COMMERCIAL OR GOVERNMENT LICENSING OPPORTUNITY -
ADVANCED FLOOD PROTECTION TECHNOLOGY

HOUSE ELEVATION SYSTEM

A flood-resilient, on-demand building elevation solution for new homes in high-risk zones.

WATCH PRESENTATION VIDEO HERE

SCAN ME

EXPRESSIONS OF INTEREST BRIEFING

This document is intended for use by local, state and federal government departments, agencies, builders, housing authorities, and infrastructure partners interested in exploring collaborative opportunities to trial, support, or license a patented Australian-made flood mitigation technology.

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This Expression of Interest (EOI) document is provided by JRR Corporation Pty Ltd (ACN 657 702 344, ABN 85 657 702 344) and its authorised representatives for the purpose of outlining an early-stage opportunity relating to the company's patented House Elevation System (HES).

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ABOUT THE INVENTOR – JOHN CUNNIFFE

John Cunniffe is a highly accomplished International Welding Engineer, QA/QC Advisor, and Senior Pipeline Welding, Coating & Structural Inspector with over 20 years of experience delivering excellence on major oil and gas, civil, and structural projects across Australia. He specialises in welding engineering, pipeline construction, coating applications, and piling works for both onshore and offshore operations.

John graduated with Honours in a Bachelor of Technology in Materials Engineering from the University of Limerick, Ireland, in 2002, before relocating to Australia shortly thereafter. His passion for engineering and design—particularly welding—led him to become a certified International Welding Engineer in 2015. During this time, John also gained extensive experience in the elevator industry, developing deep technical expertise across all levels of the field.

Drawing on his combined knowledge of elevator systems and engineering, and inspired by the devastation caused by recent floods in Brisbane, John developed the JRR House Elevation System (HES)—a practical innovation designed to help protect homes from future flood damage.

INDEX

EXECUTIVE SUMMARY

JRR Corporation Pty Ltd has developed an innovative and patented House Elevation System (HES) designed to address the increasing risks and costs associated with residential flooding across Australia. This document serves as a non-binding Expression of Interest (EOI) to introduce the system to government stakeholders and explore opportunities for future collaboration, interest, and endorsement in high-risk flood-prone regions.

The House Elevation System offers a mechanical building-lift solution that enables homes to be temporarily elevated during flood events, protecting the structure, its contents, and residents' wellbeing. Unlike traditional elevation strategies (e.g. permanent stumping or complete house relocations), the HES allows homes to remain accessible under normal conditions and only activates when floodwaters are imminent. The system integrates internal piles, a counterweight-assisted pulley mechanism, and a solar-powered backup system, and has been designed with modular, new-build housing applications in mind, also suitable for retro-fitting into existing suspended buildings.

This technology responds directly to national and state-level resilience priorities and supports efforts to mitigate future flood damage, reduce insurance losses, and enable the safe development or reactivation of previously flood-restricted residential zones.

Through this EOI, JRR Corporation seeks to engage with:

- Local, state, and federal government departments
- Disaster recovery and infrastructure agencies
- Councils in flood-affected LGAs
- Builders, developers, and housing program managers

The immediate goal is to identify government bodies, councils, or builders who express interest in the concept and are open to further discussion, feedback, or potential involvement in its next stage of development. This may include future pilot opportunities, letters of support, or inclusion in upcoming housing and infrastructure planning initiatives.

Supporting materials — including cost-benefit modelling, 3D animation, and technical schematics — are included or currently in development to aid in early-stage conversations.

With tens of thousands of homes across Queensland alone located in vulnerable flood zones, the HES represents a forward-thinking and cost-effective solution to mitigate climate risk while unlocking the potential of land previously deemed uninhabitable. JRR Corporation welcomes the opportunity to collaborate with stakeholders in shaping the future of flood-resilient housing.

WATCH THE VIDEO ON YOUR SMARTPHONE

Just hover your camera over the QR code.

Illustrative purposes only of the House Elevation System technology.

SCAN ME

PROJECT OVERVIEW

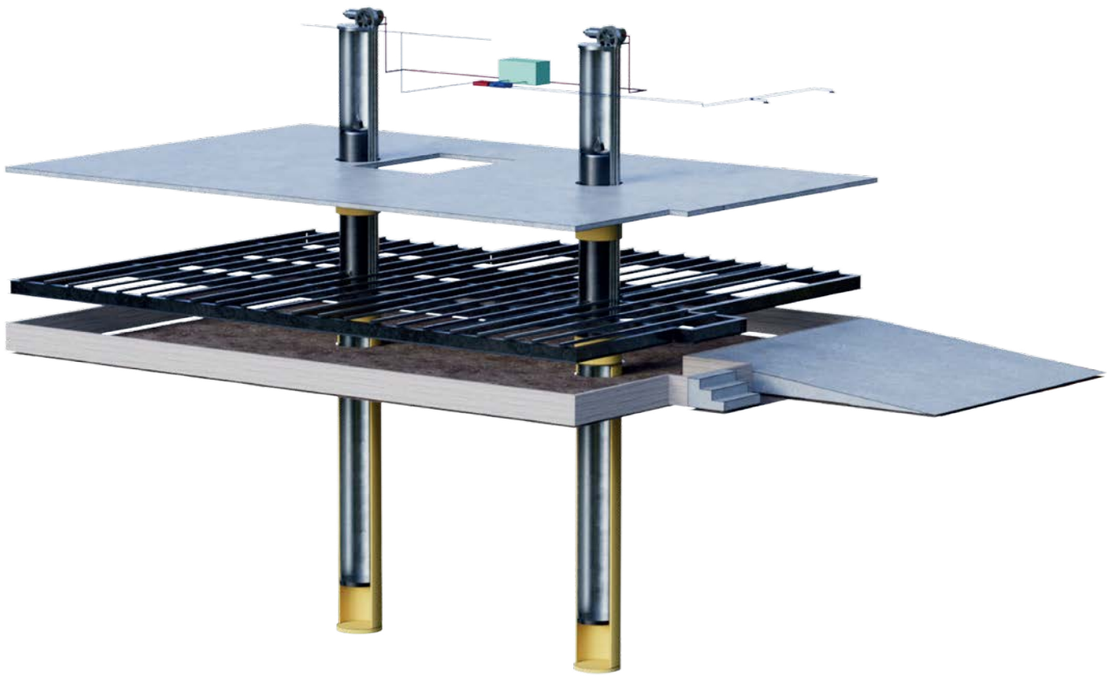
The House Elevation System (HES) is a patented, Australian-designed structural mitigation solution that enables homes to be temporarily raised above flood levels in response to rising water or imminent flood risk. Developed specifically for new residential builds and suitable for retro-fitting into existing suspended buildings in flood-prone areas, the system provides an alternative to permanent elevation, house relocation, or costly flood damage recovery.

Unlike traditional approaches — such as stumping a house at a fixed elevation or building large-scale levees — the HES integrates directly within the building's footprint and remains inactive until needed. This allows for normal ground-level access during day-to-day use, while enabling rapid vertical elevation in emergency situations.

How it works

The system operates via an internally housed pulley and counterweight mechanism, supported by structural piles installed beneath the dwelling. These piles anchor the elevatable portion of the building and guide its vertical movement. The core mechanical components — including pulley wheels, steel cables, and a counterweight system — are installed within the hollow piles and attic spaces to protect them from water exposure and environmental degradation.

The HES is powered by an electric chain block system with solar and battery backup, ensuring continued operation during power outages. The system includes integrated safety locks and failsafe features to prevent unintended lowering and to ensure protection of occupants and property during operation. Elevation speed is approximately 1 metre per minute, depending on the weight of the home and system configuration.



Key Features

- Designed for new builds, modular homes, prefab homes, and suitable for retro-fitting to existing buildings
- Operates using standard Australian-manufactured components
- Allows normal ground-level living outside of flood events
- Can be activated onsite or remotely activated in future iterations
- Accommodates sewer, water, power, and comms via a swivel utility system
- Integrated solar and battery systems power essential functions when raised

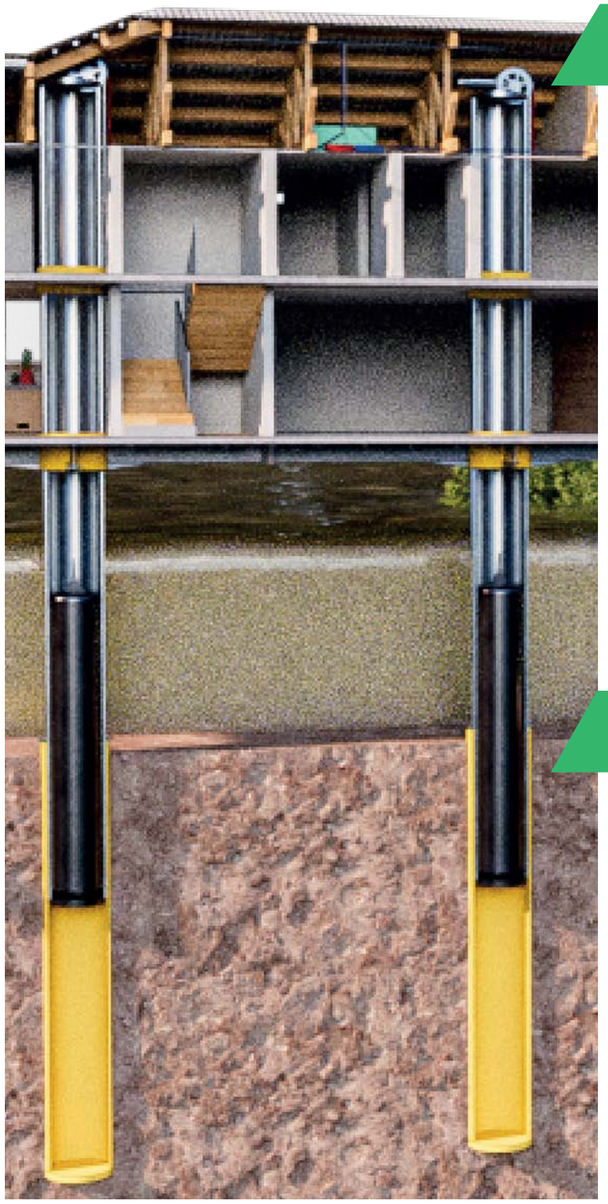
Application & Suitability

- The HES is particularly well-suited to:
- Government or public housing developments in flood-affected zones
- Post-disaster rebuild programs in areas impacted by repeat flooding
- Council-led modular housing solutions where compliance with elevation mandates is required but permanent lifting creates accessibility or visual issues
- Projects seeking to reclaim land classified as unliveable due to flood risk
- By enabling elevation on demand, the system meets the dual objective of flood resilience and liveable design, ensuring homes are both protected and accessible. It also offers significant potential for councils and government agencies looking to demonstrate leadership in climate adaptation, flood mitigation, and sustainable land use.

KEY TECHNICAL FEATURES

The House Elevation System (HES) is a purpose-built structural innovation designed to protect residential buildings from flood damage by enabling controlled, temporary elevation of the dwelling. The system has been developed with a focus on new residential constructions in flood-prone areas, allowing homes to remain at ground level under normal conditions while providing the capability to elevate above rising floodwaters when required.

The design prioritises safety, durability, energy efficiency, and ease of integration into modern housing designs, including modular and prefabricated dwellings.



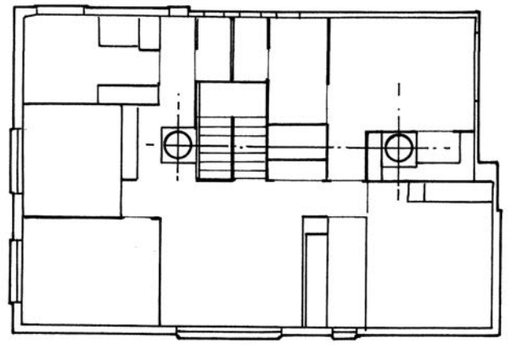
1. Internal Lifting Mechanism

At the core of the system is a counterweight-assisted pulley system, which lifts the elevatable portion of the house smoothly and safely:

- Steel cables are connected to the structural base frame of the house.
- These cables are routed through pulley wheels (also referred to as sheaves) housed at the top of vertical support piles.
- A counterweight within the hollow piles offsets the majority of the building's mass, significantly reducing the energy required to lift the structure.
- The pulley and cable system can be operated via an electric chain block motor, allowing for smooth, precise elevation control.

2. Structural Piles

- The system is anchored by a series of vertical piles driven into the ground (ideally into bedrock or compacted stable soil).
- These piles are hollow, cylindrical, and house the counterweights as well as guide the vertical movement of the frame.
- The number, spacing, and depth of piles are determined on a case-by-case basis, depending on building weight, design, and geotechnical conditions.



3. Sliding Frame Assembly

- A structural steel frame connects to the underside of the house and slides vertically along the piles via integrated sleeves or collars.
- The system ensures that the load is evenly distributed, and that the house remains stable during the lifting and lowering process.
- The frame is designed to be compatible with a wide range of floor plans and can be tailored to various residential designs.

4. Utility Integration

- All essential services (sewer, water, electricity, internet) are connected via a swivel or flexible utility system designed to remain operable during elevation and descent.
- The sewer system includes a rotating or telescopic connection, and backup measures are in place to prevent backflow or damage during floods.

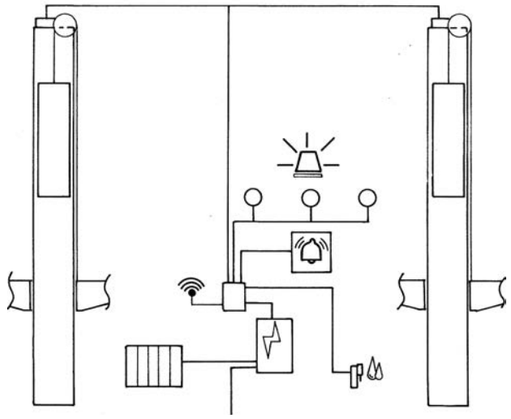
5. Safety & Operational Features

- The system includes mechanical safety locks or pins to prevent unintended movement once elevated.
- Safety interlocks ensure the system does not lower onto a person or object.
- The house must be unoccupied during elevation, as the elevated position is considered an emergency operating mode.
- The estimated lift speed is approximately 1 metre per minute, subject to the size and mass of the structure.

KEY TECHNICAL FEATURES

6. Power & Backup Systems

- The system is powered primarily by an electric chain block motor.
- A dedicated solar and battery backup system ensures the system remains operational during grid outages.
- The battery system also supports critical home systems (e.g. refrigerator, security) while the home is elevated.



7. Design Integration & Materials

- The system is designed to be concealed within the structure, protecting components from flood damage and maintaining visual appeal.
- No custom tooling is required, simplifying supply chain logistics for future manufacturing and deployment.

OPERATIONAL OVERVIEW

The House Elevation System (HES) is designed to be a responsive, on-demand flood mitigation solution that allows a home to be safely elevated in the event of rising floodwaters. It combines proven mechanical lifting principles with integrated backup systems to deliver reliable performance during emergencies. The system has been specifically developed for use in new builds and is particularly suited to modular or prefabricated housing Including retro-fitting into existing suspended buildings deployed in flood-prone areas.

The system is intended to remain inactive and visually unobtrusive during regular occupancy, with all mechanical components concealed within the building's structural footprint. When triggered, the HES engages a controlled lifting process that raises the dwelling above flood height, protecting the structure and its contents from water ingress and associated damage.

OPERATIONAL OVERVIEW

Activation and Lifting Process

- The HES is powered by an electric chain block motor which engages the pulley and counterweight system to initiate vertical elevation.
- Once activated, the home is lifted at a controlled speed of approximately 1 metre per minute.
- The elevation height is determined by local flood modelling and site-specific parameters, with configurations allowing for clearance of up to several metres if required.
- The building is supported throughout the lift by internal piles and guide sleeves, ensuring structural alignment and minimising lateral movement.

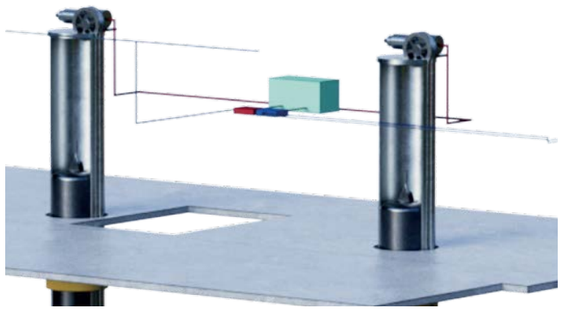
The JRR House Elevation System can be activated remotely from anywhere in the world by a secure mobile app.

Occupancy and Safety Protocols

- The system is not intended for occupancy during elevation; residents are expected to evacuate prior to activation.
- This design consideration is based on the system's intended use as a disaster resilience measure, where the raised position becomes a non-habitable protective mode during flood events.
- Once elevated, the system is equipped with mechanical locks and fail-safe mechanisms to prevent unintentional descent or movement.
- A safety interlock system will ensure the house cannot lower if an obstruction is detected beneath the structure.

Power and Backup Systems

- The primary power source is mains electricity; however, in the event of an outage, the HES includes an integrated solar and battery backup system.
- This ensures uninterrupted operation of the elevation mechanism and enables continued functionality of critical household systems, such as refrigeration, lighting, and security, while in the elevated position.



Utilities Management During Operation

- The HES includes a swivel or telescopic utility integration system to maintain essential service connections throughout the lift.
  - Sewer: Connected via a flexible or rotating sewer line, with anti-backflow valves.
  - Water, power, and communications: Configured using flexible or coiled systems to allow movement while preserving connectivity.
- These systems are designed to remain sealed and operable while elevated, minimising the risk of damage or service disruption.

Long-Term Resilience

- The system requires routine inspections and maintenance every 5 years, and is designed to remain dormant but functional over long intervals between use.
- All mechanical components are protected within the building's interior, extending their operational lifespan and reducing exposure to environmental elements.

The HES has been engineered to provide peace of mind for homeowners, reduce the burden on emergency services, and offer governments and councils a reliable, scalable solution to protect housing in at-risk areas — without requiring permanent elevation or community relocation.

Post-Event Reset

- Once floodwaters have receded and the site has been assessed as safe, the HES can be manually or electrically activated to return the building to its original position.
- The lowering sequence is fully controlled, using the same guidance and safety systems as the elevation process.

COST CONSIDERATIONS

The financial viability of the House Elevation System (HES) is one of its strongest strategic advantages. Designed to provide a cost-effective flood resilience solution over the life of a home, the system helps governments, insurers, and homeowners avoid the significant direct and indirect costs associated with flood damage, displacement, and post-event reconstruction.

A high-level whole-of-life cost-benefit analysis (2025–2050) was conducted for over 35,000 dwellings in flood-prone regions, with projections benchmarked against traditional elevated housing and current flood-prone housing with no mitigation. The analysis includes estimated construction costs, insurance premiums, displacement expenses, and maintenance forecasts.

Estimated Construction Costs

- The current estimated additional construction costs for the HES (based on a standard 200m² new build) start from approximately $180,000 AUD.
- This figure is based on early-stage modelling and is subject to change depending on site-specific conditions, such as house weight, footprint, soil type, and structural requirements.
- The cost does not yet include full mechanical and electrical integration, which will vary on a case-by-case basis and is expected to be refined through pilot projects or partnerships.

Comparative Lifetime Cost (2025–2050) *(See Appendix A on page 27)*

Using lifecycle modelling across a 25-year period, the following cost estimates were projected per dwelling:

Scenario	Forecasted Cost per House (2050)	Total Cost Across 35,850 Homes
HES (JRR System)	–$21,813 (net gain)	–$840M (net)
Traditional Elevated Housing	$749,699	$28.9B
No Mitigation (Flood-Prone Home)	$4.62M	$178.0B

Note: *The negative value for the HES indicates a net financial benefit, factoring in added property value from usable ground-level space and avoided losses due to flood damage.*

Insurance & Displacement Savings

The cost-benefit analysis indicates that homes located in high flood-risk zones typically face very high annual insurance premiums, often in the range of $20,000 to $30,000 per annum without sufficient flood mitigation.

In contrast, homes equipped with the House Elevation System (HES) are projected to achieve a significant reduction in insurance premiums, with estimated annual costs closer to $2,000 — consistent with standard homeowner insurance rates in low-risk areas.

This premium reduction is based on two key factors:

Risk Profile Improvement

By enabling the home to be elevated above flood levels in response to an event, the physical risk to the structure and contents is dramatically reduced, aligning the building with insurer definitions of protected or low-risk properties under catastrophe modelling frameworks.

Loss Prevention, Not Just Damage Minimisation

Unlike passive mitigation measures (e.g., raised slabs or flood barriers), the HES provides active, mechanical elevation, protecting both the structure and its contents — thereby reducing total claim risk, not just structural repair costs.

In the whole-of-life costing model covering 35,850 dwellings:

- Homes without elevation systems (current standard) were forecast to generate insurance-related costs of $87.1 billion by 2050.
- Homes fitted with the HES were forecast to incur insurance costs of only $6.2 billion over the same period.
- This equates to an insurance cost saving of over 90% across the modelled population over 25 years.

*In its 2022 publication Climate Change Impact Series: Flooding and Future Risks , the Insurance Council of Australia highlights the growing divide between escalating climate-driven flood risks and the affordability of insurance. The report warns that properties in flood-prone areas are increasingly becoming uninsurable or facing prohibitively high premiums due to recurring extreme weather events. It advocates for a shift from reactive disaster response to proactive resilience through smarter built-environment solutions. The Housing Elevation System (HES) directly supports these recommendations, providing a technically sound and scalable building-level intervention that mitigates risk and helps maintain insurance viability.

**Insurance Council of Australia. Climate Change Impact Series: Flooding and Future Risks. 2022. https://insurancecouncil.com.au/wp-content/uploads/2022/05/2202May_Flooding-and-Future-Risks_final.pdf*

COST CONSIDERATIONS

Added Property Value

The HES adds an additional 200m² of usable ground-floor space, which is protected during floods and can be used year-round under normal conditions. This feature is estimated to increase property value by $1,500/m², equating to $300,000 in added value per home — effectively offsetting the system's initial cost in many cases.

Maintenance and Operational Costs

- Maintenance is estimated at $5,000 per home every 5 years, or $1,000 annually averaged over the asset's life.
- All major mechanical components are designed using standard Australian parts, ensuring local serviceability and competitive supply chain pricing.
- The system includes solar and battery backup, reducing reliance on the grid during flood events and minimising operational overheads.

Scalability & Future Cost Reduction

While early installations will vary in price based on customisation and location, future deployments are expected to benefit from economies of scale. As production volumes increase:

- Material costs, labour, and installation times are projected to decrease by 10–20% per doubling of scale
- Modular designs will further reduce variability and allow integration into housing at the factory level

A phased cost reduction model will be presented in future project stages to assist councils and government with scaling forecasts.

Summary

The House Elevation System delivers significant economic benefits over time through:

- Reduced insurance costs
- Avoided flood displacement
- Increased property value
- Lower rebuild or relocation demand on government budgets

When modelled at scale across flood-affected regions, the HES offers a transformative cost-saving opportunity that aligns with both community resilience and housing affordability objectives.

UTILITY & SAFETY INTEGRATION

The House Elevation System (HES) has been engineered not only to elevate homes during flood events but also to maintain critical service connectivity and ensure safety throughout the elevation process. These two integration areas — utilities and safety — are essential to the system's functionality, viability for real-world application, and compliance with residential performance standards.

Utility Integration

One of the key challenges in temporary elevation systems is maintaining safe, flexible access to utilities. The HES incorporates purpose-built solutions that allow essential services to remain connected and operational while the home is elevated:

Sewerage

- The HES includes a swivel or flexible sewer connection that allows for controlled vertical movement without disconnecting the system.
- A non-return valve is integrated into the sewer line to prevent backflow during flood events and ensure hygienic conditions are maintained.

Water Supply

- The water line is configured using telescopic or coiled piping, enabling expansion and contraction as the house rises or lowers.
- A manual or automated shutoff valve may be included as a secondary safety feature in flood scenarios.

Electrical Power

- Power is delivered via flexible conduit or cable reels that accommodate vertical travel.
- In the event of a grid outage, the system is supported by an onboard solar and battery backup system, which maintains functionality for:
  - The elevation mechanism
  - Essential appliances (e.g. fridges)
  - Security systems
  - Basic lighting and monitoring

Communications

- Internet and telecommunications are addressed through flexible, protected cabling housed within the lifting frame or external risers, ensuring continued service without cable stress or disconnection.

These systems are designed to comply with existing Australian standards for flexible service installations in movable or modular dwellings.

UTILITY & SAFETY INTEGRATION

Safety Systems & Risk Prevention

The HES prioritises resident and operator safety, with multiple levels of mechanical and operational safeguards in place:

Occupancy Protocol

- The system is not intended to be occupied during elevation. The elevated position is classified as an emergency or protective mode, and homes should be evacuated beforehand.
- This approach is consistent with local planning and emergency services guidelines, where homes in high-risk flood zones must be unoccupied during significant events.

Accident Prevention & Interlocks

- The system features a mechanical safety locking mechanism that engages once the house reaches its fully elevated position, preventing accidental descent.
- Additional sensors or limit switches are planned to detect obstructions below the house during lowering, preventing activation if objects, vehicles, or people are detected.

Power Failures & Backup Operation

- In the event of a power outage, the system continues operating using solar and battery storage, providing full lift functionality for several hours.
- Manual override systems may be included to allow trained personnel to safely lower the home in the event of system malfunction.

User Alerts & Monitoring

- The system can be equipped with audible and visual alerts to warn residents and bystanders when the house is about to move.
- In future versions, remote activation and status monitoring may be enabled through integration with flood detection systems or government alert platforms.

Summary

The HES offers a fully integrated utility and safety approach that supports its role as a reliable, scalable, and compliant flood resilience solution. All service systems are designed to:

- Remain functional throughout the elevation process
- Prevent disconnection-related hazards
- Comply with Australian standards for residential utility connections
- Ensure user safety through mechanical locks, occupancy protocols, and backup systems

By ensuring both continuity of critical services and protection of life and infrastructure, the HES provides councils, governments, and developers with a trustworthy solution for high-risk residential zones.

COMPLIANCE & SITE SUITABILITY

The House Elevation System (HES) has been developed with the intention to complement — rather than conflict with — existing planning, building, and flood mitigation regulations in Australia. While the system is still in early-stage commercialisation, it has been designed with core principles of compliance, site adaptability, and planning alignment in mind.

Given the nature of flood-prone areas and the variability in geotechnical conditions across regions, HES suitability and compliance will be determined on a case-by-case basis, and pilot projects will play a key role in validating system performance within formal planning frameworks.

Planning & Building Code Alignment

National Construction Code (NCC)

- While the HES is not currently classified under a specific NCC building class, the system is intended for use in new builds, and the home remains a Class 1a residential building when in its normal (lowered) position.
- The elevated position is not designed for occupancy and therefore does not require compliance as a habitable space during elevation.
- It is expected that compliance will be addressed through performance-based solutions, which are supported by the NCC for innovations that achieve equivalent or superior outcomes to prescriptive code clauses.

Building Approvals

- Local councils are likely to assess the system as part of the standard development and building approval process.
- Required documentation will include:
  - Site-specific geotechnical reports
  - Engineering certification for lifting mechanisms
  - Safety protocols
  - Utility integration schematics
- JRR Corporation is currently in discussions with engineering firms to develop a full set of drawings and certifications to support future applications.

Flood Overlay & Risk Zone Compatibility

The HES is particularly relevant in areas covered by flood overlay zones, where development is restricted, or homes are required to meet minimum floor height standards above the 1-in-100-year flood level. In such areas, the HES offers:

- A performance-based solution that allows buildings to remain at ground level for accessibility, but still comply with flood height regulations through temporary elevation
- A tool for unlocking land currently zoned as unliveable or unbuildable, without the need for permanent stumping or relocation
- A strategy that supports local councils' obligations to "build back better" after major flood events

The cost-benefit analysis estimates that over 35,000 dwellings across Queensland could benefit from such a system — particularly in towns like Townsville, Bundaberg, Gympie, Rockhampton, and Brisbane floodplains, where buyback schemes or housing relocations have proven expensive and disruptive.

COMPLIANCE & SITE SUITABILITY

Geotechnical & Site Suitability

The structural piles supporting the HES are required to be driven into stable substrate — ideally bedrock or compacted soil. Site suitability is assessed based on:

- Soil type and depth
- Floodwater velocity and expected depth
- Space within the building footprint for internal pile integration

Where ground conditions are not suitable for deep pile installations, further engineering or foundation alternatives may be explored in future system iterations.

Note: Site suitability and system configuration will vary based on house weight and design. For retrofits, lifting data must be gathered by temporarily jacking the house; however, all new builds can be pre-designed for compatibility.

Environmental & Community Considerations

- The HES has a low visual impact when not in use, maintaining the appearance of a standard low-set home.
- Its ability to prevent flood-related displacement, property loss, and insurance dependency aligns with both resilience policy and climate adaptation frameworks at local and national levels.
- By keeping housing on existing blocks rather than relocating communities, the system helps preserve social fabric, school catchments, and existing infrastructure investment.

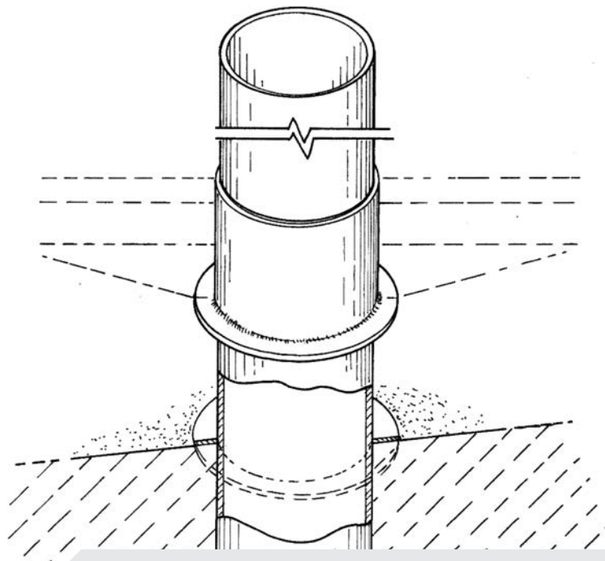
Next Steps Toward Formal Compliance

To support formal planning approvals in pilot projects, JRR Corporation intends to:

- Secure engineering partnership(s) for site-specific certification
- Develop a suite of council-ready planning documents (e.g. compliance checklists, risk assessments)
- Work with interested councils to prepare performance-based compliance justifications

Summary

The HES provides a compliant, adaptable solution for new homes in flood-affected regions. While individual site assessments and certifications will be required, the system offers a forward-looking model for development in constrained zones, with significant alignment to flood planning overlays, disaster recovery initiatives, and the evolving requirements of housing resilience strategies.



*The 2020 guideline Performance-Based Design Solutions: Construction of Buildings in Flood Hazard Areas , issued by the Australian Building Codes Board (ABCB), offers a framework for achieving National Construction Code (NCC) compliance in flood-prone zones through innovative design. It confirms that performance-based solutions are acceptable where they uphold key outcomes, including life safety, structural resilience, and post-flood habitability. The HES meets these criteria by incorporating engineered piles, lifting mechanisms, and uninterrupted utility access — enabling flood mitigation without compromising accessibility or liveability, in line with ABCB's endorsed approach.

Australian Building Codes Board. Performance-Based Design Solutions: Construction of Buildings in Flood Hazard Areas. 2020. https://www.abcb.gov.au/sites/default/files/resources/2020/PBDS_Construction_of_houses_in_a_flood_hazard_area.PDF

TARGET USE CASES

HOUSE ELEVATION SYSTEM

House Elevation System (HES) is designed for strategic deployment in flood-prone areas where traditional mitigation methods — such as permanent elevation, levees, or house buybacks — are either cost-prohibitive, socially disruptive, or logistically unviable. The system is intended for integration into new residential builds, making it particularly well-suited to public sector infrastructure, modular housing, and emergency resilience programs.

Drawing on findings from the cost-benefit analysis and extensive stakeholder engagement strategy, the following represent the most appropriate and high-impact use cases for early-stage HES deployment:

1. Government Housing in Flood-Affected Regions

- The HES is ideally suited to state-led or council-delivered housing projects where development restrictions exist due to flood overlays.
- It offers a cost-effective alternative to building on stilts or permanent relocation, enabling government bodies to retain housing stock in existing communities.
- **Estimated long-term savings include reductions in:**
  - Insurance premiums (from ~$28,000 to ~$2,000 per year)
  - Avoided displacement and temporary accommodation costs (~$110,000 per event, per family)
  - Long-term rebuild or demolition costs, often incurred every 10–15 years in flood-prone zones

2. Post-Disaster Rebuild Programs

- The HES enables resilient redevelopment after flood events without the need to displace entire neighbourhoods.
- Applicable to towns recovering from recent severe floods (e.g. Lismore, Bundaberg, Gympie, Rockhampton), where public infrastructure remains intact, but homes require elevation to meet future planning standards.
- The system allows for continued ground-level access and does not dramatically alter the built landscape, preserving community cohesion and urban character.

3. Modular & Prefabricated Housing Deployments

- **The HES integrates seamlessly into modular or transportable housing designs, making it suitable for:**
  - Regional housing programs
  - Remote community housing
  - Emergency shelter networks
- These housing types are typically lighter in structure and easier to configure for pile-based elevation, reducing engineering costs and installation time.

4. Redevelopment of Land Zoned as Uninhabitable

- Thousands of blocks across Queensland and Northern NSW have been deemed unliveable due to recurring flood risk yet are already serviced with infrastructure.
- The HES provides a compliant, performance-based alternative to traditional planning restrictions, potentially unlocking millions of dollars' worth of otherwise stranded residential land.
- This approach supports councils seeking to increase housing density or reactivate floodplain land for carefully controlled, elevated development.

5. Resilience-Focused Demonstration Projects

- **Councils and state governments with active disaster risk reduction programs may consider the HES as part of a pilot or demonstration program, especially in partnership with:**
  - The Queensland Reconstruction Authority (QRA)
  - NSW Reconstruction Authority
  - Local Resilience and Housing Taskforces
- Such programs would provide valuable technical validation, community engagement, and an evidence base for future grants or policy reform.

*The Guardian. Australia Is Becoming an Uninsurable Nation – There May Only Be One Solution. 2025.
https://www.theguardian.com/commentisfree/2025/jan/17/australia-is-becoming-an-uninsurable-nation-there-may-only-be-one-solution

TARGET USE CASES

6. Replacement for Buyback or Relocation Schemes

- In regions where full property buyback is financially or socially infeasible, the HES provides a third pathway: in-place elevation.
- This avoids displacing families, damaging community networks, or placing further strain on government housing waitlists.
- The cost-benefit analysis shows HES deployments to be 83–100% more cost-effective than rebuilding or relocating high-risk homes.

Summary of Ideal Use Cases

Use Case	Relevance
Government-funded flood zone housing	High
Disaster rebuild initiatives	High
Modular or remote housing programs	High
Strategic floodplain redevelopment	Medium–High
Community demonstration pilots	High
Alternative to buybacks/relocations	High

The HES is most impactful when deployed in partnership with councils, government housing authorities, or builders focused on community resilience and responsible growth in flood-prone areas. These use cases form the basis of early engagement efforts outlined in the stakeholder roadmap.

*In a January 2025 article titled Australia Is Becoming an Uninsurable Nation , The Guardian reports on data from the Climate Council and Insurance Council of Australia predicting that by 2030, one in every 25 Australian homes may be uninsurable. The article criticises the inadequacy of existing flood defences and urges greater investment in household-level resilience. The HES directly answers this call, offering a cost-effective, Australian-made solution that significantly reduces individual flood risk and helps maintain access to insurance in vulnerable communities.

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PILOT IMPLEMENTATION & PARTNERSHIP MODEL

As the House Elevation System (HES) moves toward real-world application, JRR Corporation seeks to establish a pilot implementation pathway that validates the system's performance, builds stakeholder confidence, and lays the foundation for broader deployment across flood-prone regions.

This pilot phase is intended to demonstrate the feasibility, safety, and financial benefits of the HES through a limited number of controlled new-build installations, delivered in partnership with government agencies, councils, or aligned commercial builders.

Pilot Objectives

- Validate the mechanical performance and safety of the HES in a real-world setting
- Gather engineering and environmental data to support council and planning approvals
- Showcase how the system integrates with modular or standard construction methods
- Demonstrate cost savings and resilience benefits when compared to alternative flood mitigation strategies
- Build early support from public and private stakeholders for future licensing, procurement, or funding opportunities

Proposed Pilot Format

- **Number of dwellings**: 1–3 new residential homes constructed with the HES installed
- **Location:** A council-nominated site within a designated flood overlay area (e.g. Northern NSW, SE QLD)
- **Housing type:** New modular, prefab, or standard single-storey homes (approx. 200m²)
- **Scope:** Includes system installation, utilities integration, functional demonstration, and post-installation evaluation

Partnership Roles

Partner	Role
JRR Corporation	Technology provider; oversees system design, installation guidance, and operational support
Government agency or council	Site access, planning approvals, coordination with housing or infrastructure teams
Builder or modular housing partner	Delivers housing construction and integrates the system into building frame
Engineering consultancy (optional)	Supports structural certification, compliance documentation, and post-pilot reporting
Grant funding body (where applicable)	Co-funds the pilot or supports through Disaster Ready Fund or state resilience initiatives

Funding & Support Pathways

JRR Corporation is seeking to engage partners who may be able to:

- Allocate land and project approval support for a demonstration build
- Contribute co-funding or in-kind resources toward construction, monitoring, or community engagement
- **Assist with access to grants and resilience programs, such as:**
  - Disaster Ready Fund (DRF)
  - Queensland Reconstruction Authority (QRA) pilot funding
  - Made in Queensland manufacturing scale-up grants
  - CSIRO Kickstart or research validation funding

Knowledge Sharing & Follow-On Opportunities

In exchange for participation, pilot partners will benefit from:

- Priority access to post-pilot insights and commercial rollout strategy
- The ability to help shape compliance pathways and design refinements
- Recognition as early adopters of a climate-adaptive housing innovation

Opportunities to collaborate on licensing, region-specific deployment, or policy advocacy

Next Steps

JRR Corporation welcomes expressions of interest from councils, government departments, housing authorities, and builders who may wish to:

- Nominate a potential site for a pilot trial
- Provide feedback or letters of support
- Participate in scoping a trial project in Q3–Q4 2025, ahead of broader commercial deployment

By demonstrating its viability in a live housing project, the HES can begin to deliver on its promise: a scalable, locally manufactured, and cost-saving flood resilience solution that protects homes, communities, and public investment in infrastructure.

*The 2022 Flood Failure to Future Fairness Report from the House of Representatives Economics Committee underscores the urgent need for reform in Australia's flood resilience and insurance landscape. It calls for a coordinated, scalable approach to reducing flood risk, urging governments and stakeholders to prioritise forward-thinking technologies over repeated post-disaster spending. The HES provides exactly this kind of proactive, asset-level solution — addressing flood damage before it occurs and reducing pressure on public insurance schemes and emergency recovery resources.

Parliament of Australia. Inquiry into Insurance Failures and Flood Risk – Flood Failure to Future Fairness Report. 2022. https://www.aph.gov.au/Parliamentary_Business/Committees/House/Economics/FloodInsuranceInquiry/Report

NEXT STEPS & INVITATION FOR ENGAGEMENT

JRR Corporation invites interested stakeholders to engage in further discussions regarding the development, trial, and future application of the House Elevation System (HES). As an early-stage innovation with national relevance, the HES presents a valuable opportunity to address the challenges of flood resilience, disaster recovery, and sustainable development through a locally developed, technically viable solution.

The purpose of this Expression of Interest (EOI) is to:

- Present the concept, benefits, and potential of the HES
- Seek expressions of interest from councils, government agencies, and commercial partners
- Explore pilot project opportunities that can validate the system in a controlled, real-world environment
- Identify aligned organisations that can support funding pathways, regulatory positioning, and broader adoption

JRR Corporation is currently seeking to engage with:

- Local councils in flood-affected areas considering alternative solutions to house buybacks or elevation mandates
- State government departments responsible for housing, planning, disaster recovery, and infrastructure
- Federal government agencies delivering national disaster resilience initiatives, including the Disaster Ready Fund
- Builders and modular housing providers interested in integrating the system into future home designs or public infrastructure projects

Stakeholders are encouraged to:

- Register their interest in learning more
- Nominate a suitable site or housing initiative for a potential demonstration project
- Provide feedback or questions regarding planning, compliance, or community application
- Offer a letter of support to aid grant submissions and technical validation

INTELLECTUAL PROPERTY & LICENSING OPPORTUNITIES

AUSTRALIAN STANDARD PATENT Filing Date: 26 July 2024 Application Number: AU 2024205129

Legal Status & Licensing Intent

The owners of JRR Corporation Pty Ltd (ACN 657 702 344, ABN 85 657 702 344), located in Brisbane, Queensland, Australia, are seeking expressions of interest from qualified parties to license the Intellectual Property (IP) relating to the company's patented House Elevation System (HES).

This includes the opportunity to commercially leverage:

- The Australian rights to utilise all relevant patents, trademarks, registered designs, and related marketing material owned by JRR Corporation Pty Ltd or its beneficial owners
- Any additional IP rights designated in a formal Schedule, as required to support the commercialisation and deployment of the House Elevation System

Available Licensing Models

The following license structures may be available, subject to negotiation and formal agreement:

- Exclusive License – for a defined territory, industry, product type, or application purpose, over a negotiated term
- Exclusive License (with performance milestones) – including minimum obligations (e.g. development of a fully engineered version within 12 months and commencement of commercial deployment within 18 months)
- Non-Exclusive License – for use in a defined territory, industry, or purpose, over a negotiated term
- Non-Exclusive License (with performance milestones) – subject to agreed commercialisation timelines or production benchmarks
- Other Licensing Models – alternative structures proposed by prospective licensees and agreed to by the owners

JRR Corporation welcomes discussions with builders, modular housing manufacturers, infrastructure partners, or state-based delivery entities who may be interested in exclusive regional rights or application-specific licensing models, particularly those aligned with flood resilience or public housing objectives.

Prospective licensees are invited to register their interest through the contact information provided in the end of this document.

More resources available on request.

Appendix

Appendix A:
https://houseelevationsystem.com/wp-content/uploads/JRR-Corporation-HES-Whole-Life-Cycle-Costing-Analysis.pdf

HOUSE ELEVATION SYSTEM

ALL INQUIRIES AND EXPRESSIONS OF INTEREST CAN BE DIRECTED TO:

JOHN CUNNIFFE

Director – JRR Corporation Pty Ltd

CONTACT

P: +61 459 514 447

EMAIL

info@houseelevationsystem.com

By collaborating with local and national stakeholders, JRR Corporation aims to progress the HES from a conceptually validated system to a practical and deployable solution, strengthening Australia's long-term flood resilience and housing sustainability efforts.