

















#### World class at Pokeno

TIAKI I A PAPATŪĀNUKU

#### HYNDS' COMMITMENT TO SUSTAINABLE WATER SOLUTIONS

Water is life. Tackling excesses or the lack OUR ENVIRONMENTAL COMMITMENT of water and ensuring water quality are some of the main challenges the world is currently facing. Since 1973, as a New Zealand founded and owned company, Hynds has taken its commitment to the environment seriously through the products and system solutions we create and the talented people we employ. Our people are among the most knowledgeable in the industry about environmental and water management.

Hynds has a 100-year business strategy which includes a commitment to remaining family owned. We plan to be here for the next 100 years and beyond, so we want to make sure that not only the business is in good shape, but that the industry is too. We want to ensure that the products and solutions we supply today, are still fit for purpose and achieving all that they need to in many decades to come.

New Zealand, strategically located to minimise distance to market, and a distribution network of 37 branches supplying over 40,000 product types for drainage, watermain, environmental, industrial process and rural applications.

Hynds has adopted a sustainability framework that focuses on three strategic pillars; the planet (our natural environment), people (our team members and our wider communities and stakeholders) and products (innovating and building resilience into what we do to meet the needs of future generations).

Addressing the effects of climate change is a huge challenge that we all face and Hynds is committed to New Zealand's transition to a low-emissions economy. We have committed to a 42% reduction in Scope 1 (direct) and Scope 2 (indirect) carbon emissions by 2032. This target is based on the goal to limit warming by 1.5°C and is aligned with the Science Based Targets Initiative (SBTi).

Hynds' carbon footprint is dominated by Scope 3 emissions. We have therefore also committed to engage with our key supply partners to lower the impact of our supply chain.

Hynds' is also providing solutions and expertise Hynds operates 10 manufacturing facilities across to increase the climate resilience of New Zealand's infrastructure. As a New Zealand manufacturer, our team of engineers and product experts are able to collaborate with designers and contractors to customise our products to meet the demands of the future without compromising on the needs of today.

Reducing our environmental footprint is incredibly important to us. This is well demonstrated at our flagship precast concrete manufacturing plant at Pokeno which is designed and built incorporating the latest in sustainable design principles to minimise environmental impact.

As a greenfields site, all infrastructure and the manufacturing processes themselves have been selected, developed and implemented to deliver maximum environmental benefits.

Key improvements focused on optimising energy and resource use, while reducing impact include:

• Traditional pipe spinning manufacturing methods that typically produce large amounts of waste have been replaced with automated and semi-automated world leading technology that results in minimal waste (over 90% reduction in waste produced), improves safety and reduces environmental noise.

"Bore water and rain harvesting significantly reduces our reliance on town supply water."

- Concreted road network and onsite water truck minimises dust nuisance and ongoing maintenance.
- Extensive use of LED lighting provides a good working environment and reduces electricity usage.
- The concrete manufacturing plant produces high performing self-compacting concrete onsite, eliminating the requirement for delivery of readymix concrete
- Centralised North Island location reduces transportation requirements, both for the delivery of aggregate for the site, and the despatch of finished products.
- Use of bore water and rain harvesting significantly reduces our reliance on town supply water.



#### PŌKENO WETLAND

All stormwater from our Pōkeno site is directed to a large stormwater wetland and detention pond with native planting to naturally filter any residual contaminants. As well as significantly reducing any impact on the environment, this contributes to the formation of a large wetland habitat that increasingly attracts local birdlife. We are committed to the long-term development and support of this valuable ecosystem.

PŌKENO PARK

The regeneration of a 34 hectare reserve bordering the manufacturing facilities at Pōkeno is progressing well. Known as Pōkeno Park, the reserve is owned by the Hynds Foundation, which has overseen the planting of more than 160,000 trees, a trapping programme that is successfully controlling dominant pest species, and implementation of erosion and flood management measures.

Mānuka and kānuka planted in 2020 are now four metres tall, which has allowed for planting of larger specimen trees – tōtara, rimu and kauri.

This long-term development of a thriving natural environment brings balance to an urban manufacturing zone, and provides benefits for humans and biodiversity.

#### GECO WATER TREATMENT AND RECYCLING SYSTEM

Our Pōkeno facility is home to a state-of-the-art Geco water treatment and recycling system. Replacing traditional slurry settling ponds, the Geco system takes any process waste and slurry from onsite washing of concrete skips and concrete trucks, screens out the aggregate (crushed stone, gravel and sand) and then

puts the remaining cementitious water through a filter press where it comes out as a dry cake. The recovered materials and pH adjusted water is then re-purposed back into the manufacturing process.

#### REDUCING THE CARBON FOOTPRINT OF OUR CONCRETE

We are committed to reducing the carbon footprint of our concrete products through the use of Supplementary Cementitious Materials (SCMs) such as fly ash, a waste product from coal power plants, and blast furnace slag, a waste product from steel manufacturing.

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#### Concrete – lasting the test of time



Concrete has been the material of choice for drainage systems around the world for over a century and offers one of the most environmentally friendly options. The inherent strength and durability of precast concrete drainage can help protect the water system during construction and throughout its long lifetime of operation. Concrete has a 100 year plus service life, removing the need for concrete pipelines to be replaced or reinstalled.

#### THE SUSTAINABLE CHOICE

Concrete products are a responsible choice for sustainable development. Concrete's durability is a significant sustainable attribute as it will not rust, rot, or burn. Additionally, concrete is easy to use, incurs little waste and can be readily recycled at the end of life. Steel components are recyclable, and the concrete can be used as a replacement for aggregate in new concrete or as an alternative to using virgin material for structures like roads and drainage installations.

Precast concrete, when compared to site poured concrete, has the added sustainability benefits of:

- Reuse of formwork to reduce waste.
- Reduction of waste concrete through precise batching and use of any excess concrete in small products.
- Increased use of cement replacements through controlled curing conditions.
- Reduced admixture use from onsite batching or short delivery distances.
- Higher quality control and ease of defect repair which leads to higher quality, more durable products that will last longer.

#### MEASURING AND REDUCING THE CARBON FOOTPRINT OF CONCRETE

As part of our goal of reducing the carbon footprint of our concrete products, we have been performing Life Cycle Analyses (LCAs) of our precast concrete products. These LCAs have identified that steel and cement are the two

largest contributors to the carbon footprint of our precast concrete products. This information helps us to optimise our product design and procurement.

The LCAs that we have performed are the first step towards published Environmental Product Declarations (EPDs) for our precast concrete products. EPDs are a key part of enabling our customers to make the most sustainable procurement decisions. The first Hynds Pipe Systems EPD, covering precast concrete pipes manufactured in our Pōkeno manufacturing site, was published in April 2024.

One limitation of EPDs are that they are static documents for a specified range of products. This is problematic for the precast concrete industry for which product customisation is common. To overcome this, we have developed a third-party verified carbon calculator that can provide 'EPD like' disclosures for our customers covering any precast concrete product that Hynds manufactures.

Hynds Pipe Systems, as a member of Concrete NZ's sector groups and the sustainability technical working group, contributed to the development and ongoing updates of 'A Net-Zero Carbon Concrete Industry for Aotearoa New Zealand: Roadmap to 2050'. This roadmap is aligned with the Global Cement and Concrete Association's 2050 roadmap to net-zero concrete. These industry wide initiatives highlight the importance of sustainability within the concrete industry and the multiple ways in which concrete's carbon footprint can be reduced.

#### Recycling

Our sites across the country take a number of different measures to ensure as much material as possible is recycled. For example, at Waters & Farr, a market leader in manufacturing and supplying plastic pipe systems, no plastic waste leaves the Whanganui or Rangiora sites. All offcuts from the production process are ground in a shredder and then repelletised. The resulting pellets are then incorporated into the manufacture of selected products such as culvert pipes and ducting.









We are proud to extend our commitment to the environment by supporting Sustainable Coastlines in their mission to keep New Zealand's waterways and coastlines healthy and beautiful for future generations to enjoy. The partnership includes both financial support and national participation from the Hynds community across Sustainable Coastlines' initiatives.

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# TIAKI I TE TANGATA A PLACE WHERE PEOPLE MATTER Sustainability is important to us more than 700 talented team across every facet of our business, members across the country. We and this extends to our people support individual development, practices and team culture. We encourage creativity and work prioritise the safety and wellbeing together as a team to make great of our workforce and employ things happen.

#### **Career and professional development**



Our commitment to growing and nurturing our people right throughout their employment with Hynds starts by helping students considering their future career options and providing work experience for secondary school aged students. Following the early ethos of our founder John Hynds, we are committed to offering a wide array of opportunities for people from different backgrounds and with varying skillsets.

We support our people with extensive on and off the job training opportunities (by both internal and external trainers) and are committed to advancing our people internally wherever possible.

All Customer Service Officers within Hynds Pipes are part of the Customer Service Development programme. Hynds has several dedicated CSO Development Partners who work, alongside our Branch Managers, to support team members to develop their skills and progress their careers while contributing to the team's operational success.

The Hynds Young Professionals network is a programme for invited employees under 32 years of age which supports the professional growth of our younger team members. They attend an annual seminar with their peers and contribute to dedicated projects throughout the year.

We support our people to grow their professional networks and further their professional development through memberships and active participation with national and international bodies such as Engineering New Zealand, Concrete New Zealand, the Concrete Pipe Association of Australasia and more.

#### Our most valued resource

Hynds recognises that our team members are our most valued resource and this is represented in one of our core values, A place where people matter.

At Hynds, our wellbeing strategy is based on the Te Whare Tapa Whā model, which supports a holistic view of health across four key areas. We provide a comprehensive annual Health Monitoring Programme and monthly wellbeing themes with practical tools and information. Fun team challenges promote healthy habits and positive lifestyle choices. Together, along with a number of other initiatives, we aim to create a safe, supportive workplace where wellbeing is part of everyday life.

#### **CELEBRATING OUR DIVERSITY**

The Hynds Group is ethnically diverse, with strong representation across our organisation of Māori, Pasifika, Filipino and Indian team members. Key documents, including our core values, are translated into multiple languages to support our team members, including Māori, Samoan, Tongan and Hindi. We are proudly committed to equal opportunity across all employment policies and procedures.

#### **OURTE AO MÃORI JOURNEY**

In 2021, Aaron Hynds saw the need for Hynds, both as a family and as a company, to be engaged in discussions surrounding water, with a focus on understanding what te wai (water) means for Māori. Very broadly, Te Mana o Te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.

Since then, Aaron, along with members of our team (including the Hynds family and Executive) have been introduced to some of the main considerations Māori have when dealing with businesses operating in the environmental space. Hynds believes that organisations that embrace Māori beliefs and culture better understand requirements from a delivery point of view, including the need for engagement, discussions, and collaboration on best outcomes for te wai and to have these jobs clearly communicated to the iwi of each region in the most respectful manner.



"We believe that organisations that embrace Māori beliefs and culture better understand requirements from a delivery point of view."

Hynds has also been encouraging and supporting team members to educate and upskill themselves on te ao Māori. A new internal webpage 'Te Ao Māori at Hynds' and an online guide 'Kawa o Nga Kaimahi' provide links and resources for our people to explore and learn, including guides to learn a waiata, karakia, participate in pōwhiri", or their own pepeha. The inclusion of te reo in Hynds' official documentation and encouraging the use in email signatures is aimed at supporting the use of te reo Māori in everyday life.

Protecting Aotearoa's waterways and environment is at the heart of Hynds' heritage. There is a strong belief that as our teams engage with the community and partners in delivering quality projects around water, an understanding of what this means to mana whenua and especially tangata whenua is important for providing better outcomes around te wai.

#### **Giving back**

We encourage and support our people to give back through their roles at Hynds. Each year, team members across the Hynds Group get the opportunity to spend a day volunteering at a charity or not-for-profit organisation, as well as actively participating in events held in partnership with Sustainable Coastlines. Throughout the year, our team rolls up their sleeves and gets involved in the charity's events which includes beach clean ups, community tree plantings and more.



#### A LOCAL PARTNER IN BUSINESS

Since the business was established in 1973, Hynds has grown a strong and loyal base of suppliers. Hynds deals with around 3,000 suppliers every month with small to medium sized businesses well represented across our supplier network. These businesses are often locally owned and operated, employing local people and contributing to their local communities. Our sites around the country engage local businesses to undertake the maintenance of our machinery and equipment, and we are committed to utilising local third-party services and purchasing materials locally wherever possible.



#### Supporting the community



There are many other avenues via which Hynds lends its support around the country. As well as supporting local schools and community groups across New Zealand, we donate to numerous charity organisations throughout the year including Life Education Trust, Heart Kids, and other children-focused organisations, camps and special events.

We are proud to sponsor the Bi-Annual Tour of New Zealand charity bike race which has raised nearly \$2.2 million for New Zealand charities. Additionally, the Hynds Heart Racers team, made up of Hynds team members and customers, is one of the only teams to have competed in all eight tours – raising more than \$300,000.



#### THE HYNDS FOUNDATION

The Hynds Foundation is a community funding extension of the Hynds business. Its vision is to contribute to a thriving New Zealand, where the wellbeing of people and communities is paramount, inequality is minimised, and opportunity to innovate with positive impact is universally accessible.

The Hynds Foundation's support creates impact through five pillars: Arts, Community Wellbeing, Education, Environment and Health & Health Research.

#### **Financial Donations**

The Hynds Foundation continues the lifelong passion of John and Léonie Hynds, joined by second-generation family members as trustees, to give back to communities. Over the years, they have been inspired and encouraged in supporting the work of talented New Zealanders who contribute to create healthy and resilient communities.

Our approach is flexible to respond to local needs, emerging issues or national crises. Drawing on the knowledge of Hynds team members, customers and business networks, the foundation makes meaningful contributions that can lead to positive transformation in communities.

See page 6 for details of the foundation's initiative at Pōkeno Park, on land adjacent to the Pōkeno manufacturing facility. Substantial effort to regenerate the ecology through pest control and native plantings now yields a place that is peaceful and beautiful. The start of a sculpture trail is also emerging, with early work by consultants Boffa Miskell helping to envisage a plan for how people will move around the park. Slow but gradual impact is expected from Pōkeno Park across arts, environment and community pillars, with significant investment stages.

Economic challenges for our country may have an effect on the extent of dividends and programme funding available over the next few years, but the Hynds Foundation remains committed to serving communities across its focus pillars as much as possible. Some recent examples are shared on the following pages.

# Historic Grants & Donations (2017-2024) Education Health & Health Research Arts & Culture Community Wellbeing Environmental

# "The Business Academy programmes have been recognised internationally by the OECD"

#### **Hynds Foundation Business Academy**

In communities where there are deep socioeconomic challenges, there is a greater risk of young people being left behind. We believe it is critical they have wide community support to inspire their confidence and access to successful futures.

Building on a decade's work to develop the Manurewa High School Business Academy, we have begun to extend the programme's impact to other communities where there is great need. Hynds Pipe Systems and Hynds Foundation networks have joined us in this work, which is led by highly experienced teacher, Emma O'Riordan.

Scaling first to Papakura High, the Business Academy supports school leadership with its goal of creating strong partnerships to serve learning engagement. One example is to set up a Makerspace, and train teachers to utilise digital fabrication technologies and entrepreneurial skills to create excitement for learning. Business and tertiary education partners also work with students to develop skills, knowledge and networks that prepare them for successful transitions from school. The Pathway to Employment model is one example of this approach, in which Hynds business units and other employers provide intensive weekly work experience opportunities for students not on a university pathway.

Additionally, a university scholarship is now available for students at both Manurewa and Papakura High Schools.

The Business Academy programmes have been recognised internationally by the OECD and in international education research. This recognition is the achievement of Hynds Foundation co-funders and contributors including more than 50 business, community and tertiary education organisations, as well as supportive alumni, families, and the school leaders, teachers and students who embrace the opportunities.



#### **Heart Foundation of New Zealand**

Over five years, a grant of \$1 million responds to some of the new and emerging challenges to the food supply. The grant is dedicated to funding the Heart Foundation-Hynds Senior Research Fellowship. The first recipient is Associate Professor Andrew Reynolds, who studies the relationship between what we eat, and globally relevant diseases of the heart Type 2 diabetes, and some cancers.

During the fellowship, Dr Reynolds has run trials on providing free healthy groceries to people recovering from heart attacks, supporting weight loss options for people with Type 2 diabetes and obesity, and studying the effects of food processing on whole grains.

In the final year of his three-year fellowship, he has launched three new research trials, with the support of PhD students within the University of Otago Department of Medicine. The first trial aims to understand and inform the subsequent use of the term 'ultra processed foods'. The second trial explores different ways of eating that might help people with Type 2 diabetes manage their blood sugar levels. The final research trial aims to test if a single food item swap to a maximally fortified food helps diabetes management. The food item on trial is a bread that is very high in both fibre and protein.

Alongside these research trials, Dr Reynolds will also complete systematic reviews and meta-analyses to inform clinical and dietary guidelines.



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#### **CASE STUDY: Crucible Artist Residency**



Léonie and John Hynds' interest in nurturing arts and culture in New Zealand has developed over many decades and seen them support a wide range of initiatives. Their vision for the Crucible Artist Residency programme has formed over the years since 2004 when the Hynds business purchased Gillies MetalTech, based in Ōamaru's Historic Precinct.

In 2024, a pilot programme was launched and a high number of quality applicants saw four artist residents chosen – Karen Aitken (Ōamaru), Motoko Kikkawa (Dunedin), Sian Quennell Torrington (Wellington), and John Ward Knox (Karitane). The artists were provided financial support and access to the skills of Gillies technicians, with the outcome of enabling them to advance their creative practices.

Investments in converting the foundry's Pattern Shop to become the Crucible Art Studios, with extended gallery spaces, allows for a model where two artists co-locate during the residency. The studios and galleries also add to the amenities available in Ōamaru, and have been utilised for exhibitions and community events.

With its natural beauty, the wider Waitaki district is growing as a tourism destination and the arts community makes an important contribution to the district's appeal. The potential of the Crucible Artist Residency programme will deliver impact across our pillars in the arts, community wellbeing, and education.

"The arts community makes an important contribution to the district's appeal."











#### PROTECTING NEW ZEALAND'S WATERWAYS

From its early inception five decades ago, Hynds has been focused on delivering positive change with industry-leading and sustainable solutions.

The manufacture of products to support stormwater and wastewater treatment, and ultimately to protect the environment, remains at the heart of our product innovation today.

While founded in the production of concrete pipes, Hynds today delivers much more than just pipes, working across a number of other areas – all focused

on improving the resilience of communities across New Zealand to weather and water-based events.

Through its various business divisions, Hynds provides fit-for-purpose water, stormwater and wastewater quality management solutions for residential and commercial markets. Our products lead the New Zealand market with second-to-none design, strength and proven reliability in some of the country's most demanding environments.

#### HyndsLC® – Our lower carbon future

Hynds is committed to lowering the carbon footprint of all product ranges, to meet both our internal sustainability goals and our customers' project requirements.

While pursuing this goal, opportunities for further carbon reductions in Hynds' precast concrete products were identified which could not be included in the standard ranges due to supply limitations and increased manufacturing time. These components were brought together to create a new product range, HyndsLC®, which combines all the benefits of our industry-leading precast concrete product ranges with a lower carbon footprint.

The HyndsLC® range can be customised to meet specific project requirements, for both performance and sustainability. The carbon reductions are achieved through increased use of supplementary cementitious materials (SCMs) in our concrete, increasing the use of raw materials with lower carbon footprints, and optimised product design.

The HyndsLC® range is available in a set of standard reductions:

**LC25**: Our lower carbon concrete and raw materials option to provide an average manufactured product carbon reduction of 25%.

**LC25+**: Our lower carbon concrete and raw materials option, combined with optimised design based on the specifics of the project.

All percentage reductions are the difference in GWP-total compared to Hynds' standard range of products. This represents a comparison to a real product, not a database or industry average value.

The calculation of all product carbon footprints follows the standard EN 15804+A2, as required for Environmental Product Declarations, and have been developed in collaboration with thinkstep-ANZ. The values cover cradle-to-gate only (EPD modules A1-A3) and do not include transport beyond Hynds' sites or end-of-life scenarios



### CASE STUDY: Greville Road stormwater culvert upgrade



Following the major Auckland floods in January 2023, the Greville Road Stormwater Culvert Upgrade project in Albany was identified as an emergency works project by Auckland Council's Healthy Waters.

After a joint workshop between Hynds, Healthy Waters and McConnell Dowell, it was decided to proceed with HyndsLC® 2100mm diameter Hyforce® Butt Joint Concrete Jacking Pipes with a fixed stainless steel jacking band.

Karun Kumar, Tunnels Project Engineer for McConnell Dowell, says it was important that the design of the jacking pipes allowed for the push of 1,400 tonnes which also coincides with the maximum thrust force of the jacking frame.

"We were able to deliver the lowest carbon option that met the project requirements for the material strength, programme and cost. The 92 Hynds pipes will save approximately 62 tonnes of CO<sub>2</sub> emissions which is a 16% reduction in the standard pipe range."

Hynds was able to deliver the HyndsLC® pipes in the same timeframe and meeting the same engineering

specifications as the standard offering, making life easy for the project team on-site. By conforming to the same engineering specifications, the low carbon pipes have the same durability and design life as the standard options, meeting Healthy Waters' long-term sustainability goals.

Gerhard Van Rooyen, Project Manager for Healthy Waters, emphasised Auckland Council's commitment to sustainability.

"We are actively seeking opportunities to incorporate low carbon products into our projects. By closely collaborating with our supply chain and project teams, we can deliver sustainable stormwater infrastructure that enhances Auckland's resilience," says Gerhard.

This collaborative approach with the client, consultants and designers has already made a positive impact on the overall programme and provided a cost-effective solution.

#### Climate resilient infrastructure

With extreme weather events becoming more frequent and intense, and the cost of recovery from these events increasing, it's critical that New Zealand infrastructure projects embrace climate change adaptation and mitigation. Hynds is committed to reducing both the embodied carbon emissions and climate resilience of infrastructure projects to reduce whole-of-life carbon and cost.

Climate resilient infrastructure reduces the impact of natural hazards on people and is less costly to maintain and repair. As climate resilience is an attribute of a project, not of individual products, Hynds provides support through our teams of product specialists and our ability to custom manufacture products locally. This allows us to provide the best products for each project to meet the current and future climate hazard demands.

Hynds products can be used to increase resilience to water related hazards (coastal erosion, storm surge, flooding and drought), minimise the impacts of climate change (low carbon solutions and waste containment) and support blue/green infrastructure (urban green infrastructure, rivers and artificial reefs).

> "Climate resilient infrastructure reduces the impact of natural hazards on people and is less costly to maintain and repair."



#### **CASE STUDY: Tupua Horo Nuku seawall**



"The design not only looks impressive, but creates a 29mm deep roughened pattern that will help provide a natural habitat for sea life."



Alliance, made up of NZ Transport Agency Waka Kotahi in partnership with Taranaki Whānui ki te Ūpoko o te Ika and Ngāti Toa Rangatira (iwi mana whenua), construction partners Downer NZ Ltd and HEB Construction Ltd, and design partner Tonkin + Taylor.

Tupua Horo Nuku is a 4.4-kilometre seawall and shared path along Marine Drive between Ngau Matau/Point Howard and Eastbourne. The new seawall will improve the resilience of Marine Drive by providing protection against storms and waves, along with coastal erosion. Hynds has manufactured the unique seawall units, with each unit measuring three metres long and including high strength 50MPa concrete and galvanised reinforcing.

Manufactured at our Palmerston North site, the new seawalls will not only provide protection from storm surge and wave action, but also enable the Marine Drive corridor to respond to the challenge of climate changes and sea level rise, ultimately helping to protect the road and essential services for local communities.

The seawall units have also been designed to allow sea life to thrive with a Reckli liner. The curved surface on the front of the units has an architectural pattern cast into the unit. The design not only looks impressive, but also features a 29mm deep roughened pattern that encourages the growth of sea life such as seaweed, barnacles, molluscs, and other marine organisms, helping to create a vibrant and natural coastal habitat.

#### **Precast products**

Hynds' wide range of precast products includes box culverts, bridges, channels, chambers, electrical pits, retaining wall systems and bespoke solutions.

Leaders in their field, our Hynds Precast engineering team specialise in concrete structures for the civil and rural infrastructure markets, providing all precast needs within one team.

Situated strategically throughout New Zealand for local access, our expert engineers can tailor a bespoke precast solution to match most scenarios, and all Hynds precast products are available in the HyndsLC® range of lower carbon concrete.

Designed in-house, precast solutions are manufactured and delivered from one of our seven precast factories around the country.

North Piha's unique lifeguard tower pictured below, features bespoke precast concrete elements designed and manufactured by Hynds.



#### CASE STUDY: KiwiRail's Bridge 23



After being awarded the contract to replace KiwiRail's Bridge 23 in the Wellington region, the Pōkeno manufacturing team swung into action.

The upgrade of the rail bridge, located halfway between Paekākāriki and the SH1 exit to Queen Elizabeth Park, was part of the Wellington Metro Upgrade Programme work being undertaken during the annual network shutdown over the Christmas holiday period.

Hynds Precast BDM, Bernie Sloane, says manufacturing and delivery of the eight culvert units, two headwalls and eight wingwall sections required a unique approach.

"What set this job apart was the tight timeframe and the sheer magnitude of the culvert units, each weighing a staggering 23 tonnes, and the wingwall sections tipped the scales at over 18 tonnes each."

All reinforcing was 3D modelled to provide insight into the final products before manufacturing and to allow the tight timeframe and the sheer magnitude of the culvert units, each weighing a staggering 23 tonnes."

for input from all parties. The 5 by 2.6 metre box culvert units, with 400mm thick walls and 500mm thick roof and floor, and 2.4 metre box culvert reinforcing cages were constructed on precision jigs before being welded to ensure dimensional accuracy. The units were type tested to ensure quality.

"In order to meet the challenging delivery timing, we developed unique casting methods. The four unique wingwalls and four extension wingwalls were cast with floor slab," explains Bernie.

Collaboration between the designers, Beca, installation contractor, Jon Holland, drafters, MGL, reinforcement by NAR, and transporter PTS, saw the project unfold seamlessly, and was delivered on time and within budget, much to the delight of the client.

#### Wastewater treatment

Hynds provides a range of treatment technologies for onsite wastewater management systems to ensure wastewater is treated and disposed of in the best and most reliable way, where there is no connection with the local council wastewater network.

Hynds supplies the highest quality treatment systems designed to ensure optimal long-term performance. For over 20 years, the Hynds Lifestyle® Wastewater Aerated Treatment System continues to be a trusted brand, and is New Zealand tested specifically for the domestic market.

Hynds holds the exclusive agency for world-renowned Eloy Water products in both New Zealand and the South West Pacific Islands.



#### CASE STUDY: New wastewater plant makes for happy campers



As small coastal town, Wai Inu, struggled to cope with an aging water treatment plant, the South Taranaki District Council were dealing with a growing number of odour complaints from residents.

The popular holiday spot, 50 minutes' drive south of Hawera, sees its population swell over summer. As well as affecting residents, the odour problem was not making for happy campers at the adjacent camp ground and Hynds was asked to find a solution to the odorous situation.

We recommended the installation of a new treatment plant which would meet the town's growing requirements. Being a coastal location, there were very strict resource consent compliance conditions on the proposed new plant which would require a high level of performance including phosphorus removal and UV treatment. The existing plant needed to be decommissioned during the installation of the new plant, without affecting the 30 occupied homes, meaning that the situation had to be navigated with much caution.

"The result is the largest Eloy treatment plant installed in Australasia."

The order for the 30m³ Eloy Oxyfix Wastewater tanks saw the 220-tonne delivery of 26 tanks shipped from Eloy Water in Belgium. Working with Hynds' contractors, the tanks were installed over a three-month period. The result is the largest Eloy treatment plant installed in Australasia.

Not only does the new system allow for seasonal population fluctuations but a huge bonus is that it can be operated remotely. A high level of design and remote monitoring via radio frequency provides real time data to the Council's system in Hawera meaning that the entire plant can be operated from a distance instead of making the two-hour return trip. The Council is delighted with the new efficiencies of the plant and the time saving factor to operate it.

#### Stormwater treatment

Hynds is New Zealand's leading stormwater technology provider, specialising in treatment, conveyance, management and storage of stormwater. For close to 50 years, Hynds has been partnering with the civil construction industry providing critical and resilient infrastructure to sustainably protect our environment from the impacts of stormwater runoff.

Our dedicated stormwater engineers are strategically placed throughout New Zealand for immediate access, and are able to design from standard to complex tailored solutions inhouse for all stormwater treatment requirements. The focus is on improving stormwater quality, by removing any harmful content, and positively impacting the quality of stormwater by either holding the water and letting it infiltrate into the ground, retaining it for storage or slowly releasing it into the receiving environment.

# "Our dedicated stormwater engineers are able to design from standard to complex tailored solutions."

## CASE STUDY: Unique stormwater solution for carpark extension



During heavy rainfall events, stormwater runoff can carry a significant amount of organics, oils, nutrients, and metals straight to the stream.

To meet Auckland's stormwater regulations, Hynds and LDE (Land Development & Engineering) together designed the necessary stormwater treatment for a carpark extension to remove fine sediment, nutrients, metals, oils, organics, and organic-trapped bacteria before discharging into the stormwater network.

To achieve this goal, an Up-Flo® Filter with 15 modules was designed to meet the required criteria. Collaboration between Hynds, LDE, and Elite (contractor) resulted in the installation of an effective solution for treating stormwater runoff from the carpark.

Hynds Up-Flo® Filter combines a patented upwards flow path with a unique drain-down system to achieve proven treatment of water. Stormwater is directed into

the manhole sump, where the water coming downstream passes through the media bags (filters) and gets treated.

This type of filter was selected due to its effectiveness in treating a large volume of water while offering durability, longevity and structural integrity. The filters ensure a more sustainable stormwater management solution.

Hynds, known for high-quality products and comprehensive support, provided the perfect solution for the installation of a device with a 2550mm diameter manhole and 15 modules. The installation process was carried out smoothly and completed in less than an hour.

#### **Smarterwater® products**

We believe that building smart technology into the infrastructure system of cities is the way of the future. Hynds Smarterwater® devices are designed and built for the asset management of stormwater, wastewater, infiltration, surge and capacity. The underlying philosophy of Smarterwater® products is 'Measure to manage, measure to act', ultimately putting the power to make positive changes in the hands of asset owners through the provision of real time information.

The traditional way of managing a city's water system is often based around customer feedback from events such as flooding and sewer overflow. The resulting poor customer and environmental outcomes can also lead to degradation of water quality and significant health risks to the end user as well as long term environmental damage.

Smart technology delivers near real time data to asset owners through a virtual network of sensors showing the location and performance of each relevant asset on their infrastructure grid. Instead of being reactive, asset owners (city, district or regional councils) can become predictive, anticipating potential failures before they occur and taking corrective action. This significantly reduces the chance of flooding, overflow and other failures. The whole community benefits from the introduction of smart real time technology.

#### **SMARTER MANHOLE SENSOR**

As the first of its kind, the Smarter Manhole Sensor is an in-manhole, real time level measurement sensor designed to transmit data directly back to the asset owner. The sensor discreetly fits into the manhole cover itself, automatically measuring water levels and any tampering events. It also removes any health and safety issues associated with confined space entry, for both deployment and maintenance.

In most gravity systems, the manhole acts as a detention device and provides added capacity to the network. When a pipe suddenly becomes blocked, the surge levels



in the manhole increase beyond what is normal. When this blockage goes unnoticed, the first sign of trouble is usually a flood of either stormwater or wastewater occurring in the street, on properties or anywhere manhole access has been provided. This not only poses a risk to public health, the environment and property, but also means the work teams need to operate in more hazardous environments or cannot resolve the problem until after it subsides, leaving communities in distress.

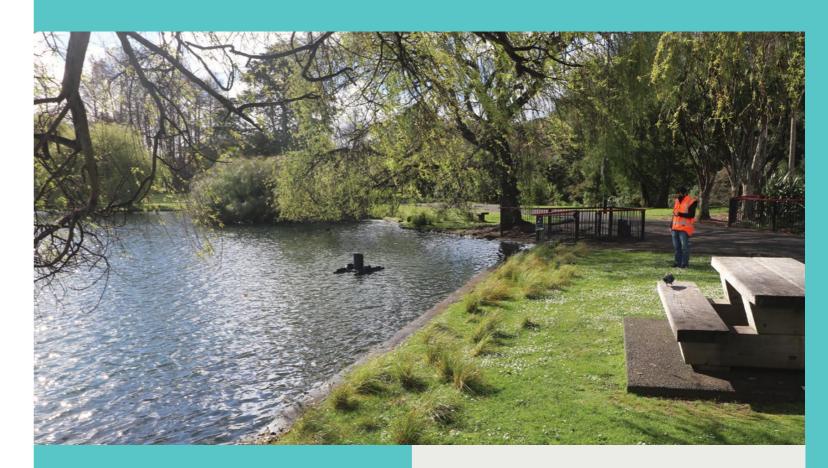
Designed to learn typical or normal water levels over time, the Smarter Manhole Sensor can set a point and provide a high-level warning when levels exceed normal. Use of the sensor provides precise information for work teams about where and when to look for issues. With more information about the parts of the system that need attention, the work teams become more effective, flooding events may be reduced, and the risks to people, the environment and property can be improved. With information learned from the network over time, system expansion cost can also be better managed by providing more accurate real situation data to assist future planning.

#### SMARTERWATER® RAFT

The Smarter Raft allows for intelligent water quality monitoring of receiving environments such as wetlands, sediment retention and effluent ponds. It acts as a floating monitoring station providing near real-time data for water quality management. Once installed, the device requires minimum maintenance and monitoring and offers sensing devices to measure parameters such as turbidity, temperature, pH, dissolved oxygen, oxidation reduction potential, and conductivity.



#### **CASE STUDY: Takapuna's Quarry Lake**



"It helps maintain the correct conditions for a healthy, thriving aquaculture environment."



Takapuna's Quarry Lake on Auckland's North Shore provides an important water source for secondary use and is one of three non-potable water tanker filling stations across Auckland.

Non-potable water is available to Auckland businesses for construction and other non-drinking purposes, and gives businesses the opportunity to assist Auckland's water saving efforts by not relying on water from the metropolitan supply network.

The pumping of water from the Quarry Lake requires continual measurement of water quality to maintain appropriate oxygen levels, correct pH and nutrient balance, to sustain plant and aquatic life. Installation of a Smarterwater® Raft provides near real time measurement of these elements, allowing better and more sustainable long-term outcomes for this important Auckland water source. It helps maintain the correct conditions for a healthy, thriving aquaculture environment for the fauna and flora that live there, and also for the people of the city who use the location for recreation. As caretaker of these resources, local councils have a duty of care to safeguard the health of these natural resources and effective measurement of that environment is paramount.

#### **Product innovation**

Our commitment to ongoing research and product development allows us to regularly introduce new products to address industry needs, increase efficiency and quality, and simplify product installation – all contributing to more sustainable outcomes.

The establishment of our state-of-the-art factory at Pōkeno has allowed us the opportunity to redesign and innovate new solutions to the very highest and latest worldwide standards. For example, innovations like the Perfect Pipe and Perfect Manholes are delivering a more sustainable product that is better for contractors and the environment alike, saving on material, labour, minimising health and safety issues on site and providing the best long term environment outcome.

#### THE PERFECT SOLUTION

The Hynds PERFECT® Manhole Base is a watertight prebenched flanged based manhole that can be customised to suit a variety of diameters, depths and inlet/outlet configurations. This watertight plug and play system is the perfect manhole for any job.

The Hynds Perfect Manhole System range is a revolution in manhole technology. It is a brand-new and improved range of concrete manholes from our world leading concrete manufacturing site in Pōkeno, Auckland. The

"Our state-of-the-art factory at Pōkeno has allowed us the opportunity to redesign and innovate new solutions."

Hynds Perfect Manhole is a pre-benched manhole base with already cast-in pipeline inlet and outlets.

The use of the Perfect Manhole provides safer and quicker construction with less work and time within the excavation zone and no requirement to bench the manhole in a confined space or haunch a pipe connection outside the manhole base.

The Hynds Perfect Manhole is specifically designed to prevent external water infiltration. The combination of rubber gasket riser and pipe connector seals, and the Pinnacle® Step System (which does not require bolting through the wall) ensure a watertight structure for many years to come. This provides Councils with the confidence that infiltration of groundwater into manholes is not occurring which greatly benefits the operation of wastewater networks.



#### World-leading partnerships and products



"The WaStop provides critical protection for people, properties and livelihoods from the devastating impact of flooding."

Hynds is proud of its partnerships and exclusive distributorships with many high-quality European agencies and brands. These include brands such as Eloy Water, Wapro, Hawle, Hauraton, EJ, GRAF and Georg Fischer.

Working in partnership with these elite brands, Hynds delivers world-class solutions for New Zealand, Australia and in the case of some brand distribution arrangements, across the Pacific Islands.

#### WASTOP®

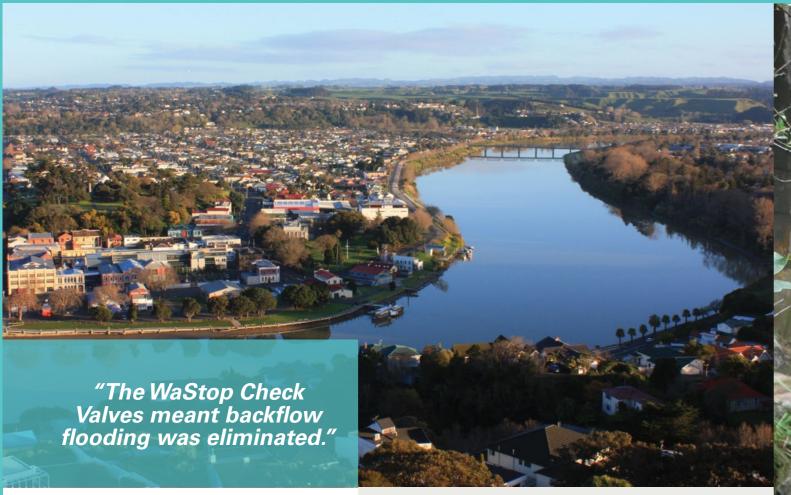
Hynds is the exclusive distributor of the highly regarded WaStop® Check Valve from Wapro, a unique product delivering crucial flood and odour management for countless communities across New Zealand, Australia and the Pacific.

The WaStop is a unique patented non-return valve with a clever membrane that allows the flow of water one way while preventing backflow, odour and flooding. By restricting the backflow of water from the ocean, lakes and other bodies of water, the WaStop provides critical protection for people, properties and livelihoods from the devastating impact of flooding.

Working on differential water pressure, the WaStop functions autonomously, without human interaction, electricity or constant maintenance.

## CASE STUDY: Protecting people and property in Whanganui

## **CASE STUDY:** Eliminating odours around Oakley Creek



Whanganui has a history of repeated flooding in low-lying areas, particularly those adjacent to the Whanganui River. The inlet of the river is subject to significant tidal fluctuations with high silt content that has historically caused flooding and damage to nearby properties and roads. Residents had to be continually prepared to evacuate themselves, pets and important belongings at short notice at times of high rainfall.

One of the main causes of flooding was backflow from the river through the stormwater outfall system. To help prevent any backflow, WaStop valves were installed on some stormwater outlets. With the WaStop in place, backflow was prevented and the stormwater system had more capacity to cope better during periods of high rainfall and high river levels.

Installation of the WaStop Check Valves meant backflow flooding was eliminated, delivering welcome peace of mind for residents and property owners.



#### Recycled products - from rubbish to rural



Post-consumer plastic is getting a second life at Hynds PKS in Christchurch. The site is the sole manufacturer of Supaduct™ Rural, a lightweight and durable culvert pipe system produced from reprocessed raw HDPE (high density polyethylene) material and post-consumer recycled plastic.

The percentage of post-consumer recycled plastic in the product ranges anywhere between 50-80%, depending on the type of material used. The balance of the resin used to make the pipes is reprocessed HDPE waste product from our manufacturing process, meaning the Supaduct Rural range is manufactured entirely from recycled and repurposed resin.

Supaduct Rural also offers a number of time and money saving features. Along with being cost effective, easy to install and long life, it is chemically resistant, physically tough and offers increased flow rates due to the smooth inner.

Its weldable nature and structural design also mean there are many ways the pipe can be fabricated to help achieve the desired end result. The capability of the product, particularly in handling significant direct traffic loadings, makes it ideal for rural and forestry applications.

"The percentage of post-consumer recycled plastic in the product ranges anywhere between 50-80%."

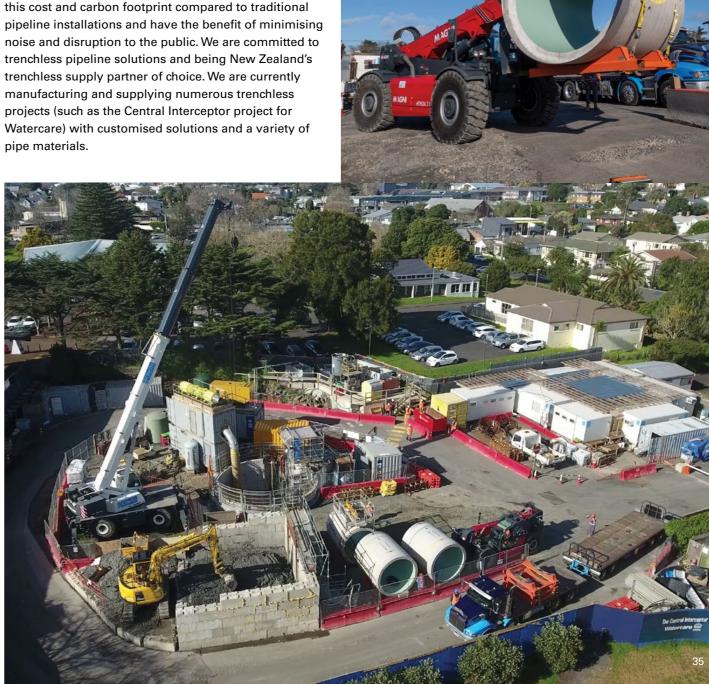


#### **Products for good**

For many years we have been committed to increasing the handprint that our products have and the benefits they have on the environment and wider community. Just as Hynds pipes and products deliver water solutions around and under New Zealand, they are also delivering social, environmental and recreational outcomes in non-traditional settings. Here is just a snapshot of our products doing good.

#### TRENCHLESS PIPELINES

New Zealand's three water infrastructure will require major upgrades over the next few years and this will come at a significant cost and carbon footprint. We believe that trenchless pipe installations will help reduce this cost and carbon footprint compared to traditional pipeline installations and have the benefit of minimising noise and disruption to the public. We are committed to trenchless pipeline solutions and being New Zealand's trenchless supply partner of choice. We are currently manufacturing and supplying numerous trenchless projects (such as the Central Interceptor project for Watercare) with customised solutions and a variety of



#### **Products for good**



#### PENGUIN CROSSING

We were proud to supply the concrete pipe for the country's first wildlife underpass in Oamaru.

The 25-metre tunnel provided an important lifeline for little blue penguins in Oamaru, acting as a unique underpass to remove the need for a treacherous road crossing for the small birds. The tunnel creates a safe passageway for the local blue penguins who head out to sea before first light, returning ashore at dusk along the same route. Their night time movements had become increasingly challenging with the birds negotiating the busy road beside the blue penguin colony.

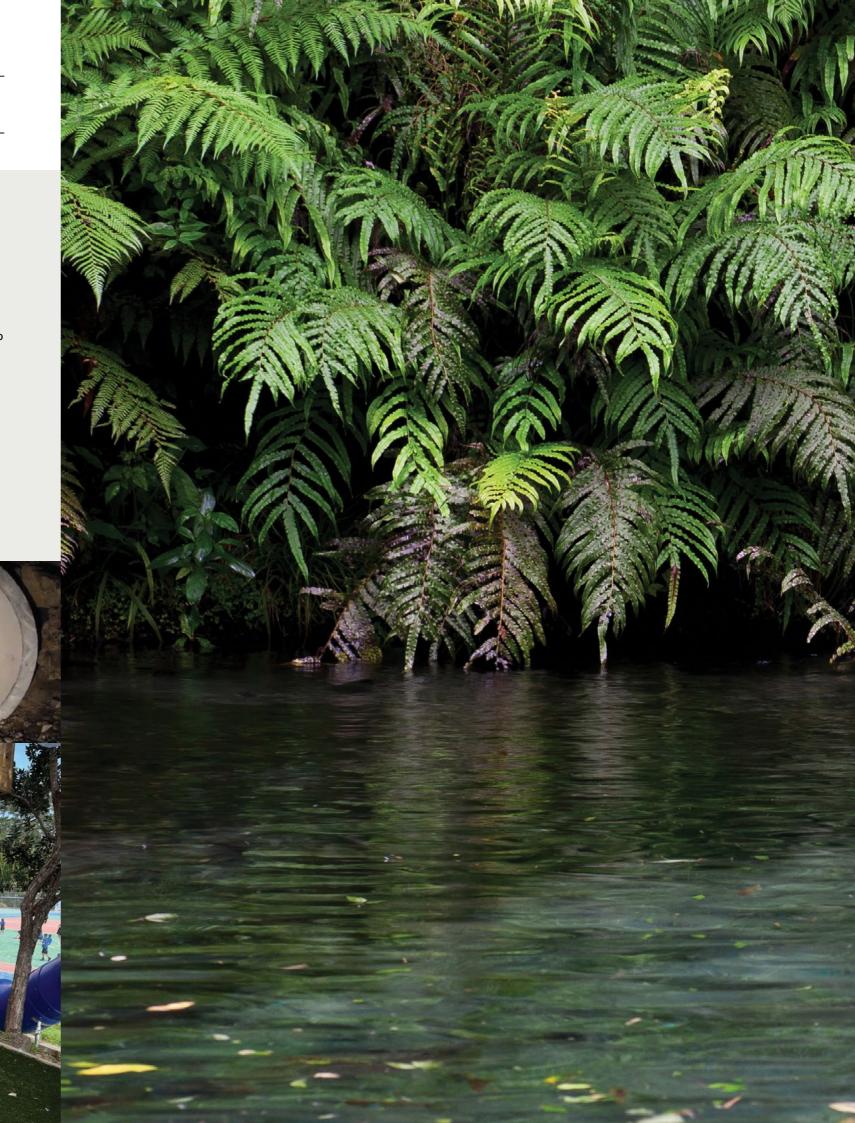
With the penguins refusing to change their course, the focus for local penguin enthusiasts and the Council was on getting them to their nests while avoiding the busy road. Power, water and other services were relocated, so the tunnel could be sited along the penguins' usual route. Hynds was thrilled to donate product and labour to support this project.



Hynds pipes are also delivering unique play structures for children around New Zealand. When Summerland School in the Auckland suburb of Henderson was looking for something a little different for their playground, Hynds answered the call with the repurposing of box culvert piping. We've also been proud to supply pipes for play structures at rural schools, like Pukekawa School, where the pipes are being used to support students' imaginative play.

"Children love the opportunity to make up their own games and these pipes have provided another avenue for this."

JOSIE REDMOND, PRINCIPAL, PUKEKAWA SCHOOL





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