

18_DEC 2023

Tract
Mia Zar
Principal Town Planner
Level 6, 6 Riverside Quay
Southbank VIC 3000

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Dear Mia,

RE: National Vietnam Veterans Museum, Newhaven - Sustainability Management Plan Addendum

This letter is provided as an addendum to the prior Sustainability Management Plan report provided for the National Vietnam Veterans Museum at 24 Churchill Road, Newhaven, and in response to minor architectural massing/location modifications made to the project and reflected in updated drawings dated December 2023.

Development Changes

Massing and location layout modifications have been made to the proposed development. HV.H note the following general changes in comparison to the prior scheme submitted in November 2020:

- Building rotation approximately 15 degrees east
- Building location moved slightly due south

Impact on SMP

The proposed changes do not have a material impact on the existing commitments described in the project Sustainability Management Plan, dated 13th November 2023.

All committed ESD initiatives are noted to have remained unchanged from prior commitments including commitments and spatial allocations for rainwater tank, bicycle parking, energy efficiency, water reuse and efficiency, urban ecology, sustainable materials.

Please don't hesitate to contact the undersigned should you have any questions regarding the above statement.

Regards,



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National Vietnam Veterans Museum 24 Churchill Road, Newhaven

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WHO WE ARE

HIP V. HYPE Sustainability provides advice that is commercially grounded, yet ambitious. We pursue exceptional outcomes that are socially, economically and environmentally sustainable and enable action across government, institutions and organisations.

We seek to partner with those who are willing to think strategically to achieve better. We lead, collaborate and support others to deliver impact and build Better Cities and Regions, Better Buildings, and Better Businesses.

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REV	DATE	NAME, POSITION	SIGNATURE
0.1	13.11.20	Clare Parry, Lead	

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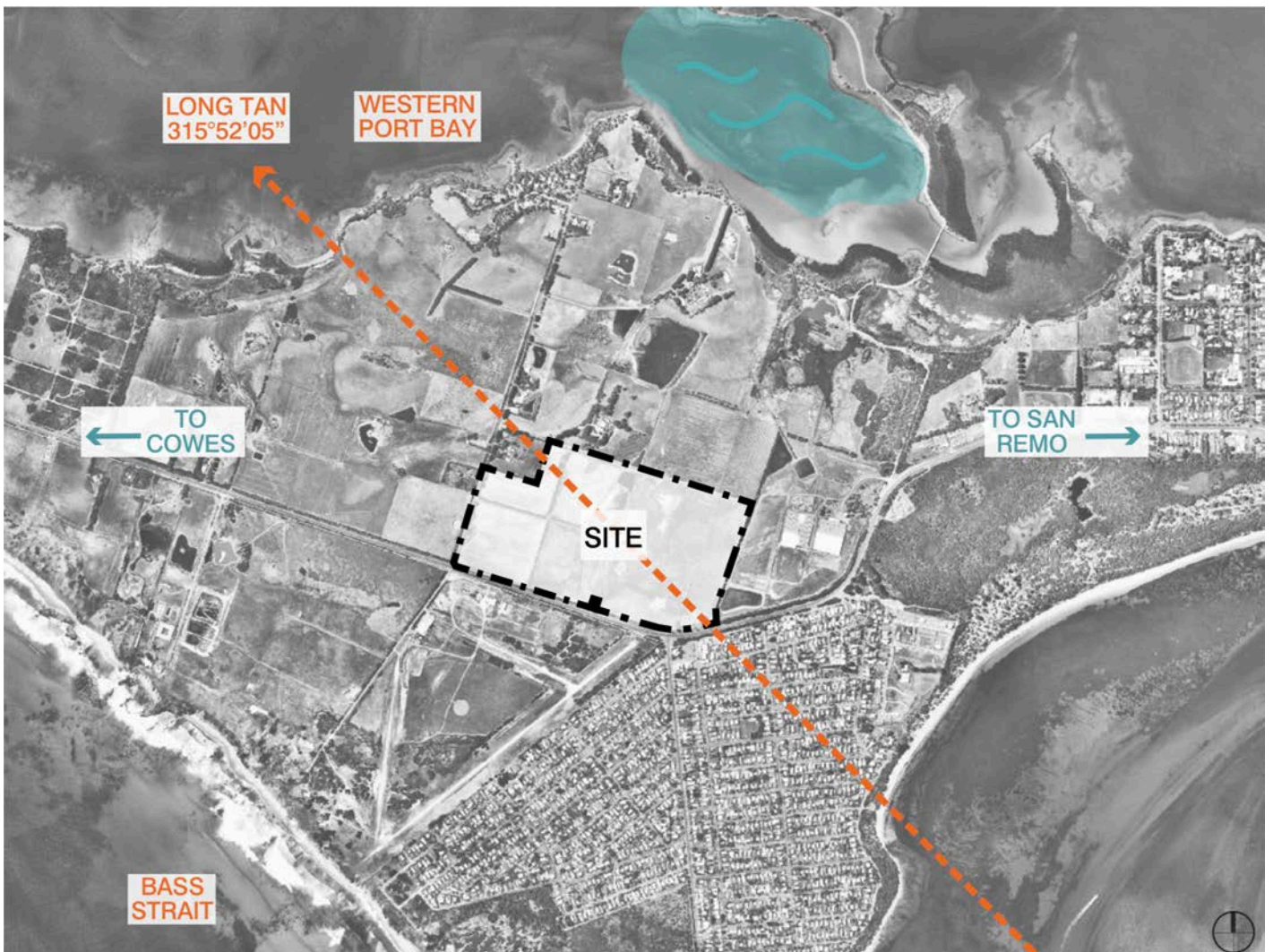
Project Context

This Sustainability Management Plan sets out the environmental initiatives that have been included in the design of the new National Vietnam Veterans Museum. Each initiative is described and the associated environmental benefits enumerated.

The new building is to contain exhibition, support and visitor spaces to support both the conservation and public exhibition efforts of the Museum.

The project will provide both internal and external spaces that allow for activities that directly and indirectly interact with the museum and its facilities.

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Project Information

Municipality: Bass Coast Shire Council, Bunurong Country

We recognise the intrinsic connection of the Bunurong people, Traditional Owners to Country and value their contribution to managing the land, water, natural and built landscapes.

Project Information:

Project Name	National Vietnam Veterans Museum
Project Address	24 Churchill Road, Newhaven 3925
Applicant	Tract Consultants
Site Area	41 Ha (approx.)
Architect	Architectus
Proposed Development	Museum and exhibition space

Key Details:

- Exhibition Spaces
 - + To house the existing collection and anticipated future acquisitions
 - + Designed into a Main Exhibition Area, and 5 supporting theme areas
 - + Temporary Exhibition and Function space
 - + External activity spaces
- Visitor Services
 - + Retail
 - + Café
 - + Education and research spaces
- Support Areas
 - + Office space
 - + Archive storage
 - + Conservation and restoration
 - + Staff amenities

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Key Initiatives

The development will include:

- A Construction Management Plan requiring diversion of at least 90% of construction waste from landfill (recycle or reuse)
- Effective daylighting in the main exhibition space
- Passive design features combining thermal mass, insulation and well shaded glazing to reduce the requirement for heating and cooling
- An extensive green roof covering the exhibition space
- Energy efficient air conditioning incorporating central plant and controls to match supply to the varying demand
- A strong focus on stormwater management to protect the adjacent wetlands
- Bike parking and a connection to the nearby bike path
- Extensive landscaping incorporating indigenous species

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Our responsibility is to leave our cities and regions in a better condition than we found them.

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Building & Construction Management

Through the application of the BESS scorecard, the planning requirements promote best practice for building management to ensure that sustainability is integrated from concept design through to the construction process.

In working in a collaborative partnership with the project stakeholders, sustainability is integrated into the design. This integrated approach delivers high calibre sustainability outcomes at the lowest possible cost.

Best practice building management also means giving future occupants the information they need to be able to run their buildings in the most efficient way.

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Construction Management Plan	The Construction Management Plan will include a target to divert at least 90% of construction waste from landfill (recycle or reuse).	Reduced waste to landfill.
ISO14001 Certification	The builder will be required to have ISO14001 (Environmental Management Systems) certification.	ISO 14001 certification provides assurance to company management and employees as well as external stakeholders that environmental impact is being measured and improved.

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The Bass Coast policy (Cl. 22.01) objectives for Design and Built Form include:

- To maximise energy saving, water conservation, and the principles of Environmentally Sustainable Design (ESD)
- Ensure development considers energy, water and natural resource efficiency in the construction and operation
- Encouraging passive solar design, especially where there are views to the north or south.

A combination of good passive design to reduce heating and cooling loads and energy efficient systems will deliver a building with low energy demands. Renewable energy from the proposed solar PV system will supply a substantial part of this demand.

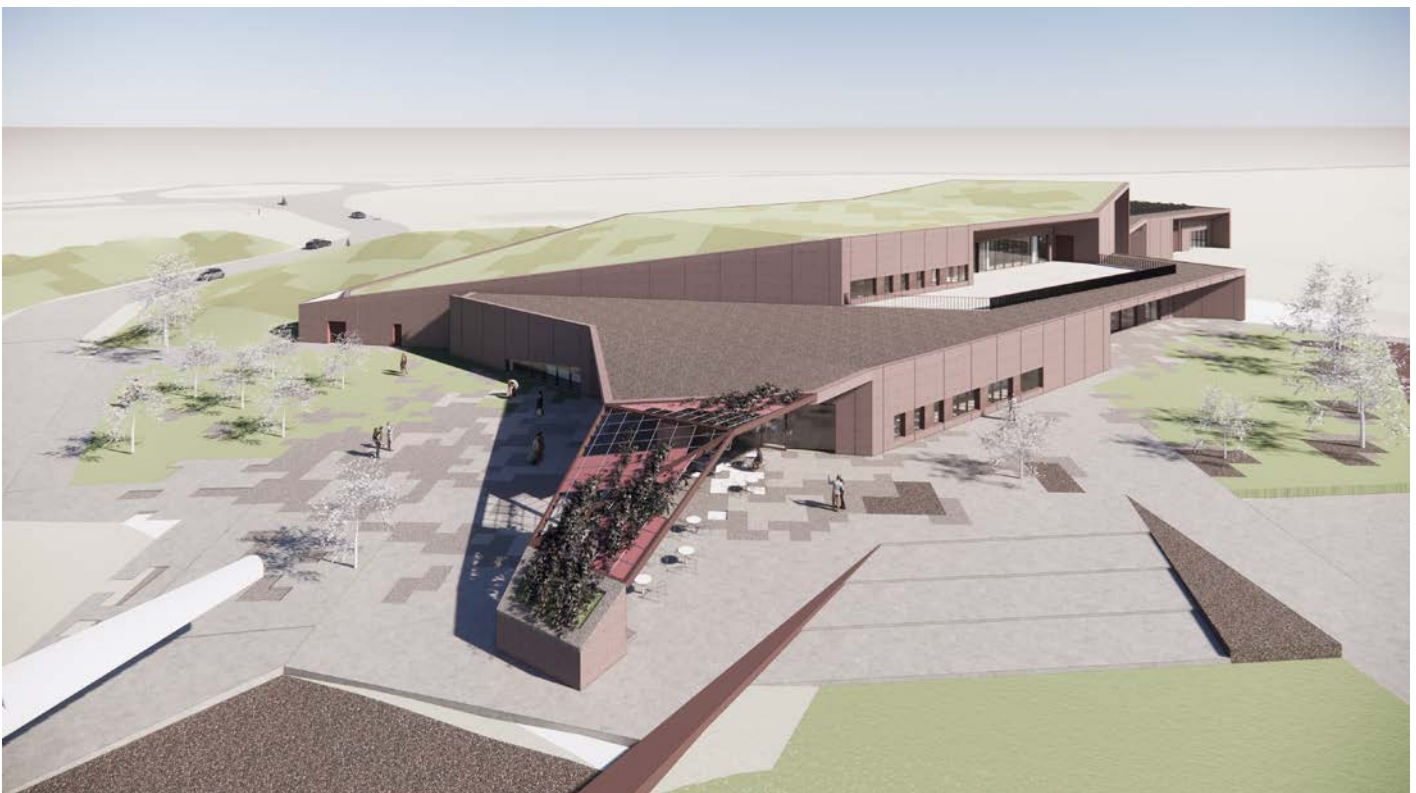
In this category, the following will be implemented:

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OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Passive Design	Windows are orientated predominantly to the North and South.	North-facing windows with optimised shading provide beneficial solar gain in winter. South-facing clerestory windows provide good daylight without heat. West-facing windows have been avoided.
	Extensive fixed and moveable shading, optimised for summer/ winter performance.	Shading controls solar heat gain and glare.
	Green roof covering the main exhibition space comprising growing media over insulated concrete roof.	The extensive green roof provides great thermal stability by soaking up solar heat gains and releasing it at night.
	Thermal mass. In addition to the green roof the design incorporates a concrete slab on ground and precast concrete walls.	This insulated thermal mass stores solar heat gain and also will be cooled overnight using a ventilation mode.
	Insulation to the level required by NCC2019 will be provided.	Insulation reduces heat loss and gain via conduction.
Efficient HVAC	Mixed mode air conditioning to Visitor Services area. Windows can be opened and air conditioning turned off when ambient conditions are suitable.	Studies show that this strategy saves fan, cooling and heating energy as occupants accept wider range of temperature.
	Demand controlled ventilation - the fresh air quantity is adjusted according to CO2 level in space.	For spaces with highly variable occupancy this strategy reduces energy for heating and cooling the fresh air.

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Efficient HVAC	Heat Recovery Ventilation - heat is recovered from exhaust air to pre-heat the incoming fresh air.	This strategy reduces energy for heating and cooling the fresh air.
Efficient Lighting	Ambient/Task lighting strategy - Ambient light using daylight and controlled electric lighting provides the base lighting level. Visitor-activated task lighting will illuminate the displays.	This strategy reduces fading of collection and reduces lighting energy consumption.
Renewable Energy	North-facing, inclined solar PV panels will be mounted on the Conservation area roof delivering an estimated capacity of 50kWp.	Solar energy is well matched to the 7 day per week daytime opening hours.

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Indoor Environment Quality

Maintaining a high-quality indoor environment has been a key driver in this project, delivering a comfortable, healthy experience for visitors and staff

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Daylight	South-facing clerestory windows are included in the design.	Low heat gain in summer. Good diffuse light.
Thermal Comfort	Sweep fans or "Air Pears" will be included in the larger spaces.	Air movement improves thermal comfort in summer and de-stratifies the air bringing warm air down to floor level in winter.
Indoor Air Quality	Low or zero VOC paints, materials, adhesives and finishes will be specified throughout.	Indoor pollutants are reduced.
	Ventilation will be enhanced by incorporating economy cycle controls into the air handling units and by exhausting warm air during cool summer nights.	Fresh air quantities are increased.

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Sustainable Water

The Bass Coast policy (Cl. 22.01) objectives for optimising the management and use of water include:

- To incorporate stormwater management considerations
- To maintain and enhance stormwater quality introduced into waterways
- To maintain stormwater flows and discharges (at maximum) at the pre-development levels
- To maximise the effectiveness of stormwater infrastructure
- To manage flooding and drainage so as to minimise risk to the community and environment

The site is adjacent to a protected wetland, so managing the quality of water run-off is critical. The landscape design is centred around a water treatment wetland which will moderate and clean stormwater flows.

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Reduce Water Consumption	Water efficient tapware, appliances and toilets will be specified.	Demand on precious potable water will be reduced.
Manage Stormwater	Stormwater from car parking and paved areas will be directed via swales to a storage basin in an enhanced natural treatment wetland to be formed on site. Plants will be selected to optimise water cleaning through removal of nutrients.	Improves quality of stormwater run-off entering the local environment including the adjacent protected wetlands.
Water Reuse	Rainwater from the Conservation Area roof will be collected, filtered and stored in nearby rainwater tanks (15kL minimum). This water will be used for toilet flushing.	Demand on potable water will be reduced.
	Water collected from the green roof will be directed to a storage basin in the wetland system.	This water will be available for irrigation of lawns and the green roof during dry spells.

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Resources (Materials & Waste)

New buildings and infrastructure generate waste during both construction and operation. With considered thinking and minor changes during design, both can be significantly reduced.

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Minimise Construction Waste	The construction Management Plan will include a target to divert at least 90% of construction waste from landfill (recycle or reuse).	Reduced landfill and enhanced input to recycling stream.
Minimise Operational Waste	Organic waste from the Café will be collected and composted.	Reduced landfill.
	Space will be provided for sorting recyclable materials.	Reduced landfill and enhanced input to recycling stream.
Reduce Concrete and Steel Quantities	"Super T" beams.	These roof beams provide superior strength reducing the volume and weight of concrete used.
	"Hollowcore" panels are part the Exhibition Hall roof.	Lightweight construction method that reduces the volume of concrete.
Recycled Materials	Recycled bricks, sourced from local quarries, will be crushed and used as aggregate in the concrete mix.	This measure will reduce the volume of raw materials used in the project.

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Sustainable Transport

The sustainability of transport modes is related to both environmental, social and economic factors. Buildings, infrastructure and behaviour conducive to sustainable transport modes can lead to reduced greenhouse gas emissions, less air pollution, lower living costs and improved health and wellbeing.

Each project has the capacity to influence the future travel habits of occupants. By making a conscious decision to incentivise sustainable transport modes long lasting benefits can be created for the occupants and wider society.

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Active Transport	Cycle parking will be provided for staff and visitors.	Encourage staff and visitors to cycle.
	Connection to the bike path along Phillip Island Rd.	Encourage staff and visitors to cycle.

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Ecology

The Bass Coast policy (Cl. 21.05) contains a number of objectives for landscape and built form including:

- To ensure that development is subordinate to the natural, visual and environmental landscape character and significance
- To minimise the impact of infrastructure on the landscape and viewpoints
- To increase vegetation across the municipality
- To ensure that development creates and maintains a high quality landscape setting

In this category, the following will be implemented:

OPPORTUNITY AREA	MEASURES ADOPTED	VALUE & IMPACT
Outdoor Spaces	Outdoor spaces have been provided including the Northern landscape / commemorative garden, outdoor café seating and breakout area.	These spaces will provide staff and visitors the opportunity to enjoy the fresh air and a variety of landscaped areas.
Vegetation	Indigenous plant species will be specified.	Drought tolerance and attraction to birdlife.
	Green roof on exhibition hall roof.	Green roofs reduce heat gain in summer due to evapotranspiration (the cooling effect of plants). The extensive green roof will make the building blend into the landscape improving the view from the main road.
	An arbour at eastern entry will provide shade to the café and outdoor area.	The arbour will provide shade and structure for climbing vegetation, increasing the ecological value while also mitigating urban heat impacts.
Lighting Design	External lighting will be designed to minimise upward light.	This strategy will prevent disturbance of migratory birds including shearwaters and minimise light pollution.

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Ruskin Elwood. Photography by Tess Kelly.

We respectfully acknowledge that every project enabled or assisted by HIP V. HYPE in Australia exists on traditional aboriginal lands which have been sustained for thousands of years.

We honour their ongoing connection to these lands, and seek to respectfully acknowledge the traditional custodians in our work.

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For additional information, questions unturned, collaboration opportunities and project enquiries please get in touch.

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