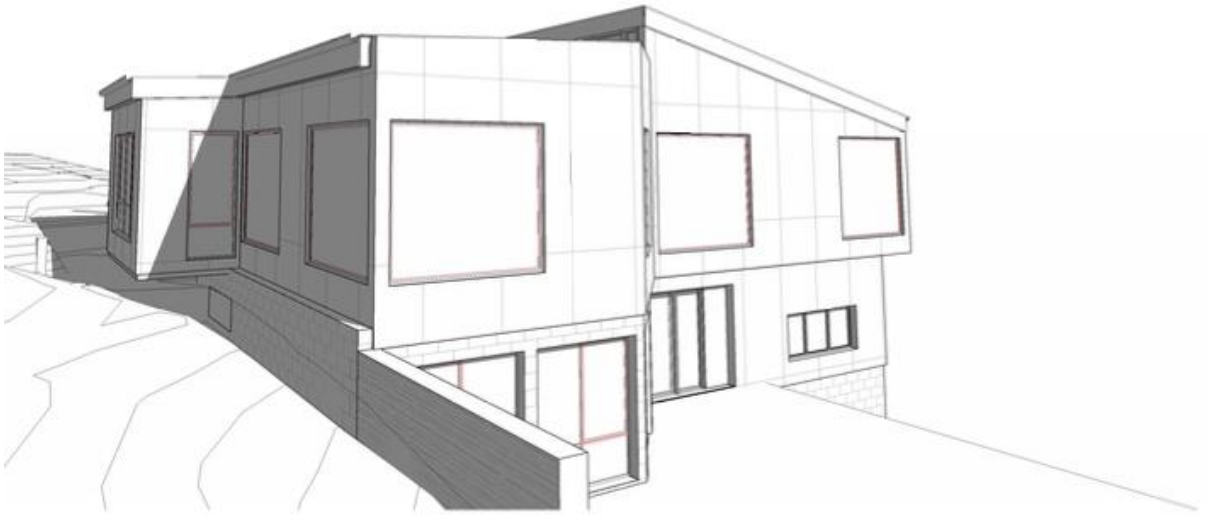
40 Wolfes Road Extension

Environmental Management Plan



Prepared by Hamish Ostler

Diploma of Construction

hamishostler@hotmail.com

0400 177 875

INDEX

1. Aim

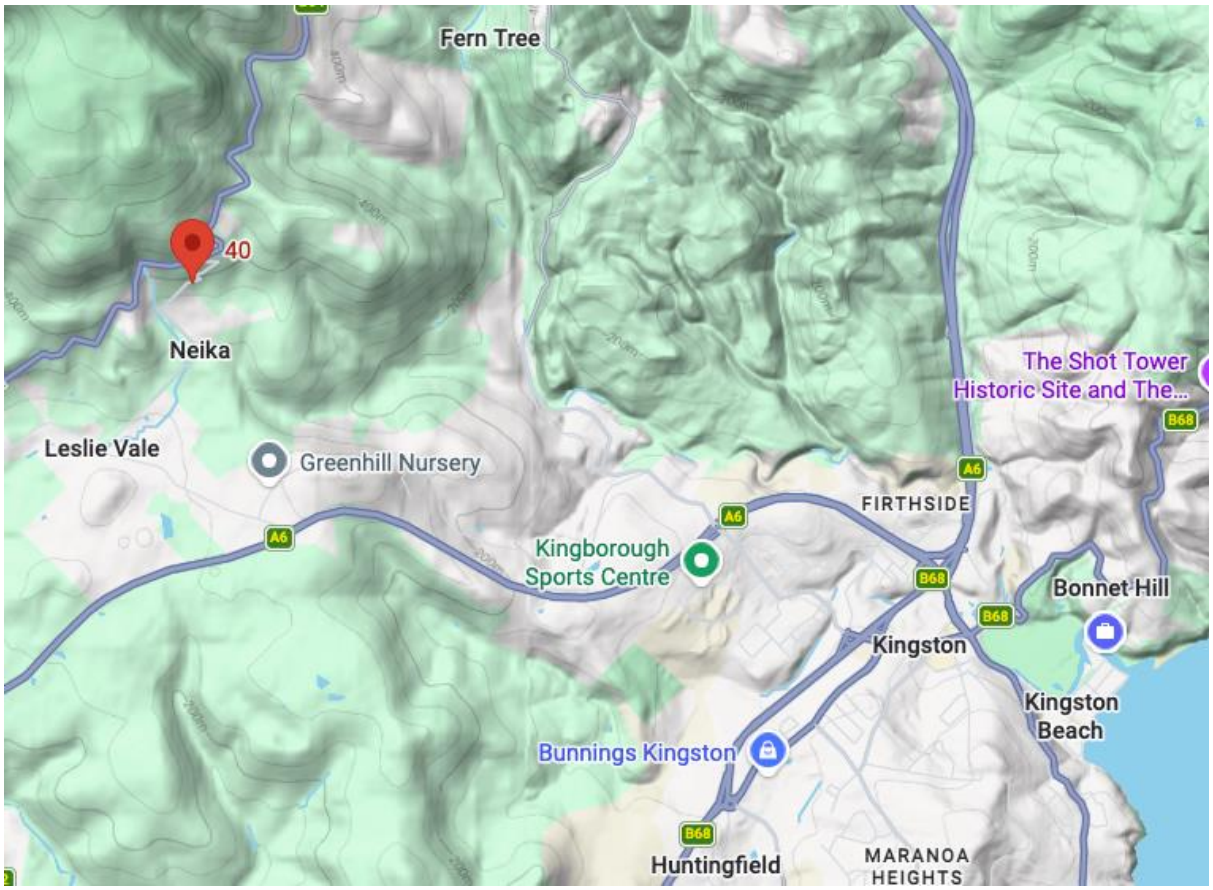
This Environmental management plan (EMP) has been prepared to demonstrate the environmental impacts from the proposed extension to the existing Class 1A dwelling at Wolfes Road.

It establishes a code of conduct and key protection measures to be followed by all attendees to site throughout construction and guide the project toward being of net benefit to the immediate and broader environment.

This EMP stipulates the following areas for advice and guidance through and post construction and after completion:

- An outline of the proposed development
- Direct impacts on the immediate and broader environment from the development
- Specific courses of action, enforcement and protection measures
- General environmental advice and guidance throughout construction
- Proposed native regeneration and environmental net benefit to the land

2 Key development features



Location of proposed development

2.1 Location History

Located between the southern slopes of kunanyi and the North Western outskirts of Kingston, the property is defined by a dense layered forest, displaying a mix of early colonising natives, and a large volume of invasive species, with the land being clear-felled and utilised as a farmland (berry farms) until the 1934 Bushfires, at which time it was abandoned and left to rewild.

2.2 Existing Environment

While many notable established natives have repopulated the area (pg. 18, 19, 35; 40 WOLFES

ROAD NVA 2025, LARK AND CREESE), this ecosystem faces a significant challenge from vigorous invasive species. A thick unchecked corridor of Radiata Pines cuts through the centre of the property from the existing property to the northern border, their fallen needles creating an acidic carpet that competes with the local scrub, leading to a die off of natives. Radiators are dispersed throughout the remaining bushland, mixed in with sprawls of Blackberry bushes (Rubus Fruticosus), Spanish Heath (Erica Lusitanica) and English Holly (Ilex Aquifolium), which weave through the eucalypts, native ferns, tea trees and wattles. The property requires active restoration to protect against further degradation.

2.3 Proposed Development summary

The proposed extension is located to the west of the existing build. The extension sits primarily on an area previously utilised as Wolfes Road, decommissioned in the 1890's, with the road rerouted to the current format, wrapping around the Southern and Easten approaches to the block. The proposed extension encroaches roughly 130m2 further into the title, with the property's total final developed area being less than 2% of adhered land area.

2.4 Net benefit from adhesion of titles

The adhesion of land titles serves as a mechanism for the long-term preservation of biodiversity. By formally merging two distinct titles into a single entity, the potential for secondary residential or commercial development is neutralised, as the "residual" land is no longer a separate, buildable lot under standard Tasmanian planning schemes. This strategic administrative action ensures that the land remains a contiguous ecological unit, preventing the fragmentation that typically accompanies suburban or rural sprawl. By removing the right to develop the second title, the landholder creates a permanent buffer zone that shields sensitive habitats from the noise, light, and physical disturbances of human habitation, thereby securing a stable environment for native flora and fauna to thrive in perpetuity.

2.5 Principles of active regeneration and Land Management Policy (LMP)

A consolidated land management approach directly supports active ecological restoration, building upon successes already achieved in removing invasive species and reintroducing native flora since completion of the primary build in 2019. The systematic clearing of non-native vegetation has already facilitated the return of indigenous species, while targeted debris

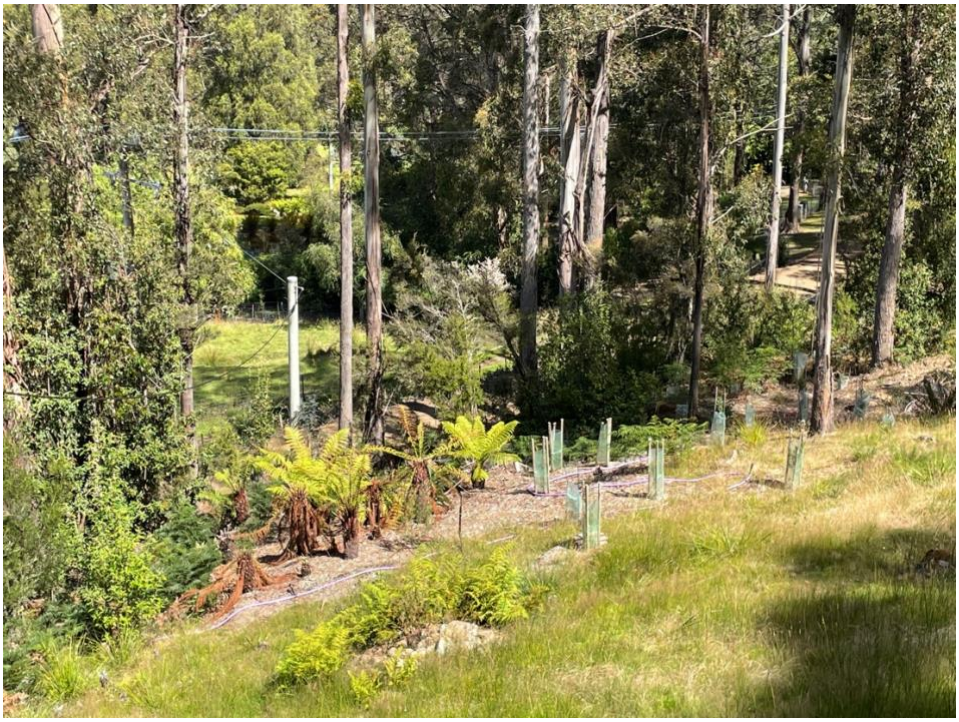
management and controlled burn-offs have significantly mitigated bushfire risks, clearing the way for the understorey to regenerate naturally, restoring the complex vertical layers of the forest.

As invasive competitors are removed, the soil and light conditions return to a state that favours the regrowth of the native seed bank, allowing the ecosystem to begin its transition back to a self-sustaining, resilient state. The ultimate vision for this unified land parcel is the full regeneration of a "primordial" forest ecosystem, mirroring the pristine condition of the landscape prior to European settlement.

By protecting the land from future building footprints, the site can serve as a critical corridor contributing to Australia's broader conservation goals. Through the legal permanence of title adhesion and the physical dedication to ecological restoration, this land is will once again stands as a high-conservation-value forest, preserved for its intrinsic natural worth

All native trees not listed for removal in line with the NVA (Pg 35, NVA, Lark and Creese) will be retained, along with any other natives across the property. As invasive species are removed, a mix of native species will be replanted as part of the active regeneration of the property, within ten years. Tall stands of radiator pines will sought to be replaced primarily with Eucluptus Regnans for the primary canopy.

SW of existing dwelling, 2020. Two large Pinus Radiators, with ground level die off from acidified soil.



SW of existing dwelling, 2026: Radiators removed, shed and water tank removed and area remediated with plant out of juvenile Pomaderris Elliptica, Nothofagus Cunninghamii, Eucryphia Lucida, Anthrotaxis Selaginoides, Dicksonia Antarctica, Acradenia Frankliniae, Acacia Melanoxylon. 280 natives have been replanted since 2020.

East of property during construction 2019 with bank entirely overgrown with Ilex Aquifolium and Rubis Fruticosus

Same area viewed as previous and from the southern boundary, with all Illex Aquifolum and Rubis Fruticosus removed and replanted with Dicksonia Antarctica, Lagarostrobos and Pomedaris Elliptica

2.6 General LMP approaches to eradication of invasives and rehabilitation

This Land Management Policy outlines the commitment to restoring and preserving the ecological integrity of this environmentally sensitive forest site. The primary objective is to transition the landscape from a state of degradation—characterised by invasive species—back to a high-functioning native ecosystem.

The first phase of the policy focuses on the systematic eradication of non-native and invasive vegetation that threatens local biodiversity. Targeted removal will be implemented to clear Blackberry bushes (Rubus Fruticosus), Radiata pines (Pinus radiata), Spanish Heath (Erica Lusitanica) and English Holly (Ilex Aquifolium), which currently outcompete native flora and alter the soil chemistry. These species will be removed using low-impact methods to avoid unnecessary soil disturbance, with follow-up monitoring to ensure any regrowth or seed banks are effectively managed before they can re-establish. The removal of the presence of high-combustion invasive 'woody weeds' seeks to eradicate "ladder fuels" that allow ground fires to reach the canopy or produce intense heat that kills native seed banks and otherwise resilient native species. This eradication and targeted burning of ground fuel loads aims to restore the natural "wet" fire-break characteristics of the region, providing a broad net benefit to the environment.

Post-removal, the site will be transitioned into a multi-tiered native forest. This selection focuses on species that are either fire-resistant or essential for the long-term ecological "cooling" of the microclimate. The second phase involves an intensive revegetation program designed to restore the canopy and understorey with species indigenous to Southern Tasmania. The cornerstone of this effort will be the planting of Mountain Ash (Eucalyptus Regnans), alongside a diverse mix of local associates such as Blackwood (Acacia Melanoxylon) and Tree Ferns (Dicksonia Antarctica) amongst others, where appropriate for the microclimate. The built environment remains a small, contained enclave within a thriving, restored Tasmanian forest, protecting the site's long-term natural heritage and ecological resilience.

Target Species for Removal

Radiata Pine (*Pinus radiata*)	Highly flammable due to resin content; alters soil pH, kills off native understory

British Holly (*Ilex aquifolium*)	Creates dense, dry thickets that impede firefighting access
Spanish Heath (*Erica lusitanica*):	Extremely volatile fine fuel that ignites rapidly
Blackberry (*Rubus anglocandicans*):	Forms massive "wick" structures that carry fire across the forest floor.

Restoration Strategy: Native Re-vegetation

Eucalyptus regnans	Canopy Structure	Fast-growing, creates high-level shading.
Blackwood	Mid-Storey	Dense, broad leaves retain higher moisture levels.
Leatherwood	Mid-Storey	Dense, broad leaves retain higher moisture levels.
Celery Top Pine (Phyllocladus aspleniifolius)	Slow-burn Timber	Naturally more resistant to ignition than invasive pines.
Yellow Dogwood (Pomedaris Elliptica)	Mid-Understory	Provides essential habitat while keeping ground moisture high.
Manfern (Dicksonia Antarctica)	Wet Zone	Provides essential habitat while keeping ground moisture high, high fire resistance
Melaleuca (Tea tree)	Understory	Wet-Zone Stabilizer

2.6 Environmentally sensitive building design and construction principles

The selection of high-performance energy-efficient design elements provides a broader net benefit to the environment by reducing operational emissions and minimizing long-term resource consumption. The use of a decoupled slab on the lower level acts as a thermal mass battery allowing the building to harness passive solar gains, storing heat to stabilize indoor

temperatures naturally. Collectively, these strategies transition the built environment toward a low-impact model that reduces the ecological footprint of the residential sector.

The selection of materials for fit out by the head contractor will seek to consider all elements of this EMP, including;

- The sustainability of the materials used
- The longevity and suitability of materials to provide the best service life
- The embodied energy of materials through raw extraction, production, and transport.
- Preferability to remove waste materials from landfill or other construction waste processes or over ordering

Integrating FSC and PEFC sustainable timber into a building's fit-out offers a net environmental benefit by functioning as a carbon sequestration mechanism, effectively locking atmospheric CO2 within the built environment for the duration of the material's life. A Timber-centric internal fit-out will be pursued, facilitating circular economy principles; high-quality timber components can be salvaged, repurposed, or biodegraded at the end of a building's lifecycle, drastically reducing landfill contributions, and limiting the use of finite resources, such as plasterboard.

This holistic approach not only lowers the project's immediate Global Warming Potential (GWP) but also supports the restoration of biodiverse forest ecosystems through responsible silviculture practices.

3. Construction process enforcement measures

3.1 Construction methodology and design requires that strict stipulations are adhered to throughout delivery of the project. Delivery compliant upon this EMP requires the enforcement and compliance of the following;

3.2 The Head contractor must at all times

- Conduct all construction activities in line with the EMP
- Consider all elements of the EMP wholistically outside of site construction, including procurement, site administration, waste management and embodied energy.
- Provide all materials, equipment and consumables to facilitate onsite compliance
- Communicate compliance stipulations where necessary to suppliers or contractors in advance of their arrival to site
- Ensure contracts include EMP compliance measures where necessary
- Undertake regular and periodic inspections of site to ensure compliance
- Utilise cyclical analysis of the effectiveness of measures and actions against the aims of this EMP to ensure they are effective
- Communicate any specific stipulations of enforcement and adherence to the site supervisor and record results
- Consider the general intent of the EMP through construction practises, and act according to its principles, where an action is not directly foreseen

3.3 The Site supervisor must at all times

- Ensure that the EMP is accessible onsite
- Ensure that all attendees to site are versed in the EMP at the time of sign in
- Ensure that the stipulations of the EMP are enforced
- Ensure an ongoing physical record of compliance
- Ensure that any unique or specific stipulations for suppliers or contractor are enforced and recorded
- Communicate with the Head contractor that the site is fully provisioned with measures to meet compliance
- Enforce strict site access, including an in/out register and signatures for compliance to the EMP for all site attendees

- Generally manage the physical site for compliance, including the regular disposal of waste, and general monitoring and maintenance of site condition in line with the Aims and Stipulations of the EMP
- Consider the general intent of the EMP through construction practises, and act according to its principles, where an action is not foreseen directly.
- Report any shortcomings, faliures or incidents and their rectifications to the Head contractor immediately

3.4 Contactors, suppliers and site attendees must at all times

- Comply with contractual stipulations in their conduct relating to the EMP
- Where no specific contractual obligations occur in their provision of services or goods, conduct themselves in line with the aims and stipulations of the EMP
- Sign in and out to site with dates and times
- Contactors to sign compliance with the EMP upon site attendance
- Comply with stipulations from the Site Supervisor or head contractor within a reasonable time.

4 Site Ecological Sanitation

4.1 Biological Hazards

Maintaining ecological hygiene during construction is critical for preventing the introduction and spread of invasive pests, weeds, and pathogens into high-conservation-value ecosystems. Tasmanian forests are unique, serving as vital carbon sinks and habitats for threatened and native species. 40 Wolfes Road has been partially remediated around the existing property, with the suppression and removal of weeds and the reintroduction of native species.

Invasive species are dealt with under the Biosecurity Act of 2019 (TAS), and through the Tasmanian Environmental Protection Authority (EPA). Construction activities pose a significant risk of environmental harm if machinery and site attendees are not properly decontaminated. Sanitation measures ensure that pathogenic soils or seeds from highly disturbed areas do not infect native forests. Ecological hygiene includes managing on-site sanitation and waste to prevent long-term

degradation of the forest's soil and water quality and native biodiversity.

The following protections will remain in place for the duration of construction

- All machinery, boots, equipment or other items with loose or aggregated clumps of soil will be cleaned to be free of such contaminants before entering site at an approved suitable location. It will be a contractual stipulation of works for machinery to cleaned in such a way before reaching site. 'Tas Washdown Guidelines for Weed and Disease control: Machinery' should be provided to contractors and included as site attendance stipulations. Any non compliant machinery, vehicles or other will be turned away if non compliant.
- Site supervisor will enforce compliance of clean equipment, ensuring that all machinery, boots, equipment or other items are free of loose or aggregated contaminants
- Site Supervisor will document all potentially contaminated items entering site with photographs before they are cleared to conduct works
- Application of a disinfectant spray (Phyto clean or equivalent) are to be enacted for general site entry upon arrival for any equipment involved in the movement of or contact with soil such as machinery tracks, boots or other digging or earth moving equipment.
- Bunded 'Boot Brush' Wash down stations to be installed at access to site, utilising a disinfectant wash (Phyto clean or equivalent).
- All equipment operating on site in the conduct of earth moving is to receive a washdown at an appropriate facility after completion of works, with evidence provided to the Head Contractor
- Regular inspections of site to be undertaken, with any outbreaks of weeds to be controlled before they are allowed to spread, utilising a native ecologically sensitive control agent (Picloram)
- Site to have bound access on all sides to public access and internal areas of work, and derisk the spread of biological hazards.
- Limiting of the movement of soil/spoil from excavation to a confined and controlled area.
- Weeds to be identified and eradicated in line the Biosecurity Act (2019) Tas
- Any soil amendments added to the site will be certified as free of Phytophthora Cinnamomi in accordance with AS4555-2012. Any records of certification are to be retained by the head contractor.
- Site attendees to be limited to access roads and established roadways and parking areas. No free vehicle access is to be given to the site

5 Site water and sediment run off

5.1 Water run off

The site is steep, with an open area of approximately 25 meters south of the development, running a consistent downhill to deep rooted Eucalyptus Regnans and mulched area with newly planted Manferns (Dicksonia Antarctica), Leatherwoods, Myrtles (Nothofagus Cunninghamii) and Yellow Dogwoods (Pomaderris Elliptica), allowing for reabsorption and limiting runoff where it occurs. Water run off for the site past this point diverts to a road stormwater drain, derisking water catchments and other sensitive Riparian areas

5.2 Sediment control

Secondary "last line of defence" measures will be installed to capture any sediment that becomes mobile from the primary site due to the step gradient and open area. Sediment fences will be installed parallel to the contours of the slope, with their ends angled upward to prevent water from bypassing the barrier.

Sediment controls must not consist of any potentially hazardous materials which would place the measure in breach of any other measure contained within this EMP (i.e biological contaminants).

All works and site design through construction will seek to act within the narrowest envelope, planning all material deliveries and construction activities to minimise the disruption to the site. Any soils disturbed will be ‘stabilised’ permanently as early as is reasonably practicable.

Any sediment redistributed through runoff shall be processed and returned to site regularly through, to prevent build up, release, or failure of containment measures. No soil or sediment from construction shall be distributed in such a way that it can increase pressure on tree root systems, reduce moisture content, or suffocation of the roots within the dripline.

6 Noise management plan (NMP)

6.1 With a distance of roughly one hundred and fifty metres to the nearest neighbours, the space and flora provides a natural acoustic buffer for the community, but may cause disruption to local nesting birds or sensitive mammals, which may be impacted by sudden, percussive sounds. Low-frequency vibrations from heavy earthworks can be felt through shared rock strata, causing stress responses, and disruptions to nesting and hunting.

To remain compliant with the Environmental Management and Pollution Control Act 1994. the following must be adhered to;

- Adhere to Standard Construction Hours: Limit high-noise activities to between 7:00 am and 6:00 pm on weekdays and 8:00 am to 1:00 pm on Saturdays, with no noisy work on Sundays or public holidays.
- Percussive noise, power tools and powered machinery are to be further restrained, with the beginning of civil twilight to act as a noise cut off for these activities. A schedule of civil twilight should be kept and adhered to, to minimise noise at the times when vulnerable fauna are active (dawn to dusk).
- Neighbour Consultation: Notify neighbours within 500m at least 48 hours in advance of particularly loud or vibratory activities, such as rock breaking, machinery use or large concrete pours.
- The use of acoustic buffers where possible to limit stationary noise sources like generators or compressors to dissipate sound traveling will be implemented
- Head Contractor to liaise with all suppliers of services and plant that machinery is fitted with high-quality mufflers and acoustic enclosures in good working order
- Construction practices to be employed where reasonably possible to limit the emission of construction noise

7 Spill management

In environmentally sensitive Tasmanian forests, rigorous contamination management is the primary defence against irreversible soil and waterway degradation. Minor leaks of hydraulic fluid, fuel, or wet concrete can devastate local micro-flora and leach into the water table, particularly on steep slopes where gravity accelerates the spread of pollutants. Implementing a "zero-leak" culture on-site supported by high-quality spill response equipment—is a mandatory requirement under the Environmental Management and Pollution Control Act 1994 (EMPCA). Proactively isolating potential contaminants ensures that the delicate balance of the surrounding native bushland remain uncompromised.

The following methods will be adhered to throughout construction

- Strategically positioned spill kits: fully serviceable and adequate spill kits are to be available on site at all times.
- Establish Bunded Refuelling Zones: Conduct all refuelling and chemical mixing within a bunded, impermeable and level area.
- Plant and ‘at risk’ equipment to undergo full inspection by site supervisor before clearance to operate on site
- Plant Maintenance Inspections: Conduct daily visual checks of all excavators and generators for weeping hoses or oil leaks, utilising drip trays under any stationary machinery parked overnight.
- Stockpile Contaminated Waste: Any soil impacted by a spill must be excavated immediately, stored on multi layered heavy-duty (200um) plastic sheeting, and disposed of at a licensed Tasmanian waste facility.

8 Unnecessary energy consumption through construction

8.1 Background

Minimising energy consumption during the construction phase is a vital step toward reducing the total embodied energy of a dwelling. A focus on construction-phase efficiency ensures that the sustainable ethos of a home begins at the outset. Embodied energy represents the total sum of energy required to extract raw materials, manufacture products, and transport them to the building site, forming a significant but often "invisible" portion of a building's lifetime carbon footprint.

8.2 Reduction of embodied energy

The following principles are to be followed throughout construction

- Optimised Site Logistics: Planning deliveries to ensure full truckloads and sourcing materials from local Tasmanian suppliers to reduce the "transport energy" and fuel consumption associated with heavy haulage.
- Prioritising materials with low embodied energy—such as locally sourced timber or recycled aggregates and lightweight construction materials and systems
- Consideration of the distance of local supply of goods and services
- Use of High-Efficiency Machinery: Selecting modern, well-maintained plant and equipment with high fuel-efficiency ratings
- Implementing a "no-idling" policy for vehicles and excavators.
  Scheduling high-energy tasks (such as concrete pours or heavy lifting) to be completed in concentrated blocks to avoid multiple mobilisations of heavy machinery.
- Choosing durable materials that won't require frequent replacement and can be easily disassembled and recycled at the end of the building's life.
- Detailed Estimation and Ordering: Utilising precise detailed take-offs to order exact quantities, preventing the "over-ordering" that often leads to surplus materials being discarded, or underordering resulting in unnecessary deliveries
- Secure and Weatherproof Storage: Providing designated, covered areas for fragile materials like insulation and plasterboard to prevent damage from Tasmania’s high rainfall

10 Bibliography

Text reviewed or referenced

Abdulmohsen Aldersoni, Ali, 'Investigating the impact of low carbon building materials in energy consumption and carbon emissions in construction projects', International Journal of low carbon technologies, volume 20. 2025

Anil Sezer A, "Environmental impact of construction transport and the effects of building certification schemes, Resources, Conversation and Recycling, Vol 172 September 2021

Karlsson Ida, 'Decarbonization of construction supply chains – Achieving net zero carbon emissions in the supply chains linked to the construction of buildings and transport infrastructure', Chalmers University of Technology

Malmqvist T, 'Design and construction strategies for reducing embodied impacts from buildings – Case study analysis' Energy and buildings, Vol. 166, May 2018

Odoi Yorke F, Adu Frimpong T, 'Embodied energy in buildings: Two decades of research trends, evolution, and implications for climate change mitigation', Scientific African, Vol 31 March 2026

AS 1742.3-2002: Manual of uniform traffic control devices - Traffic control devices for works on roads.

Environmental Management and Pollution Control (General) Regulations 2017

Environmental Management and Pollution Control Act 1994 (EMPCA)

Environmental Protection & Biodiversity Conservation Act 1999. (CWTH)

Forest Practices Act (1985) (TAS)

Guidelines for Safe and effective herbicide use near waterways', Department of primary industires, parks, water and the environment, Tasmanian State Government

Kingborough Interim Planning Scheme 2015. Kingborough Council 2015

Land Use Planning and Approvals Act (1993) (TAS)

Nature Conservation Act (2002). (TAS)

Rudman T (2005). Interim Phytophthora cinnamomi. Management Guidelines.

Tas Washdown Guidelines for Weed and Disease control: Machinery', 'Department of Natural Resources and Environment'

Tasmanian Weed Management Act (1999) (TAS)
Government Printer, Hobart, Tasmania.

Threatened Species Protection Act (1995) (TAS)

Urban Drainage Act 2013 (TAS)

Water Management Act 1999 (TAS)

State Policy for Water Quality Management 1997 EPA (TAS)