heritage Register under the category of Registered Place. Barwon Water was represented at the Hearing by Mr Terry Montebello of Maddocks Lawyers and engaged the expert evidence of Mr Andrew Cherubin of ACNL Engineers Pty Ltd and Ms Kate Gray of Lovell Chen.

Mrs Jennifer Bantow OAM

Mrs Bantow OAM nominated the wind turbine for inclusion in the Heritage Register, having successfully requested an Interim Protection Order ('IPO') in relation to it in February 2025. Mrs Bantow attended the Hearing and made submissions in support of the Executive Director's recommendation that the Demonstration Wind Turbine be included in the Heritage Register in the category of Registered Place.

Other interested parties

Engineering Heritage Victoria

Engineering Heritage Victoria made a submission to the Heritage Council in support of the Executive Director's recommendation, pursuant to section 44 of the *Heritage Act 2017*. Engineering Heritage Victoria did not make further submissions and did not participate in the Hearing.

Introduction / Background

The Place

01. On 17 March 2025, the Executive Director made a recommendation ('the Recommendation') to the Heritage Council, pursuant to Part 3, Division 3 of the *Heritage Act 2017* ('the Act'), that the Demonstration Wind Turbine, at 395 Blackrock Road, Connewarre, Greater Geelong City ('the Place'), is of State-level cultural heritage significance and should be included in the Heritage Register in the category of Registered Place.
02. The Place is located on Wadawurrung Country.
03. The Recommendation was made by the Executive Director following the issuing of an IPO by the Heritage Council of Victoria in relation to the wind turbine, which at the time was located at the Place, on 18 February 2025 in accordance with section 143 of the Act. At this time, the application for IPO related only to the wind turbine and its component parts. Accordingly, the IPO identified the wind turbine as a 'Registered Object'. The determination to issue an IPO was made by a differently constituted Heritage Council Regulatory Committee to the current Committee, with one member being on both Committees.
04. References to 'the Place' throughout this document relate to the land parcel and structures located at 395 Blackrock Road, Connewarre, prior to the dismantling and offsite storage of the wind turbine in July 2025, in accordance with Permit P40926. For the purpose of this determination, elements or components of the Place are considered to include the wind turbine, wind monitoring tower with anemometer, monitoring hut, control and monitoring equipment, and equipment and fixtures associated with these three structures (see **Figure 1** below).
05. The following description is taken from pages 3-4 of the Recommendation:

The Demonstration Wind Turbine is located near the corner of Thirteenth Beach Road and Blackrock Road, approximately 700 metres from the coastline between Barwon Heads and Torquay on Wadawurrung Country. It is situated on the far northwestern corner of a triangular parcel of land of approximately 23 hectares that is mainly flat and grassy in character.

The place has three main features: the wind monitoring tower, the wind turbine and a monitoring hut. All played a role in the production and transmission of wind power at the site, and they are connected to each other by underground cables.

Wind monitoring tower

The wind monitoring tower is a simple triangular lattice steel frame tower set in a concrete base. It has an anemometer affixed to the top of the tower designed to measure wind speeds and direction at 22 metres – the height of the turbine's hub. Its purpose was to initiate the turbine's operation when wind speeds were ideal. The tower is similar in design to other wind monitoring towers (which were all 10 metres in height) erected over the same period by the State Electricity Commission of Victoria ('SECV') and Victorian Solar Energy Council ('VSEC') as part of a joint wind monitoring project. The tower originally had two anemometers: one mounted at 10 metres and one at 22 metres.

Wind Turbine

The Demonstration Wind Turbine is a 60-kW model, meaning it can produce a maximum of 60kW during peak operation. The main components of the turbine are a set of blades, a nacelle and a tower. The Demonstration Wind Turbine measures 22 metres from the tower's base to the hub. The three fibreglass blades measure 8 metres long and are mounted to a hub. The rotating hub is attached to the nacelle, which contains a gearbox and connecting shafts, a brake, and an electricity generator. The nacelle can be opened from inside to enable inspection and maintenance. It displays hand-painted blue signage that reads 'WESTWIND' along each side, and on the rear, it contains the names and addresses of the manufacturers.

The Nacelle sits on a slewing ring that enables it to rotate depending on wind direction. The slewing ring is mounted on a galvanised steel tower that consists of hollow, octagonal sections. The tower contains an internal ladder which is accessed by a door at ground level. It also contains control panels and electrical cabinets. Access to the nacelle is gained through the slewing ring. There is also a door near the top of the tower to enable inspection of the blade tips, which feature airbrakes in case wind speeds are too great.

Monitoring hut

The monitoring hut is a small, circular concrete hut (a design commonly used and adapted from commercially available water tank) located on the site's northern edge. It has a steel door and contains a switchboard and meter box. It was installed to connect the wind turbine to the power grid, monitor the wind turbine's output, and transmit data to researchers. An aerial and ventilator are located on the roof of the monitoring hut.

Other elements

The wind turbine, monitoring hut and wind monitoring tower are situated on a flat, grassy site surrounded by chain link security fence. An additional agricultural style fence marks the parcel boundary. A gravel track runs through the site and connects to Blackrock Road. There are reportedly subsurface cables linking the wind turbine, monitoring hut and wind monitoring tower.

- 06.** The historical summary of the Place as outlined in the Recommendation is provided as **Attachment 1** to this determination.
- 07.** Place elements and structures shown in the Recommendation are included in **Figures 1 and 2** below:



Figure 1: Diagram of main elements of the Place (page 4 of the Recommendation, prior to the dismantling of the wind turbine, 2025).



Figure 2: Wind turbine, wind monitoring tower in the background, and monitoring hut, prior to the dismantling of the wind turbine (page 18 of Ms Gray's statement of evidence, 2025).

08. More recent images of the turbine are included in **Figures 3-5** below.



Figure 3: Dismantled wind turbine tower at its current location (Committee image, 12 September 2025).



Figure 4: Dismantled blades at their current location (Committee image, 12 September 2025).



Figure 5: Dismantled nacelle at its current location (Committee image, 12 September 2025).

Process following the Recommendation of the Executive Director

09. After the Recommendation was made to the Heritage Council on 17 March 2025, notice was published on 21 March 2025 for a period of 60 days, in accordance with section 41 of the Act.
10. Three submissions, pursuant to section 44 of the Act, were received in relation to the Place. Two submissions supported the Executive Director's Recommendation and one did not. The submissions were received from:
 - Barwon Water, which objected to the Recommendation and requested that a Heritage Council hearing be held to determine the matter;
 - Mrs Jennifer Bantow, who supported the Recommendation and wished to participate in any hearing held in relation to the matter; and
 - Engineering Heritage Victoria, which supported the Recommendation and did not want to cause a hearing in relation to the matter.
11. The Regulatory Committee has considered all submissions, pursuant to section 44 of the Act, in making its determination.

Regulatory Committee

12. Pursuant to section 13(1) of the Act, a Regulatory Committee of the Heritage Council ('the Committee') was constituted to consider the Recommendation and all submissions received, and to conduct a hearing into the matter.

Hearing arrangements

13. On 1 July 2025 the Committee notified all individuals and organisations who had made a submission pursuant to section 44 of the Act that a hearing would be held. All individuals and organisations were invited to submit a *Hearing Participation Form (Form B)* to indicate whether or not they would participate in the hearing.
14. The Committee received three (3) Hearing Participation Forms from:
 - Executive Director, Heritage Victoria;
 - Barwon Water; and
 - Mrs Jennifer Bantow.
15. The Committee notified those individuals and organisations who had requested to participate in the hearing that a hearing had been tentatively scheduled to take place on 28 August 2025.
16. On 10 July 2025 Barwon Water made a request to the Committee to adjourn the hearing, due to availability of appointed legal representatives and experts.
17. On 18 July 2025 the Committee notified parties of the adjournment request and invited participants to advise in writing whether the request was agreed to or opposed. The Committee additionally invited participants to indicate whether they considered a Directions Hearing would be required.
18. The Executive Director stated that he had no position with respect to an adjournment of the scheduled hearing.
19. An objection was received and a request was made for a Directions Hearing by Mrs Bantow. Relevantly, the timing of the adjournment request and responses did not allow for a Directions Hearing without displacing the program that had been directed for submissions and evidence to be circulated.
20. Consequently, the Committee notified all parties that a Directions Hearing would take place on 28 August 2025. It also informed parties that it proposed a rescheduled hearing to be conducted on 20 November 2025 ('the Hearing').
21. Prior to the Hearing, the Committee sought and received hearing submissions and submissions in reply.
22. All parties presented their submissions at the Hearing. Expert witnesses were made available for cross-examination by all parties. The Committee asked questions to assist its understanding of submissions and evidence, and to seek experts' opinions about matters included in submissions and related topics.

The Directions Hearing

23. On 28 August 2025 the Committee held a Directions Hearing to determine several procedural matters before the hearing including:
- confirming hearing dates, times and arrangements;
 - confirming any expert witness and representation;
 - enquiring as to the willingness of all parties to engage in their own discussions, with the potential to reach agreement about the matters in issue;
 - confirming timing of the receipt of any expert evidence and submissions;
 - confirming date and arrangements for any site inspection by the Committee; and
 - other matters, as identified by parties.
24. As had been requested by the Committee at the Directions Hearing, on 4 September 2025, Barwon Water confirmed its position and provided an outline of its position.

Committee site inspection

25. On 12 September 2025, the three Committee members (Ms Margaret Baird, Dr Ursula de Jong and Dr Mark Burgess) undertook a site inspection of the Place. The Heritage Council Secretariat Hearings Manager was also in attendance. Barwon Water staff facilitated access to the site. No submissions were sought, made or received during the site inspection.
26. The inspection included storage locations of dismantled turbine elements (Black Rock Reclamation Plant, 400 Blackrock Road, Connewarre) and the site of the proposed extent of registration of the Place (395 Blackrock Road, Connewarre).
27. Subsequently, on 22 September 2025, the Committee provided all parties with a copy of photographs taken by the Hearings Manager at the site inspection for information. This includes several images replicated in this determination.

Preliminary, procedural and other matters

Future use, maintenance and development

28. It is not the role of the Committee to consider future proposals or to pre-empt any decisions regarding future permits under the Act. Pursuant to sections 49(1)(a)–(c) of the Act, the role of the Committee is to determine whether or not the Place, or part of it, should be included in the Heritage Register and, if determined to register, pursuant to section 49(3), to determine categories of works which may be carried out without a permit (permit exemptions).
29. The Committee (and the Heritage Council similarly) has no current or future role in the consideration of permits under the *Planning and Environment Act 1987*. The Heritage Council's statutory remit is limited to the *Heritage Act 2017*.

Permit 40926

30. The Committee was made aware of Permit 40926 issued by the Executive Director on 28 April 2025 that allowed recording, dismantling and relocation of the turbine. The permit application on behalf of Barwon Water was made for public safety reasons. The Committee understands works were undertaken on 4 July 2025, with the components stored at the location inspected by the Committee. An approved Heritage Management Plan is part of that approval. The Executive Director also advised the Committee that the approval includes conservation and repair works, and installation of an interpretation program.
31. Barwon Water referred to these obligations contained within permit conditions.

Conflicts of interest

32. The Chair invited Committee members to consider whether written declarations or otherwise were required to be made in relation to any matters that may potentially give rise to an actual or apprehended conflict of interest. All members were satisfied that there were no real or perceived conflicts of interest.

Recent amendments to *Heritage Council Protocol 6 – Expert Evidence*

33. It was noted by the Committee at the Hearing that on 6 November 2025 *Heritage Council Protocol 6 – Expert Evidence* was amended to require certain declarations from experts appearing at online hearings via videoconference link. Experts appearing at the Hearing made the required declarations.

Request for additional information

34. In the course of the Hearing, the Committee requested that Barwon Water provide by no later than 26 November 2025 clarification as to whether or not subsurface cabling connecting the structures at the Place remained intact. This direction was complied with.

Issues

35. The following section is not intended to be a complete record of submissions, expert evidence and associated material received by the Committee. It is a summary of what the Committee considers to be key issues, followed by an explanation of the Committee's findings and conclusions. Any reference to the Criteria or to a particular Criterion refers to the *Victorian Heritage Register Criteria and Threshold Guidelines (updated by the Heritage Council on 1 December 2022)* ['Criteria for Assessment'], referred to by headings in **Attachment 2**.

Overview of positions

36. The Executive Director recommended that the Place is of State-level cultural heritage significance and should be included in the Heritage Register in the category of Registered Place. The Executive Director assessed the Place to be of State-level significance under Criteria A, B and F.
37. Barwon Water accepted that the wind turbine is of State-level cultural heritage significance.
38. Barwon Water did not support the recommendations of the Executive Director submitting:
- it opposed the recommended category of registration, submitting instead that the wind turbine and other 'ancillary items' at the site could be appropriately conserved in the category of Registered Object;
 - the land ('Place') does not warrant registration;
 - neither the wind monitoring tower, nor monitoring hut, have any cultural heritage significance individually or as a group of objects that merits their registration as either objects or as part of a Place;
 - the recommended extent of registration is inappropriate;
 - changes should be made to the recommended categories of works/activities able to be carried out without a permit (permit exemptions);
 - with respect to the recommended Criteria for inclusion in the Heritage Register, Criterion A is satisfied at State-level, but that Criteria B and F are not; and
 - the recommended Statement of Significance should be amended based on expert evidence.
39. Two proposed specific permit exemptions were not agreed between the Executive Director and Barwon Water. Barwon Water said these would only be relevant in the event of a Registered Place, which it opposed. In expert evidence, Ms Gray expressed her opinion about the specific exemptions should the Place be registered, disagreeing in part with the Executive Director's recommendation with respect to fencing and suggesting the ability to allow a wider range of signage to be exempt.
40. Engineering Heritage Victoria submitted that it supported the Recommendation and the inclusion of the Demonstration Wind Turbine in the category of Registered Place, endorsing and supporting the Recommendation.
41. Mrs Bantow supported the Recommendation. She also made submissions with respect to a broad range of concerns and topics such as public participation, witness independence and engagement, the issued Permit 40926, and the effectiveness of the IPO process.
42. There were also submissions with respect to the naming of the Place, if accepted as a Registered Place, to reflect the site and components.

Category of registration

Overview of submissions and evidence

Executive Director

43. The Executive Director recommended that the Place be included in the Heritage Register in the category of Registered Place.
44. The Executive Director submitted that 'Registered Place' is the appropriate category of registration for reasons focused on the following:
 - The physical fabric at the Place is characterised by structures, and structures are best considered places rather than objects.
 - The three structures associated with the site – being the wind turbine, monitoring hut and wind monitoring tower – are located within close proximity of each other, are interrelated by subsurface cabling and operated together as a system, and are tethered to their locations.
 - The cultural heritage significance of the wind turbine relates not only to the structures, but to the location, which was specifically selected for carrying out the demonstration of wind energy generation based on environmental and meteorological conditions.
 - The fact that structural elements of the Place remain in situ enable a 'better understanding' of the historical phase that is a key consideration of Criterion A.
 - While several buildings and structures have been included in the Heritage Register in the category of 'Registered Object', a common aspect with most, if not all, examples is that they are movable or portable, or were manufactured with the concept of relocation in mind. Few objects, if any, were tethered to land, as is the case of the wind turbine and wind monitoring tower.
45. The Executive Director submitted that, while the IPO issued in relation to the Place referred to the wind turbine as a 'Registered Object', the Act does not limit the Executive Director from recommending that the wind turbine be included in the Heritage Register in the category of 'Registered Place'.
46. The definition of 'place' pursuant to section 3 of the Act is broad and expansive, and includes building, precincts, landscapes and gardens among other place types. It was the further submission of the Executive Director that 'building' is also defined under section 3 of the Act as including 'a structure, work and fixture, and any part of a building, structure work and fixture.'
47. The Executive Director considered that 'built' features are present at the Place, and that these built features are associated with land at this specific site, and were intended to stand in the landscape that is the subject of the Recommendation.
48. The Executive Director conceded that, unlike the wind turbine and wind monitoring tower, the monitoring hut is not tethered to a concrete pad. However, the monitoring hut is 'tethered' by its weight, would be challenging to move, and was installed at its current location with the intention of remaining in the same place for several decades. The Executive Director considered that the many waterwheels included in the Heritage Register in the category of 'Registered Place' provided a useful comparison to the above factors, and supported the Place's registration in the same category.
49. The Executive Director did not accept the position of Barwon Water that the structures at the Place were designed to be readily dismantled. The Executive Director submitted that, even if the structures at the Place *could* be readily dismantled, this consideration did not automatically support an appropriate registration category of 'Registered Object'. In support of this view, the Executive Director cited other 'Registered Places' with a history of dismantling and relocation such as Cook's Cottage located within the Fitzroy Gardens (VHR H1834) and St James Old Cathedral in West Melbourne (VHR H0011).
50. The Executive Director concluded that the cultural heritage significance of the Place could be best protected and conserved by being included in the Heritage Register in the category of 'Registered Place'.

Mrs Bantow

- 51.** Mrs Bantow supported the Recommendation of the Executive Director and did not specifically address the category of registration in her submissions. However, she did refer to the visibility of the wind turbine in the landscape, and the aesthetic and other qualities of the setting.

Barwon Water

- 52.** Barwon Water supported the inclusion of the wind turbine in the Heritage Register in the category of 'Registered Object'. It submitted that the cultural heritage significance of the Place relates to the wind turbine *only*. Barwon Water submitted that the monitoring hut or wind monitoring tower are 'utilitarian, standard typologies and of no significance'.
- 53.** Barwon Water submitted that the 'Subject Land' (the proposed extent of registration as put forward by the Executive Director in the Recommendation) 'does not possess inherent cultural heritage value, nor does it contribute to the historical or technological significance of the wind turbine.' The 'Subject Land's' only function has been to provide a physical location for the wind turbine and ancillary structures.
- 54.** Barwon Water did not accept the submissions of the Executive Director that the 'Subject Land' contributes to the cultural heritage significance of the Place, putting forward the view that its selection as the demonstration site was 'mere happenstance'.
- 55.** Barwon Water stated that 'Registered Object' is the most appropriate category of registration for the wind turbine, considering it to be a 'manufactured piece of machinery originally designed to be relocatable'.
- 56.** While it was the view of Barwon Water that the wind monitoring tower and monitoring hut 'did not meet the threshold for heritage recognition', Barwon Water accepted the expert evidence (heritage) of Ms Gray that the anemometer currently fixed to the wind monitoring tower 'would have informed the operation of the wind turbine in relation to wind speed and direction'. Barwon Water submitted the anemometer could be 'easily removed' from the wind monitoring tower and would be 'able to be either retained (by registration) with the wind turbine or incorporated into the equipment that comprises the wind turbine'. Barwon Water submitted that the Act would support such an approach, allowing the registration of 'a collection of objects'.
- 57.** Barwon Water further submitted that the IPO in relation to the Place in category of 'Registered Object', and Permit P40926 – which approved the dismantling and temporary storage of the wind turbine – support inclusion in the category of 'Registered Object'. Barwon Water's rationale for this position was as follows:
- works approved by Permit P40926 have resulted in a significant change in circumstances since the Recommendation was made, and that is relevant to the integrity of the Place;
 - the wind turbine is the 'raison d'être' but is not at the site;
 - the cultural heritage significance of the wind turbine can be adequately protected in the category of 'Registered Object', which can be a collection of objects; and
 - it is not necessary for land to be included in the registration.
- 58.** Mr Montebello questioned the power of the Committee under the Act to determine to register the 'Subject Land', monitoring hut and wind monitoring tower in the category of 'Registered Place' when the wind turbine is currently dismantled and not located on the 'Subject Land'. He submitted that, given this dismantling was approved under the Act, the intactness and prospective cultural heritage significance of the 'Subject Land' had changed since the Recommendation was prepared.
- 59.** Barwon Water relied on the expert evidence of Mr Cherubin and Ms Gray in support of its position that the wind turbine would be most appropriately registered in the category of 'Registered Object'.
- 60.** Mr Cherubin's opinion included that:
- The monitoring hut was originally a concrete pipe, placed on its side, and with a concrete floor poured after the pipe was put in place.
 - The monitoring hut has no footings, but sits directly 'on the turf' at the Place.
 - The hut is currently leaning 'substantially' and is in a poor condition. Mr Cherubin surmised that further lean may only be limited due to anchoring from the underground cables.

- The wind monitoring tower is not embedded within the concrete footing located beneath it, but rather it is connected to a bracket that is embedded within that concrete footing.
 - The wind monitoring tower is a series of elements all bolted together, which is able to be dismantled.
- 61.** In cross-examination, Mr Cherubin confirmed his view that the wind monitoring tower and monitoring hut may generally be considered to be ‘structures’ in engineering terms, and advised that the monitoring hut and wind monitoring tower are currently connected by subsurface cables. He referred to structural issues notably with respect to the monitoring hut.
- 62.** In cross-examination, Mr Cherubin described the current condition of individual structures. He commented on the ability for them to be dismantled, relocated and repaired.
- 63.** Mr Cherubin considered the currently dismantled elements of the wind turbine could feasibly be reinstated in their original location on the ‘Subject Land’. Mr Cherubin’s evidence on this point had been informed by discussions with a work colleague who had also undertaken inspections.
- 64.** The subsequent correspondence from Barwon Water on 25 November 2025 stated that the cabling remains in situ, does not appear to be original, and some cables have been cut.
- 65.** Ms Gray’s opinion included that:
- The wind turbine and its component parts (notably the switchboard and remaining anemometer) alone are of State-level cultural heritage significance.
 - The wind monitoring tower and monitoring hut are not considered to be of cultural heritage significance in their own right, nor as related to the wind turbine.
 - The location of the wind turbine appears to have been selected solely on the basis of pragmatic reasons¹ and does not contribute to the State-level cultural heritage significance of the wind turbine.
 - ‘Ancillary’ objects associated with the function of the wind turbine, including the anemometer and switchboard warrant inclusion in the Heritage Register as ‘part of’ the wind turbine.
 - There is precedent in the Heritage Register for the inclusion of Registered Objects with associated component parts, including the Sailors’ Rest Electric Sign (VHR H2338) and the Commonwealth Scientific and Industrial Research Organisation Computer (VHR H2217).
 - The matter of whether or not the structures located on the ‘Subject Land’ are tethered is not relevant when considering an appropriate category of registration under the Act, with an object categorisation being appropriate if the location or surrounding land is ‘not important’.
- 66.** With respect to the pragmatism of site selection, Ms Gray stated the wind turbine’s historical importance is as part of a broader program of investigation and testing in the 1980s to support assessment of the viability of wind generation in the longer term. Her evidence provides details about this, including site assessment and selection. Ms Gray’s position was as follows:
- The wind turbine’s location on this particular site is not an important factor or characteristic.
 - The other two structures on the site (wind monitoring tower and monitoring hut) are contemporary with the wind turbine and played a part in its operation.
 - While both the monitoring hut and wind monitoring tower were connected to the wind turbine via underground cabling, this has since been removed (as Ms Gray understood it at the time of her evidence).
 - The monitoring hut and wind monitoring tower supported technical components which were related to the wind turbine’s operation and/or monitoring. With the exception of one anemometer, however, those technical components have also been removed or replaced.
 - The monitoring hut and wind monitoring tower themselves are utilitarian/standard typologies and do not in themselves demonstrate a functional connection to the wind turbine.

¹ Ms Gray’s statement of expert evidence, October 2025, paragraph 158.

67. Ms Gray's evidence was that in light of these factors, and on the basis of comparable 'Registered Object' registrations, it is considered more appropriate that the wind turbine be included in the Heritage Register as a 'Registered Object' rather than a 'Registered Place'.

Committee discussion and conclusion

68. The Committee has thoroughly considered the Executive Director's recommendation that the Place be included in the Heritage Register in the category of 'Registered Place', and the submissions of other parties in response to it.

IPO and Permit P40926

69. The Committee acknowledges that the IPO issued in relation to the Place refers to the wind turbine and its component parts as a 'Registered Object'. Accordingly, Permit P40926 issued subsequent to the IPO referred to the same category of registration. The Committee also identified that the application made to the Heritage Council of Victoria for the IPO was limited to the 'Black Rock Wind Turbine'. The Committee considers that the IPO categorisation does not limit the Executive Director, nor the Committee, from considering the most appropriate category of registration afresh in accordance with the Act. It is noted that the Recommendation was made when the wind turbine was in situ.
70. The Committee further notes that the process by which the Heritage Council determines to make an IPO is often, necessarily, undertaken expeditiously. In accordance with the Heritage Victoria and Heritage Council of Victoria policy *Matters to be considered in the making of an Interim Protection Order under section 143(1) of the Heritage Act 2017 (2020)*, the Heritage Council or Heritage Victoria must determine if there is an imminent or immediate threat to the place or object in order to make an IPO in relation to it. The Recommendation process, as set out by Part 3, Division 3 of the Act, is the stage at which the cultural heritage significance of the place or object is considered, and requirements for safeguarding that cultural heritage significance – including registration category, extent of registration, and specific permit exemptions – are fulsomely assessed.
71. The Committee has carefully examined the relevance of the issued permit and the fact that the turbine has been relocated off-site. The permit does not allow the turbine to be demolished or destroyed. The Committee does not find that the active permit, nor the currently dismantled state and off-site storage of the wind turbine, are determinative.
72. In this context, Mrs Bantow referred to the Heritage Council's 2023 determination in relation to the Caulfield Racecourse (H2415) as to the relevance of granted permits.² In that case, the Executive Director had issued several permits for extensive works at the Caulfield Racecourse including in relation to fabric that was the subject of the registration hearing process. The Glen Eira City Council had also issued several planning permits based on an incorporated document in its planning scheme. The Committee recorded that at the time of the Hearing, and the Committee's site inspection, and based on permits issued, building and landscape fabric had been removed or was approved for removal, modification or reconstruction. The Committee referred to its scope being confined to whether the Place meets the threshold for inclusion in the Heritage Register as a place of State-level cultural heritage significance and, related to this, the extent of registration and specific permit exemptions. It determined the matter based on the Recommendation before it.
73. Pertinent to this consideration, the Committee observes a recent determination of the Heritage Council, which accepted that fabric included in a place's written extent of registration remained in the Heritage Register even when removed to an off-site location. This view is consistent with a Heritage Council decision³ where it was found that sector gates from the Ballarat Railway Complex (H0902) are registered, despite their removal from the Ballarat Railway Complex. The gates were specifically included as registered structures in the place's written extent of registration.

Components

74. The Committee is persuaded by the Executive Director's rationale for including the wind turbine, monitoring hut, and wind monitoring tower (and all associated component parts, as set out in the Recommendation), and surrounding land in the Heritage Register.

² [Determination of the Heritage Council, Caulfield Racecourse \(H2415\), 20 February 2023](#), 'Decision Summary', p. 2.

³ [Determination of the Heritage Council, Ballarat Railway Complex \(H0902\), 17 November 2025](#), pp. 14-15.

75. Ms Gray's evidence has accepted the wind turbine and anemometer as being of State-level cultural heritage significance (as objects). The Committee agrees with the Executive Director that the wind monitoring tower and monitoring hut are important components of the experiment in this phase of Victoria's history. That is, it is part of the demonstration system. The hut's rudimentary nature is of historical interest (but not of individual significance).

The site and land

76. The Committee is persuaded by the Executive Director's rationale for including the wind turbine, monitoring hut, and wind monitoring tower (and all associated component parts, as set out in the Recommendation), and surrounding land in the Heritage Register.
77. The Committee is not persuaded to accept Barwon Water's submissions or evidence that the 'Subject Land' upon which the turbine and structures were installed as part of the demonstration project is not of significance (based on the Criteria referred to below).
78. There was an extensive experimentation process, which the Executive Director (in the Recommendation) and Ms Gray's evidence described, including events in other states of Australia.⁴ These included smaller wind projects (such as Mars factory in Ballarat) and Western Australian company Westwind (which is not repeated here). Ms Gray's evidence also included the following information:

A programme of research was then developed and undertaken jointly by the SECV and the VSEC into the potential for wind energy generation in Victoria. The first step and key precursor project to the demonstration turbine was the SEC and VSEC's coastal wind monitoring study (1985-87). This project involved the installation of monitoring equipment at 10 sites along the coast and the collection of data, with the intent being that one or more pilot wind generators could subsequently be installed for connection to the grid.

79. Without reciting all of the material included in Ms Gray's evidence, it is relevant that the 'Subject Land' was the eleventh site, that had been, and was still under consideration for, a demonstration wind turbine in 1987, as Ms Gray's evidence records:

At this point, while not part of the coastal monitoring project, the Connewarre site was still under consideration for a demonstration wind turbine:

An eleventh site is located on the Geelong and District Water Board land at Breamlea, south east of Geelong. It is idea [sic]⁵ because it is in a flat coastal region, with a good wind regime, satisfactory access and the grid is available next to the site. The installation of a machine at this site and appropriate wind monitoring is being seriously considered at the moment. A monitoring contract will be let with the same firm which is conducting the wind study for a period of 12 months of machine operation. This important data on machine performance will provide valuable input to the overall program.

80. The 'ideal' 'Subject Land' was ultimately selected, and the infrastructure was installed in 1987.
81. The Committee finds the site and land are a necessary and important component of the demonstration system. The Committee gives weight to the site and its components as a demonstration system, rather than a collection of objects. The Committee reaches this conclusion even if the land's selection was practical and/or alternative sites may have existed.
82. The Committee therefore does not agree with the evidence and submissions by Barwon Water that the State-significant values are embodied in, and demonstrated by, the wind turbine alone (including its switchboard) and associated anemometer. The Committee does not agree that there is no requirement to include the land at 395 Blackrock Road, Connewarre, and ancillary structures on the 'Subject Land' (wind monitoring tower and monitoring hut).
83. The evidence that structures may have been movable and cabling is modified, cut or removed, are also not persuasive such as to overturn the Executive Director's assessment of the cultural heritage significance of the Place. The components (with or without cabling or tethering) demonstrate an

⁴ Ms Gray's statement of expert evidence, October 2025, Section 2.0 'History' including "Planning for the Connewarre turbine".

⁵ Ms Gray stated this is a typographical error and was intended to read 'ideal'.

important inter-relationship which is not limited to those items. All of the items, and their configuration upon the land which they were designed and installed, played a role in the demonstration project.

84. The Committee notes that the Recommendation is based on land that is part of a title. It is a square of 80 metres by 80 metres as measured from the north-west title corner that includes all components. As recorded below, the Committee is of the view that a reduced extent of registered land surrounding the structures is appropriate.

Conclusion

85. The Committee finds that it is appropriate to include the Place in the Heritage Register in the category of 'Registered Place' for the combination of the following reasons, and generally consistent with the Recommendation:

- the three structures associated with the site – being the wind turbine, monitoring hut and wind monitoring tower (with anemometer) – operated together as a demonstration system;
- the cultural heritage significance of the demonstration wind turbine relates not only to the structures, but also to the location, having been specifically selected for carrying out the demonstration based on environmental and meteorological conditions; and
- the fact that structural elements of the Place remain in situ enable a 'better understanding' of the historical phase that is a key consideration of Criterion A.

Criteria for registration

Overview of submissions and evidence

Executive Director

86. The Executive Director recommended that the Place satisfies Criteria A, B, and F at State-level. The recommended Statement of Significance is extracted from page 33 of the Recommendation is below:

How is it significant?

The Demonstration Wind Turbine is of historical and technical significance to the State of Victoria. It satisfies the following criterion for inclusion in the Victorian Heritage Register:

Criterion A

Importance to the course, or pattern, of Victoria's cultural history.

Criterion B

Possession of uncommon, rare or endangered aspects of Victoria's cultural history.

Criterion F

Importance in demonstrating a high degree of creative or technical achievement at a particular period.

Why is it significant?

The Demonstration Wind Turbine is historically significant for its association with the development of renewable energy in the late twentieth century in Victoria. It was established as a collaborative project between the SECV and VSEC to demonstrate the potential of wind energy to feed power to the state electricity grid. The site retains several features that enable its function and operation to be well understood. It is emblematic of the Victorian Government's emerging commitment to renewable energy in the 1980s, and growing public concerns about the longterm [sic] viability of electricity derived from fossil fuels. It was an important precursor of Victoria's wind power industry, which by the early 2000s had evolved into large-scale wind farms. [Criterion A]

The Demonstration Wind Turbine is significant as a rare surviving example of a place that can demonstrate the growing interest in renewable energy sources in the latter decades of the twentieth century. It is also a rare surviving example of a wind turbine from the 1980s in a state and national context. It is uncommon in that it remains in place and retains the wind monitoring tower and monitoring hut in addition to the wind turbine. [Criterion B]

The Demonstration Wind Turbine is technically significant as an important experiment in the viability of wind powered electricity in Victoria. It was the first wind turbine in Victoria to be successfully connected to the state electricity grid. The erection and successful operation of the turbine is acknowledged as an important early step in the evolution of wind power in Victoria. It applied emerging technologies to the issue of Victoria's reliance on fossil fuels. Despite being established as a demonstration project, the turbine continued to feed electricity into the grid until 2012 and has been widely acknowledged for the longevity of its operation. [Criterion F]

Mrs Bantow

- 87.** Mrs Bantow supported the Recommendation of the Executive Director and did not specifically address the Criteria for registration in her submissions.

Barwon Water

- 88.** Barwon Water submitted that the wind turbine alone satisfied Criterion A at State-level. Barwon Water submitted that the wind turbine did not satisfy Criteria B and F at State-level.
- 89.** Barwon Water submitted that the monitoring hut and 'Subject Land' did not meet any Criteria at State-level. Its submission stated in part that:⁶

Barwon Water submits that the historical and technical significance of the wind turbine is fully expressed through the object itself, which can be understood and interpreted independently of its current setting. Inclusion of the land within the extent of registration as a place is therefore unnecessary and inconsistent with the Act's focus on protecting fabric that demonstrates cultural heritage significance. To that end, while Barwon Water has no objection to the registration of the wind turbine, it should be recorded as an object independent of the land that it used to exist on. Furthermore, Barwon Water submits that the extant lattice tower and the circular masonry structure are of no cultural significance. That said, Barwon Water would not contest the registration of the lattice tower and its associated equipment (anemometer) as affixed to the lattice tower as a further object related to the wind turbine. In relation to the circular masonry structure (which we will refer to as the monitoring hut), Barwon Water submits that it should not be registered.

- 90.** Barwon Water relied on Ms Gray's evidence that the wind turbine meets Criterion A at State-level and warrants inclusion in the Heritage Register. Ms Gray was of the view that:
- the phase of historical importance is a phase of research and development of alternative renewable energy sources in the 1970s and 1980s (A1 and A2);
 - the wind turbine has a clear association with that phase, demonstrated both through documentary evidence and the physical fabric;
 - the wind turbine is strongly associated with an important historical phase of research and testing by the Victorian Government in the 1970s and 1980s into the potential for economic use of renewable energy for bulk electricity generation, and provides tangible evidence of these early investigations; and
 - the function and relationship between the monitoring hut and the wind turbine are not evident.
- 91.** Ms Gray questioned aspects of the Recommendation, to which the Executive Director responded in reply submissions. Among these matters were educative values and how the two ancillary structures enable the turbine's function and operation to be well understood, or whether or how this contributes to historical significance. Even with these qualifications or comments, Ms Gray concluded:

⁶ Barwon Water's written hearing submissions, October 2025, paragraph 8.

Notwithstanding these queries, the finding of state significance against Criterion A is supported. Even without a detailed understanding of other places and objects that might be or have been associated with initiatives in renewables in the period ('better than most other places with substantially the same association'), in my opinion, the [wind] turbine's associations with this historical phase are sufficient justification for heritage recognition at a [State] level.

92. Addressing other Criteria, Ms Gray's conclusions were:

- In relation to Criterion B, the class of place being '1980s wind turbines', as identified by the Executive Director, was too narrow, and went beyond the intention of the Criteria for Assessment. The rarity here would need to be very narrowly defined (for example, a conclusion that the wind turbine is rare would rely on its definition within a specific historical context).
- In relation to Criterion F, the Executive Director had not adequately established that the design of the wind turbine was significant, nor that the process of putting electricity into the grid was a high technical achievement for the relevant period.
- In relation to Criterion F, while the anemometer and switchboard survive, not all elements relating to the technical achievement identified by the Executive Director in the Recommendation are retained in situ. Ms Gray referred to the Criteria for Assessment in relation to Criterion F, noting the requirement for physical evidence of the technical achievement in question to be retained.
- The Statement of Significance for the wind turbine should be revised to confine its identified State-level cultural heritage significance to Criterion A.

93. Ms Gray agreed with the Executive Director's conclusions with respect to Criteria C, D, E, G and H (with specific comments contained in her evidence).

Committee discussion and conclusion

94. The Committee has carefully examined the Criteria for registration as recommended by the Executive Director and submissions received from other parties in response to them.

Criterion A

95. The Committee notes agreed position between the Executive Director and Barwon Water with respect to Criterion A, but on different grounds. The Committee finds that both Steps 1 and 2 are met with respect to the Place including:

- the Place has a clear association with the development of sources of renewable energy in Victoria in the 1970s and 1980s;
- there is ample evidence of an association between the Place and the phase;
- there is evidence that the Place is rare or uncommon;
- few comparable wind turbines from the era appear to survive in Victoria. There are few places or objects related to early Victorian Government efforts to establish renewable energy sources;
- the wind turbine is rare being one of a small number of places or objects remaining that demonstrates exploration of sources of renewable power in the latter decades of the twentieth century;
- the Demonstration Wind Turbine is of the class of wind turbines. It is an important and comparatively early surviving example. Few comparable wind turbines from the era appear to survive in Victoria or Australia.

96. It is noted from the Executive Director's submission that the wind turbine is now uncommon but is broadly comparable to conventional designs emerging from Europe and the United States in the era.

97. The Committee has set out the reasons why it accepts the Recommendation of the Demonstration Wind Turbine as a 'Registered Place', with the three structures, equipment and land expressing the cultural heritage values of the demonstration and the location of the demonstration. The Committee does not

accept Barwon Water's alternative position which, respectfully, appears to downplay the importance of all structures and components as part of the demonstration project. The Place is where the turbine remained operational, and provided the necessary conditions and site infrastructure for the turbine to operate and the demonstration project to be undertaken.

- 98.** The Committee does not ascribe weight to submissions about the visibility and/or aesthetic values of this setting or place.

Criterion B

- 99.** The Committee finds the Place satisfies Criterion B at State-level, and adopts the position of the Executive Director as set out by the Recommendation in relation to Criterion B with regard to steps 1 and 2. The Committee does not regard the interpretation of rarity as being too narrow. It is noted that Barwon Water's submission has referred to the wind turbine as rare.

- 100.** The Committee has not been referred to other surviving comparable places or objects that enable this phase of exploration and development of sources of renewable energy to be demonstrated. As a substantial surviving tangible remnant of the phase, the Committee agrees with the Executive Director that the wind turbine appears to be rare. It is noted that the Executive Director has no objection to wording being integrated into the Statement of Significance, if the Place is included in the Heritage Register with respect to a degree of importance as the 'only surviving 1980s turbine of the scale'.

Criterion F

- 101.** The Committee does not accept the position of the Executive Director in relation to Criterion F. The Committee is persuaded by the evidence of Ms Gray that the Recommendation does not adequately establish that the design of the wind turbine was significant, nor that the process of putting electricity into the grid was a high technical achievement for the relevant period.

- 102.** The Committee finds that it has insufficient information before it to conclude that Criterion F is satisfied at State-level.

Other criteria

- 103.** The Committee accepts the agreed positions between the Executive Director and Barwon Water with respect to Criteria C, D, E, G and H.

Statement of significance

- 104.** The Committee observes that the Statement of Significance for the Place should be amended to accord with the findings in this determination (including listing the valued components of the Place) and notes suggestions made by both the Executive Director and Barwon Water through Ms Gray's evidence.

Conclusion

- 105.** The Committee finds that **Criteria A and B are satisfied at State-level.**

Extent of registration

Overview of submissions and evidence

Executive Director

- 106.** The Executive Director recommended that the extent of registration for the Place, in the category of 'Registered Place', be gazetted as set out below and in **Figure 6**:

All of the place shown hatched on Diagram 2462 encompassing part of Lot 1 on Title Plan 600592 to the extent of an 80m square from the corner of the title boundary.

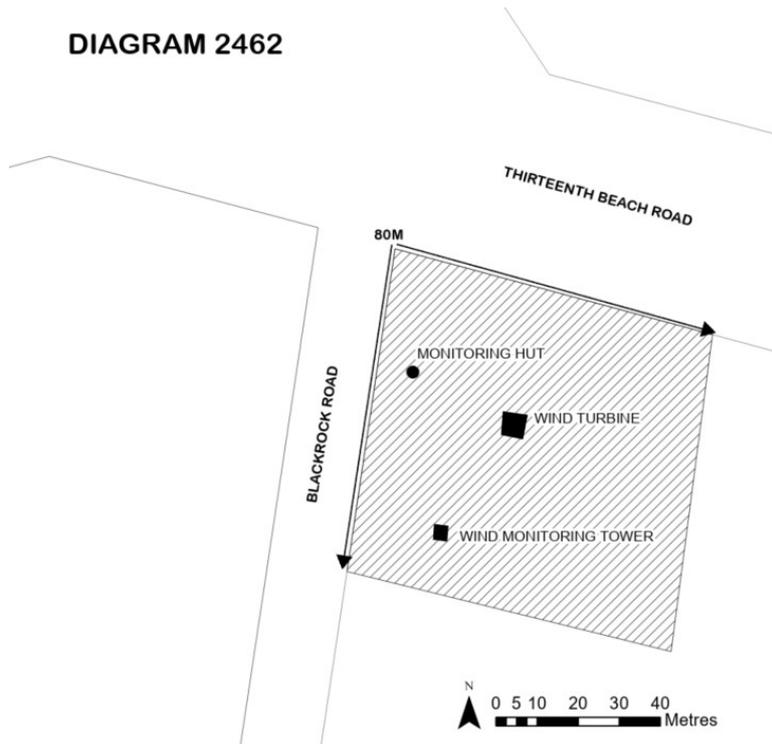
DIAGRAM 2462


Figure 6: Recommended registration extent diagram for the Place, page 18 of the Recommendation.

107. The Recommendation provided the following rationale for the proposed extent of registration:

The recommended extent of registration includes significant structures at the place, being the wind turbine, wind monitoring tower, monitoring hut and all fixtures within the turbine and hut. It also includes sufficient land around these features to provide a setting and for change to the place to be managed via a Heritage Victoria approval process. It is a straightforward extent of registration that is easily discernible when mapped and on the ground.

It should be noted that everything included in the proposed extent of registration, including all of the land, all structures, any fixtures attached to structures and any sub-surface features (including cables connecting the structures), are proposed for inclusion in the [Heritage Register]. A permit or permit exemption from Heritage Victoria is required for any works within the proposed extent of registration, apart from those identified in the categories of works or activities in this recommendation.

108. In oral submissions at the Hearing, the Executive Director put forward the view that the cyclone fencing present at the Place would not provide an appropriate extent of registration, noting the close proximity of some structures at the Place to that fencing. The Executive Director submitted that this consideration informed the Recommendation that the parcel boundary be used as the boundary for the extent of registration.

Mrs Bantow

109. Mrs Bantow supported the Recommendation of the Executive Director and did not specifically address the recommended extent of registration in her submissions.

Engineering Heritage Victoria

110. In submissions made in accordance with section 44 of the Act, Engineering Heritage Victoria endorsed and supported the recommended curtilage and inclusion of ‘ancillary plant and equipment’ in the Heritage Register.

Barwon Water

111. Barwon Water did not support the proposed extent of registration. Barwon Water submitted, as set out at paragraphs 52-67 above, that the most appropriate category of registration for the wind turbine was

'Registered Object' and that no other structures or surrounding land at the Place warrant inclusion in the Heritage Register.

- 112.** However, Barwon Water stated in its submission that, should the Committee determine to register the wind turbine and ancillary structures in the category of 'Registered Place', the extent of registration as proposed by the Executive Director is excessive. It was the submission of Barwon Water that the existing cyclone fencing at the Place provided adequate curtilage for the structures and location.

Committee discussion and conclusion

- 113.** The Committee has carefully considered the proposed extent of registration as set out by the Recommendation, and submissions from other parties in response to it.
- 114.** As stated in paragraphs 68-85 above, the Committee has determined to include the Place in the Heritage Register in the category of 'Registered Place'. The Committee has also determined that the land surrounding the structures at the Place contributes to its cultural heritage significance. It is therefore appropriate that land is included in the extent of registration for the Place.
- 115.** The Committee has taken into account that the 80 metres by 80 metres square in the Recommendation extends from the north-west corner with the road reserves, which is appropriate. This square does not align with an inner existing wire fence (being a second fence which is additional to boundary fencing along the road frontages). The square extends for some distance notably to the east of the extant fence and turbine site which is evidenced by a concrete pad.
- 116.** The Committee agrees with Barwon Water that the extent should be reduced, but only with respect to the eastern boundary. The fence referred to by Barwon Water is estimated by the Committee to be approximately 57 metres from the western title boundary. The Committee regards an eastern extent of 65 metres as being sufficient area to protect and conserve the values and understanding of the Place.
- 117.** The extent of registration, as determined by the Committee, is a rectangle of 80 metres (north to south) and 65 metres (east to west) measured from the eastern and northern title boundaries.
- 118.** The extent of registration for the Place, as determined by the Committee, is provided at **Attachment 3**.

Registered name of the Place

Summary of submissions and evidence

Executive Director

- 119.** The name of the Place as proposed in the Recommendation is 'Demonstration Wind Turbine'.
- 120.** At the Hearing, the Executive Director clarified that the name 'Demonstration Wind Turbine Site' or 'Demonstration Wind Turbine System' might more appropriately capture all elements of the Place which contribute to its cultural heritage significance.

Other parties

- 121.** Other parties were invited to express their views about naming.

Committee discussion and conclusion

- 122.** As set out in paragraphs 68-85 above, the Committee finds the Place – including the wind turbine, monitoring hut and wind monitoring tower with anemometer, in addition to associated land supporting and surrounding the structures – to be of State-level cultural heritage significance. That is, its finding is to affirm the Recommendation in this regard.
- 123.** The Committee considers that the name 'Demonstration Wind Turbine' does not sufficiently reflect the cultural heritage significance of the Place. Acknowledging information in Ms Gray's evidence and the Recommendation regarding the original research program to identify potential wind generation sites, and the selection of '...Water Board land at Breamlea...' as the eleventh location, the Committee recognises the relevance of the site to the function of wind energy demonstration. The Committee accepts the view of the Executive Director that the name 'Demonstration Wind Turbine Site' would better capture the Place's components, location and collective cultural heritage values.

124. The Committee determines to include the Place in the Register under the name 'Demonstration Wind Turbine Site'.

Specific permit exemptions

Overview of submissions and evidence

Executive Director

125. The Recommendation included proposed categories of works or activities which may be carried out in relation to the Place, for which a permit is not required (specific permit exemptions).
126. The Recommendation provided two specific exemptions for the Place, being:
1. *Repair and maintenance of fences and gates, and replacement where the replacement is of the same height and type.*

2. *Installation of signage, security cameras, lights and the like to secure the site, provided they are not attached to significant structures.*

Barwon Water

127. Barwon Water called and adopted the expert evidence of Ms Gray in relation to specific permit exemptions.
128. Ms Gray provided the following comments in relation to the proposed specific exemptions, should the Committee determine to register the site in the category of 'Registered Place':
- *The requirement for fences and gates to be exempt only if they are of the same height and type is questioned. These are not significant structures and new fencing or gates of alternative design would not cause any harm to cultural heritage significance.*
 - *The installation of signage etc 'to secure the site' is supported, albeit the intent of the signage (to secure the site) could be widened to allow for other signage types (related to public safety for example).*
 - *It is suggested that the construction of new access roads or paths within the site should be exempt.*
129. The Executive Director did not object to the proposed changes to specific permit exemptions as suggested by Ms Gray.

Committee discussion and conclusion

130. The Committee makes the following comments with respect to the specific permit exemptions proposed by the Executive Director and the evidence of Ms Gray:
- The Committee does not support a specific permit exemption on signage, but accepts an exemption for security lighting and associated elements to secure the site.
 - The Committee does not support a specific permit exemption for the 'construction of new access roads and paths within the extent of registration, provided they do not impact significant structures' as the nature of impacts could be broad and is uncertain.
 - The Committee does not support an exemption for all fencing, or for replacement of fencing, without information about the specific type and height.
131. The Committee adopts specific permit exemptions are set out in **Attachment 4**.
132. It is noted that one-off exemptions can be applied for in accordance with Part 5 of the Act.

Other matters

133. Mrs Bantow expressed concern about, or commented on, a range of matters as noted earlier.
134. Where they are outside the scope of this proceeding or beyond the Heritage Council's remit, those concerns have not been addressed in this determination.

- 135.** The Committee records that expert witnesses made the necessary declarations in accordance with relevant Heritage Council Protocols including the basis of their engagement and any previous involvement with the Place and its components.

Conclusion

- 136.** After considering the Executive Director's Recommendation and all submissions received, and after conducting a hearing, the Heritage Council has determined, pursuant to section 49(1)(a) of the *Heritage Act 2017*, that the Demonstration Wind Turbine Site is of State-level cultural heritage significance and is to be included in the Heritage Register in the category of Registered Place.
- 137.** The Extent of Registration is provided as **Attachment 3** and specific permit exemptions are provided as **Attachment 4**.
- 138.** The Committee thanks all parties and submitters for their submissions and participation in the Hearing.

Attachment 1

Historical summary of the Place taken verbatim from pages 10–12 of the Executive Director’s Recommendation. Provided for information purposes only.

History

Generation of electricity in Victoria

Electric lighting first appeared in Melbourne in the 1880s. Small, privately owned, electricity generating plants such as the Former Richmond Power Station (VHR H1055) were established at this time. Demand for electricity grew throughout the late nineteenth and early twentieth centuries, and Victoria relied heavily on coal imported from New South Wales for power generation. In 1918, the State Electricity Commission of Victoria (SECV) was formed (headed by General Sir John Monash), and established the Yallourn Power Station, using brown coal mined in the Latrobe Valley. Yallourn began feeding electricity to Melbourne in 1924 and was followed by other major coal-powered power stations, including the Morwell Power Station (1949-59), Hazelwood (1964) and Loy Yang A (1977-84). The SECV also established other forms of power generation, including hydro-electric power stations such as the Rubicon Hydro-electric Scheme north of Marysville (VHR H1187).

Development of wind power

People have harnessed wind power for thousands of years for numerous uses such as pumping water and grinding grain. In Europe, the use of windmills increased from the medieval period and technologies rapidly advanced in the 1700s.¹ Experimental wind generators specifically for creating electrical power emerged in Scotland and Denmark in the late nineteenth and early twentieth century. Globally, use of fossil fuels for electricity generation predominated throughout the twentieth century. In the early 1970s, there was a growing interest in the potential of large-scale and commercial wind power initiatives as an alternative to fossil fuels and nuclear power. This was due to a range of factors, including the oil and energy crises of the 1970s, concern about the long-term viability of fossil fuel supplies, growing environmental awareness and the potential of ‘green power’. Denmark was key in advancing technologies in this era, while the first large-scale commercial wind farms were established in the United States. In Europe and the United States, the 1980s was a decade that saw the establishment and expansion of wind farms and improvements in technology, mainly driven by private industry. Wind farms were initially established on land and still predominated, while offshore wind farms began to be established in Europe and the United States in the 1990s. There is an increasing interest in offshore wind farms where land sites are scarce, and because of the slightly higher wind speeds over water (where there is less surface friction).

Wind power in Victoria

From around the mid-twentieth century, in rural locations in Victoria, small electric wind generators were used on some private properties that had no access to mains electricity.² From the 1970s in Victoria, there was an increasing interest in renewable energy sources, both from government agencies and throughout the general community. In 1980, the Victorian Solar Energy Council (VSEC) was established (replacing the earlier Victorian Solar Energy Committee) to encourage and promote research into the development of solar and other forms of renewable energy in Victoria.³ From the 1980s, the SECV maintained an active interest in a range of renewable energy sources, including wind generation, hydro-electric power and solar cell technology.⁴ There was a growing focus on the potential for larger wind generators to supply electricity for industry, small communities or to feed directly into the power grid.⁵

¹ See the World Heritage Site Mill Network at Kinderdijk-Elshout, Netherlands, built 1738-40, consisting of 19 windmills, pumping stations, sluices and Water Board Assembly Houses.

² SECV & the Solar Council, *Wind power in Victoria*, August 1988.

³ *Victorian Solar Energy Council Act 1980*.

⁴ *Report of the State Electricity Commission of Victoria for the year ended 30 June 1985-86*, p. 86.

⁵ SECV & the Solar Council, *Wind power in Victoria*, August 1988

The SECV and VSEC collaboration

From 1983, the SECV and the VSEC collaborated to conduct a wind monitoring study to identify suitable locations along the Victorian coastline for potential wind power generation. The study installed wind monitoring equipment at locations like Apollo Bay, Portland, Port Fairy, Swan Reach and Toora to gather data about wind speed and direction to determine the feasibility of connecting wind-powered generators to the state electricity grid.⁶ From February 1985 to January 1987, wind data was gathered from ten wind monitoring locations along the coastline.

While the wind monitoring study was underway, the SECV and VSEC conceived of a demonstration wind turbine to test the potential for a grid-connected wind generator.⁷ Around 1985, the SECV and VSEC received a grant from the National Energy Research Development and Demonstration Program for the installation and operation of a wind turbine at the subject site.⁸ The SECV reported in 1986 that it was working with the VSEC to establish a grid connected wind turbine and that a 75 kW aerogenerator was being constructed by a 'local manufacturer'.⁹ The chosen site was owned by the Geelong and District Water Board (now Barwon Water). This local manufacturer withdrew from the project the following year.¹⁰

Establishment of the Demonstration Wind Turbine

In 1987, the SECV reported that it would proceed with a 60kW wind generator at the subject site, to be jointly funded with the VSEC.¹¹ The 60 kW Venco-Westwind generator, constructed in Western Australia, was erected in November 1987 and operated for the first time later that month. The SECV's annual report stated that 'information obtained from the operation of the demonstration aerogenerator at Breamlea will make a valuable contribution to assessing the future use of Victoria's wind energy resource'. Additionally, it was hoped the demonstration site would 'provide valuable operating experience and enable assessments to be made of the economics, reliability and environmental effects of wind generation'¹² and 'test the feasibility of using wind power on a larger scale'.¹³ The wind turbine was installed at a cost of \$180,000.¹⁴ This was jointly funded by the SECV and VSEC, but the monitoring was solely funded by the VSEC. It was estimated the turbine would generate 100 000 to 130 000kWh annually, approximately enough energy to supply 20 homes for a year.¹⁵

Operation and ownership

The turbine was intended to have an educational function as well as providing data and operational experience for the SECV and VSEC. An article in the newsletter of the VSEC stated that 'educational institutions and the general public can see the operational wind generator... a large sign visible from the road explains how the system works'.¹⁶ In early 1988, monitoring equipment was installed at the site.¹⁷ From March 1988 until March 1989, 95,000 kWh was produced by the wind turbine and fed into the grid.

⁶ 'Study will be a breeze', *the Age*, 14 August 1984, p. 61; *Report of the State Electricity Commission of Victoria for the year ended 30 June 1987*, p. 84; SECV & the Solar Council, *Wind power in Victoria*, August 1988.

⁷ SECV & the Solar Council, *Wind power in Victoria*, August 1988.

⁸ *Report of the State Electricity Commission of Victoria for the year ended 30 June 1985-86*, p. 86.

⁹ *Report of the State Electricity Commission of Victoria for the year ended 30 June 1985-86*, p. 86.

¹⁰ *Report of the State Electricity Commission of Victoria for the year ended 30 June 1985-86*, p. 86; *Report of the State Electricity Commission of Victoria for the year ended 30 June 1987*, p. 85.

¹¹ *Report of the State Electricity Commission of Victoria for the year ended 30 June 1987*, p. 85.¹² *Report of the State Electricity Commission of Victoria for the year ended 30 June 1988*, p. 75.¹³ *Solutions*, Summer 1988.

¹⁴ SECV & the Solar Council, *Wind power in Victoria*, August 1988.¹⁵ SECV & the Solar Council, *Wind power in Victoria*, August 1988.¹⁶ *Solutions*, Summer 1988.

¹⁷ 'Breamlea wind generator', *Solutions*, Undated.

In early 1995, the Alternative Technology Association (ATA), a group focused on green energy and associated technologies, acquired the wind turbine from the SECV. The group carried out some repairs, modifications, and improvements to the turbine.¹⁸ It generated a modest income for the ATA via the power it generated, then the group elected to sell the wind turbine to one of its members around 1996. The turbine continued to feed green power into the grid throughout the late 1990s and early 2000s.¹⁹ In May 2003, an electrical generator burn-out within the turbine resulted in the need for major repairs. At this time, Barwon Water, the landowner, agreed to purchase the turbine for \$1. Barwon Water then commissioned repairs to the generator to bring it back to operational condition.²⁰ Barwon Water started the turbine again in February 2004. Barwon Water carried out additional repairs to the blade tips in 2017. The turbine was eventually disconnected from the grid in 2012.

Other early wind power projects

The wind turbine at Connewarre was amongst the early Australian experiments in generating electricity for the power grid from wind in the latter decades of the twentieth century but was not alone. There was an interest in the potential of wind to provide electricity to remote communities, and wind turbines were installed on places like Rottneest Island in South Australia in the late 1970s. In 1983, the Mars Confectionery company installed the first medium-sized wind generator in Victoria at their factory in Ballarat. Although the Mars wind generator was reportedly connected to the electricity grid via the factory, it only supplied power to the factory.²¹ Mars sponsored the generator, but the SECV and VSEC were aware of its existence, and it appears on a SECV/VSEC map of wind monitoring sites and wind turbine locations. This generator was damaged in high winds and was no longer functional by the time the Demonstration Wind Turbine began operation just a few years later.

In Western Australia, the Salmon Beach Wind Farm near Esperance began operation in early 1987. It comprised six 60kW wind turbines manufactured by Westwind (the same as that at Connewarre) and began supplying wind-generated power to supplement Esperance's diesel generator. It was decommissioned in 2002. As of 2022, one of the Salmon Beach wind turbines remains standing in situ and can be visited as part of an interpretative heritage trail. Another has been installed as a monument in the town of Esperance. The Salmon Beach Wind Farm turbines were very similar in design to the Demonstration Wind Turbine at Connewarre.

A wind turbine was also installed by the New South Wales Energy Authority at Malabar south of Sydney in 1987.²² Like the Demonstration Wind Turbine at Connewarre, the Energy Authority erected the 150kW Windmaster turbine, manufactured in Belgium, mainly for research purposes, although it did supply power to the Malabar sewage treatment works.²³ The Malabar turbine was removed in 2000. At the time of writing, the wind turbine at Connewarre appears to be one of the only comparable wind turbines of the era to survive in Australia, and to remain in situ at its original location with additional features, being the monitoring hut and wind monitoring tower, in place.

Wind power today

Along with solar power, wind power has become an increasingly important and widespread form of power generation in Victoria. From testing individual turbines in the 1980s, the sector is now characterised by 'farms' of turbines which are significantly taller and more powerful than their predecessors. Large-scale wind farms established by private enterprise were established along the coast of Victoria from the early 2000s, Codrington Wind Farm near Portland being one of the first, followed by Toora and Wonthaggi. More recently, wind farms have been established or proposed inland. There are currently 41 windfarms and approximately 2,500 wind turbines in Victoria. Victoria's windfarms generated around 21% of Victoria's electricity in 2023 and are a key element of achieving the Victorian government's renewable energy targets.²⁴ The Demonstration Wind Turbine at Connewarre provided early evidence that wind power was viable in Victoria.

¹⁸ Michael Gunter, *ReNew*, Issue 100, July-September 2007, p. 54.

¹⁹ Michael Gunter, *ReNew*, Issue 100, July-September 2007, p. 54.

²⁰ Michael Gunter, *ReNew*, Issue 100, July-September 2007, p. 54.

²¹ SECV & the Solar Council, *Wind power in Victoria*, August 1988.

²² SECV & the Solar Council, *Wind power in Victoria*, August 1988.

²³ 'Energy Authority wants to know watts in the wind', *Sydney Morning Herald*, 7 February, p. 3; '22-metre wind generator for Malabar', *Sydney Morning Herald*, 29 June 1985, p. 7.

²⁴ DEECA, 'Wind Energy', <https://www.energy.vic.gov.au/renewable-energy/wind-energy>.

Attachment 2

Victorian Heritage Register Criteria and Threshold Guidelines

Criterion A	Importance to the course, or pattern, of Victoria's cultural history.
Criterion B	Possession of uncommon, rare or endangered aspects of Victoria's cultural history.
Criterion C	Potential to yield information that will contribute to an understanding of Victoria's cultural history.
Criterion D	Importance in demonstrating the principal characteristics of a class of cultural places and objects.
Criterion E	Importance in exhibiting particular aesthetic characteristics.
Criterion F	Importance in demonstrating a high degree of creative or technical achievement at a particular period.
Criterion G	Strong or special association with a particular present-day community or cultural group for social, cultural or spiritual reasons.
Criterion H	Special association with the life or works of a person, or group of persons, of importance in Victoria's history.

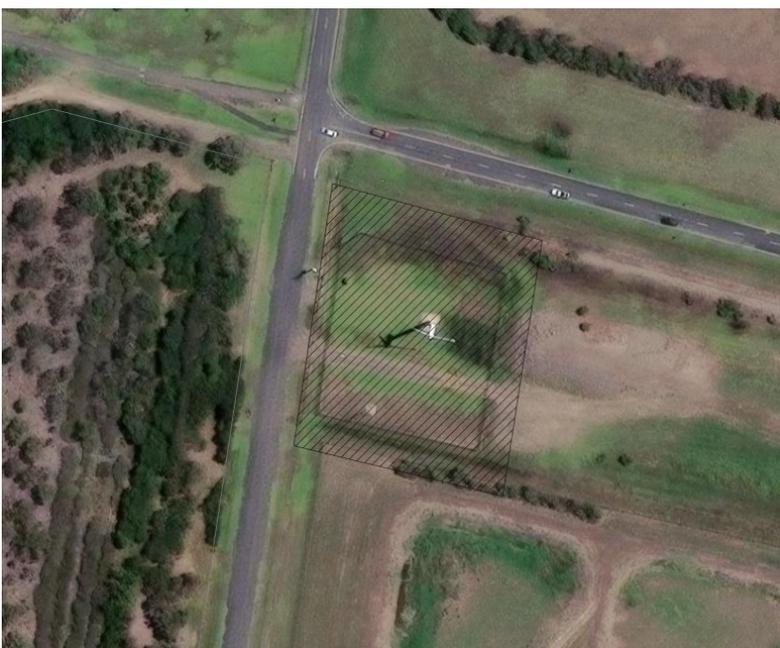
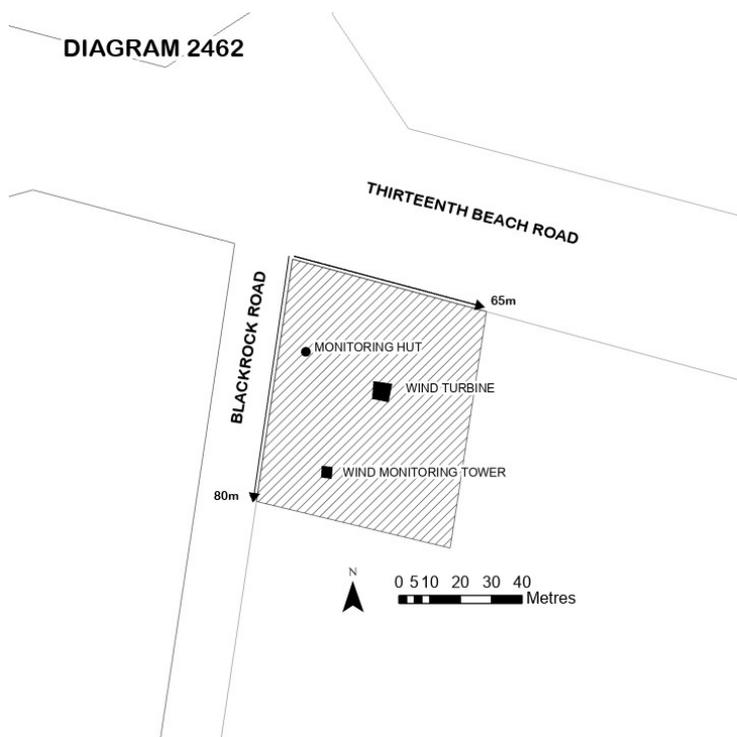
These were adopted by the Heritage Council at its meeting on 1 December 2022, and replace the previous criteria adopted by the Heritage Council on 6 December 2012.

Attachment 3

Extent of Registration

All of the place shown hatched on Diagram 2462, encompassing part of Lot 1 on Title Plan 600592 to the extent of 80 metres (north to south) by 65 metres (east to west), and all structures (including associated electrical and monitoring equipment) known as the Demonstration Wind Turbine Site, including:

1. Demonstration wind turbine
2. Monitoring hut
3. Wind monitoring tower with anemometer.



Aerial image of the extent of registration for the Demonstration Wind Turbine Site (VHR PROV H2462)

Attachment 4

Categories of Works or Activities which may be undertaken without a Permit (Permit exemptions)

Permit exemptions

General exemptions

General exemptions apply to all places and objects included in the Heritage Register. General exemptions have been designed to allow everyday activities, maintenance and changes to your property, which do not harm its cultural heritage significance, to proceed without the need to obtain approvals under the *Heritage Act 2017*.

Subdivision/consolidation: Permit exemptions exist for some subdivisions and consolidations. If the subdivision or consolidation is in accordance with a planning permit granted under Part 4 of the *Planning and Environment Act 1987* and the application for the planning permit was referred to the Executive Director as a determining referral authority, a permit is not required.

Specific exemptions may also apply to your registered place or object. If applicable, these are listed below. Specific exemptions are tailored to the conservation and management needs of an individual registered place or object and set out works and activities that are exempt from the requirements of a permit. Specific exemptions prevail if they conflict with general exemptions. Find out more about heritage permit exemptions [here](#).

Specific exemptions

The works and activities below are not considered to cause harm to the cultural heritage significance of the **Demonstration Wind Turbine Site** subject to the following guidelines and conditions:

Guidelines

1. Where there is an inconsistency between permit exemptions specific to the registered place or object ('specific exemptions') established in accordance with either section 49(3) or section 92(3) of the Act and general exemptions established in accordance with section 92(1) of the Act specific exemptions will prevail to the extent of any inconsistency.
2. In specific exemptions, words have the same meaning as in the Act, unless otherwise indicated. Where there is an inconsistency between specific exemptions and the Act, the Act will prevail to the extent of any inconsistency.
3. Nothing in specific exemptions obviates the responsibility of a proponent to obtain the consent of the owner of the registered place or object, or if the registered place or object is situated on Crown Land the land manager as defined in the *Crown Land (Reserves) Act 1978*, prior to undertaking works or activities in accordance with specific exemptions.
4. If a Cultural Heritage Management Plan in accordance with the *Aboriginal Heritage Act 2006* is required for works covered by specific exemptions, specific exemptions will apply only if the Cultural Heritage Management Plan has been approved prior to works or activities commencing. Where there is an inconsistency between specific exemptions and a Cultural Heritage Management Plan for the relevant works and activities, Heritage Victoria must be contacted for advice on the appropriate approval pathway.
5. Specific exemptions do not constitute approvals, authorisations or exemptions under any other legislation, Local Government, State Government or Commonwealth Government requirements, including but not limited to the *Planning and Environment Act 1987*, the *Aboriginal Heritage Act 2006*, and the *Environment Protection and Biodiversity Conservation Act 1999* (Cth). Nothing in this declaration exempts owners or their agents from the responsibility to obtain relevant planning, building or environmental approvals from the responsible authority where applicable.
6. Care should be taken when working with heritage buildings and objects, as historic fabric may contain dangerous and

poisonous materials (for example lead paint and asbestos). Appropriate personal protective equipment should be worn at all times. If you are unsure, seek advice from a qualified heritage architect, heritage consultant or local Council heritage advisor.

7. The presence of unsafe materials (for example asbestos, lead paint etc) at a registered place or object does not automatically exempt remedial works or activities in accordance with this category. Approvals under Part 5 of the Act must be obtained to undertake works or activities that are not expressly exempted by the below specific exemptions.
8. All works should be informed by a Conservation Management Plan prepared for the place or object. The Executive Director is not bound by any Conservation Management Plan and permits still must be obtained for works suggested in any Conservation Management Plan.

Conditions

1. All works or activities permitted under specific exemptions must be planned and carried out in a manner which prevents harm to the registered place or object. Harm includes moving, removing or damaging any part of the registered place or object that contributes to its cultural heritage significance.
2. If during the carrying out of works or activities in accordance with specific exemptions original or previously hidden or inaccessible details of the registered place are revealed relating to its cultural heritage significance, including but not limited to historical archaeological remains, such as features, deposits or artefacts, then works must cease and Heritage Victoria notified as soon as possible.
3. If during the carrying out of works or activities in accordance with specific exemptions any Aboriginal cultural heritage is discovered or exposed at any time, all works must cease and the Secretary (as defined in the *Aboriginal Heritage Act 2006*) must be contacted immediately to ascertain requirements under the *Aboriginal Heritage Act 2006*.
4. If during the carrying out of works or activities in accordance with specific exemptions any munitions or other

potentially explosive artefacts are discovered, Victoria Police is to be immediately alerted and the site is to be immediately cleared of all personnel.

5. If during the carrying out of works or activities in accordance with specific exemptions any suspected human remains are found the works or activities must cease. The remains must be left in place and protected from harm or damage. Victoria Police and the State Coroner's Office must be notified immediately. If there are reasonable grounds to believe that the remains are Aboriginal, the State Emergency Control Centre must be immediately notified on 1300 888 544, and, as required under s.17(3)(b) of the *Aboriginal Heritage Act 2006*, all details about the location and nature of the human remains must be provided to the Secretary (as defined in the *Aboriginal Heritage Act 2006*).

Exempt works and activities

1. Repair and maintenance of fences and gates.
2. Installation of security cameras, lights and the like to secure the site, provided they are not attached to significant structures.