

CAPABILITY PROFILE

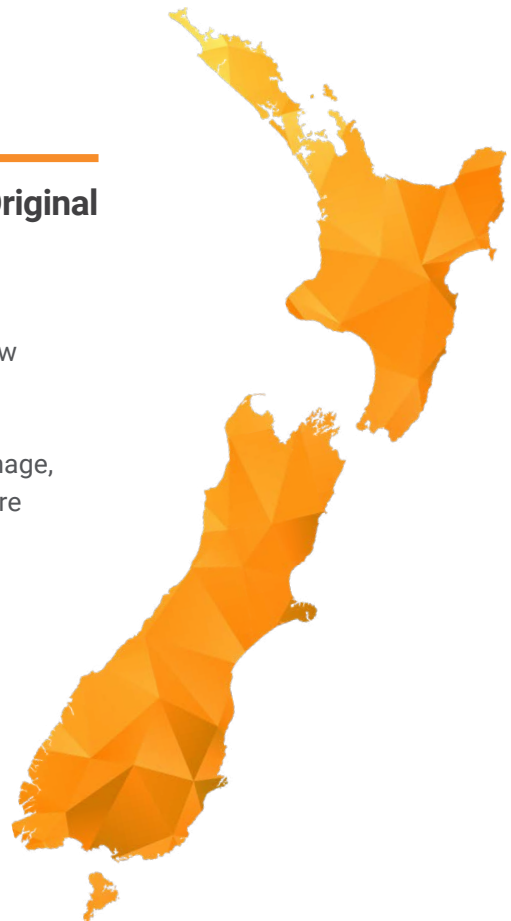


PKS Civil specialises in the manufacture of PE pipeline systems and fully fabricated infrastructure solutions, covering all requirements from manholes and pipework through to retention tank, wet well and pump station systems.

Two Decades of Expertise – New Zealand's Original Spiral Wound PE and PP Pipe Specialists

For more than 20 years, we have set the benchmark for New Zealand's large bore spiral wound PE pipe manufacturing capability, delivering certified PE100 spiral wound pipe solutions, and PE100 pipe up to DN3500 for essential drainage, stormwater and wastewater networks. We also manufacture bespoke manhole and pipeline structures with specific project ability to make up to DN4200mm ID.

Our diverse capability equips us to tailor solutions to meet the complex needs of asset owners and major infrastructure projects around the country.



A Sustainable New Zealand Business

At our PKS Civil sites, we are deeply committed to sustainability, intentionally designing our manufacturing processes to minimise waste by recycling all resin offcuts, ensuring all offcuts are collected, reused and repurposed into our rural culvert range. To back this up we are the only spiral manufacturer that can provide an independently verified EPD.



Find our EPD and technical resources here: pkscivil.co.nz/resources/

Adaptable and Bespoke Innovation

We combine emerging market needs with practical technical advancements to deliver solutions that genuinely respond to customer and project requirements. Through a collaborative approach, we work closely with clients to design bespoke outcomes – such as transitioning the ends of PE100 pipes into concrete structures, welding components into larger culverts, and creating pipe end transitions that allow flexible PE100 pipes to connect reliably to wingwalls or manholes.



Unrivalled Capability in Spiral HDPE – the PKS Civil Difference



Design through partnership

In collaboration with design engineers, asset owners and civil contractors, our approach is underpinned by partnership. Our in-house design and fabrication teams work with you to deliver bespoke, future-proofed PE solutions for all civil needs. We can also provide design assistance with Producer Statements (PS1, seismic, PS2 and ITP guidance), complex modelling and technical support.



Leading edge manufacturing

Our state-of-the-art manufacturing facilities we are capable of manufacturing PE100 pipe up to 4200mm along with all required components. The PKS system allows for uniform, permanently tight structures – with pipes of all conventional dimensions. The leak-tightness, chemical resistance and flexibility of our product protects the environment. All PE and PP pipe and structures are fabricated onsite in our manufacturing facilities, reducing onsite installation time.



High strength to weight ratio

The PE100 spiral wound pipe technology makes it practical to manufacture pipes to a specified ring stiffness/SN rating at a fraction of the weight compared to solid wall pipe systems. The high strength to weight ratio is due to the use of PP (polypropylene) core tube which gives the pipes their spiral nature, wrapped in PE100 material. This means PKS Civil pipe systems can be installed as alternative solutions in gravity stormwater and wastewater settings over other pipe materials like steel, concrete and GRP (glass reinforced polymer).





Direction / grade change done differently

With the PKS PE100 system, changes in pipeline direction and grade can be accommodated by forming bends within the pipeline, while same or smaller sized access shafts can be installed at suitable locations where permitted. This approach can reduce the need for large manhole structures while still providing access.



Early Contractor Involvement (ECI)

Our commitment to ECI enables us to work closely with clients from the outset to refine and optimise project concepts. We take initial drawings, at any stage, and develop them into practical, fully constructible solutions. By identifying buildability improvements early, we reduce redesign effort, minimise risk and support faster, more efficient project delivery.



In-house and on-site training

We offer comprehensive training as part of our service delivery, ensuring client teams are fully equipped to manage installation and operational requirements with confidence. We provide structured in house training for all relevant personnel ahead of deployment, supported by practical on site assistance during installation. This combination of preparation and hands on guidance helps streamline project delivery, reduce risk and build long term capability within client teams.



Proven in the Field

At PKS Civil, our work speaks for itself. Each project showcases the strength of our fabrication capability, our commitment to technical excellence and our ability to deliver tailored, high performance civil infrastructure solutions across New Zealand. From bespoke components to complex structural builds, we deliver with accuracy, innovation and confidence.



Products and Solutions

Cleverly designed and manufactured pipeline systems for drainage, stormwater and wastewater applications.

- Pipes from 400mm up to 3500mm internal diameter.
- Chambers, pump stations, manholes, tangential manholes, drop structures, access shafts, rodding eyes, catch pits with all the required parts such as segmented bends, tees, wyes, reducers, expanders, junctions, transitions, square to round adapters, penstocks, stoplogs, stub flanges and air vents.
- Below-ground storage tanks, above-ground storage tanks, silos, combined 2-in-1 tanks with wet and dry compartments, DOC huts, emergency shelters, and dedicated firefighting water storage tanks.
- Design standards AS/NZS 2566.1, ATV DVWK A127, ASTM F1759, NZ Bridge Manual, NZS 1170.5, DVS Technical code by German Welding Society
- PKS culverts offer a line of robust and durable pipes manufactured from virgin PE100 or recycled material in SN4, SN8, SN16 stiffness classes along with design capability to engineer for special pipe installation scenarios.
- Standard product stocked nationwide to reduce lead times and support project schedules

Material Properties:

- Design life of 100+ years in PE100 material (virgin material only).
- Efficient hydraulic performance with its lower manning's roughness coefficient n , range (0.008-0.011) PKS recommend typical design n (0.009) value.
- High abrasion resistance.
- Produced to required SDR Rating and OD. Pairing to other pipes.
- Reduced installation costs due to light weight, long lengths up to 22m, fully fabricated complete products.
- Inert to many chemicals including hydrogen sulphide (HS2) attack.

PKS Benefits:

- No minimum run length requirement meaning variable lengths can be manufactured at low cost.
- Pipes are weldable making it easy to fabricate required structures such as manholes and fittings, reducing build time onsite.
- Reduced site hazards due to lightweight nature of the pipes.
- Design assistance for specification and ECI.



Manhole Alternatives



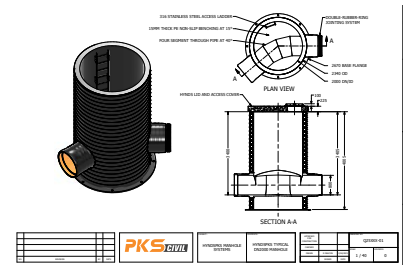
**Manholes, Pump Stations
and Wet Wells**



Pipe



**Fabricated Bends,
Tees and Wyes**



Technical Design



Pipe Transitions



High Volume Storage Tanks



PE to Concrete Connections



Client Training



Project Snapshot

Transmission Gully Stormwater Culverts

We played a key role in connecting Wellington with the rapidly growing economic centres of the Kāpiti Coast, Horowhenua, and the wider North Island. More than 12 km of PKS Civil Culverts, ranging from DN300 to DN2500, were supplied for installation beneath the main Transmission Gully highway alignment. The contractor found that the longer pipe lengths significantly reduced the number of joints required, lowering installation time and reducing risk to the culverts beneath the highway.

The project included six major culverts designed in accordance with the NZTA Bridge Manual. Each pipe section underwent Finite Element Analysis (FEA) to determine the correct Stiffness Nominal (SN) class for the installation conditions. With culverts located near active earthquake fault lines and installed at varying depths, the pipes needed to support both the surrounding earth structure and the State Highway constructed directly above.







Project Snapshot

Pūhoi to Warkworth – Stormwater Culverts

We were engaged to manufacture and supply stormwater culverts for the new Pūhoi to Warkworth State Highway upgrade. Over 1.3 km of PKS Civil Culverts in multiple diameters have been installed as a high performing alternative to concrete pipes. PKS Civil Culverts were selected for their lightweight construction, ability to withstand deep cover exceeding 40 metres, and their contribution to reduced installation costs.

Two of the culverts were located in particularly difficult to access areas, where transporting heavy concrete pipes would have posed significant challenges. The lightweight nature of HDPE made it safer and more practical to carry the pipes into position. From a risk management and health and safety perspective, PKS Civil Culverts offered a clear advantage over traditional concrete options.



Project Snapshot

Porirua Wastewater Treatment Tank Project

PKS Civil recently supported the Porirua Wastewater Treatment Tank project, supplying PE gravity wastewater pipe and manholes using our proprietary EF welded socket system. The project required careful planning thanks to challenging ground conditions – hillside runoff to the east, coastal groundwater to the west, and a high water table throughout the site.

To ensure the pipeline and manholes remained secure, the design incorporated detailed flotation calculations, trench-strengthening improvements and approval of an SN16 pipe structure capable of meeting both HN-HO-72 load and seismic uplift requirements.

Supply included in-house training for the team ahead of installation, followed by trench-side support once pipe arrived on site. The project featured high-vis yellow internal spiral PKS pipe from DN800 to DN1500, including around 400m of DN1200, along with 24 PE manholes up to DN2500. Concrete ballast bases and on-site benching ensured stability across the network.

Welding support spanned more than 15 days, covering spool fabrication, flow meter brackets, flange transitions and multiple connection types into manholes, structures and weirs. Technical oversight included PS1 and CM checks, third-party engineering review, and peer review.





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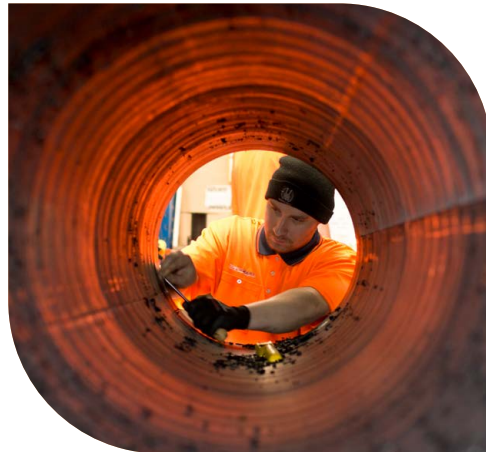
Christchurch Manufacturing Plant



Auckland Manufacturing Plant

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