

COASTAL PROJECTS

CAPABILITY STATEMENT

"Together we create better places"

About

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Foreword

Thank you for the opportunity to put forward our coastal capability statement which displays a variety of projects including; wharves, seawalls, breakwaters, beach nourishment, erosion protection works and boat ramps. The following document displays our coastal capability and portfolio for your general interest.

Urban Solutions has extensive experience in delivering significant coastal projects since our formation in 2001. We are adept and embrace working closely with local government clients, local communities and mana whenua to complete elegant designs that endure the elements. Key projects have been highlighted in the portfolio section such as Panmure Wharf, Dunkirk Reserve Revetment and Kohimarama Beach to demonstrate a broad range of projects that we are involved with.

Offering a refreshing and compelling alternative to the limited number of large corporate consultants in the coastal sector, our clients appreciate the way we assemble and manage the right expertise, undertake meaningful consultation to guide projects and provide a complete level of professional services to deliver outstanding results on time and to budget. With the philosophy that "Together We Create Better Places", we believe in a collaboration between disciplines to achieve outcomes that are to a high quality, functional and aesthetically pleasing. We strengthen our core team of engineers, landscape architects and project managers by partnering with our strategic specialist consultants. Sharing office space with 4Sight and LDE provides Urban Solutions with specialist resources such as geotech, civil and structural engineering as well as resource consent planning and environmental assessments. By selecting the best people for the project we ensure we have the right mix of skills to deliver a result that you can expect.

We hope this capability statement is of interest to you and we are happy to work through any opportunities should you wish.

I look forward to hearing from you.

Sincerely,



Lorenzo Canal
Managing Director
Urban Solutions

Visit our website www.urbansolutions.co.nz to learn about our services and view our diverse range of projects.

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Together We Create Better Places

Urban Solutions Limited is a multi-disciplinary project orientated consultancy that exists for the purpose of providing solutions for a growing urban habitat.

Urban Solutions tailor and manage transformative infrastructure projects that engage with communities and support meaningful and prosperous growth for the city at large. We have a proven 16 year track record in delivering high-profile infrastructure projects in the public open space realm.

Our client's projects are diverse and our areas of expertise are wide. We have managed everything from playgrounds

to pipelines, coastal restoration to community buildings with an emphasis on mindful and elegant design that will stand the test of time.

We strive to strike the right balance between the old and the new, redressing biodiversity and environmental factors as they arise while redefining how we live and work better in public spaces. We understand and align ourselves with each new project and its associated issues. Our strength is envisioning fresh ways of inhabiting and interacting within our urban spaces, and then making it happen.

*"We get things done by combining project specific talent and the practical application of project management best practice. We are fuelled by a real passion for contributing to the success of a sustainable, vibrant and healthy New Zealand future. **Judge us by our significant achievements in a diverse range of urban projects.**"*

- Lorenzo Canal

Strong and Effective Working Relationships

"Professional and useful people with a passion for creating solutions"

Our Team



Lorenzo Canal BE MIPENZ, CPEng, IntPE
Managing Director

Lorenzo Canal is a chartered professional engineer with over 20 years of experience. Primarily he specialises as an engineering project manager, planning and delivering government infrastructure based in Auckland.

He co-founded Urban Solutions Limited in 2001, a project management consultancy based in central Auckland. For the past decade, Lorenzo has managed a large number of complex, infrastructure projects and portfolios across the parks and reserves, roading and transport, stormwater, coastal and urban streetscapes, sectors.



Kirsten Dovey BE (Hons)
Project Engineer

Kirsten is a qualified engineer who has experience in running and supervising significant civil infrastructure and community asset projects.

Kirsten has worked on multiple coastal projects for Auckland Council, including Island Bay Rock Revetment Renewal and Mt Wellington Seawall Upgrade. Kirsten has 12 years' project management experience, with strong technical capabilities including a focus on ensuring projects conform to current legislative guidelines, health and safety, and quality assurance and compliance.



Jake Allen BE (Hons)
Coastal Engineer

Jake is a results-driven civil and coastal engineer with an engineering background covering a range of roles.

Jake has undertaken a number of open space and coastal engineering designs including, parks and reserves, jetties, seawalls and boat ramps. He is proficient at undertaking coastal process assessments. He is an excellent communicator, an effective negotiator and passionate about projects that enhance the natural environment.



Simon Gasson BE (Hons)
Project Manager

Simon is a project manager with a degree in engineering and expertise in project delivery.

Simon has been involved in a wide range of coastal projects including boat ramps, seawalls and breakwaters. With experience in monitoring, leading and managing small teams, he delivers projects within the given timeframe and under budget. He especially enjoys projects associated around active transport such as shared paths and bush tracks.



Chris Felton PRINCE2
Project Manager

Chris is a dedicated project manager with a work ethos of delivering excellent customer service.

He has 21 years of experience in the turf and golf course industry, with a further 5 years as a sports park specialist at Auckland Council, which has allowed for Chris to obtain a wide range of knowledge to ensure the needs of all stakeholders are met during project delivery. Chris believes that communication, planning and accountability are fundamental to successful Project Management and considers sustainability and the environment during all aspects of a project.



Per Lindstrom BLA, MLA
Landscape Architect

Per is a Landscape Architect from Sweden with a Bachelor and a Master of Science in Landscape Architecture.

He has gained experience in multidisciplinary areas such as civil design, landscape architecture and project management. Per is a team player who is passionate about communication across different disciplines and uses a variety of tools such as digital 3D modelling and rendering, virtual reality and artist's impressions to convey and communicate projects. He also has a strong interest in sustainable design solutions and takes any opportunity to use native plants where the context allows.



Maddie Palmer BAS (Landscape), MLA
Landscape Architect

Maddie is a landscape architect, who has an interest in designing recreation spaces within the urban public realm that are aesthetically unique and functional.

She has a particular interest in New Zealand's coastlines and how these space can be designed for a variety of users. Also she believes in designing towards sustainable and resilient outcomes that achieve long-term resolutions. Maddie has experience in 2D and 3D programmes to create a range of concept and construction drawings, feasibility reports, rendered models and artist's impressions.



Sean Rooke NZDS
Surveyor

Sean is a surveyor with a National Diploma in Surveying from Technikon Natal. He is a professional and dedicated surveyor who produces high quality deliverables.

Over the past 20 years Sean has been involved with a wide range of surveying applications. Sean's experience ranges from boundary surveys in the high Arctic to engineering surveys for the Manukau Rail Link (DART 9). He is well versed in producing topographical surveys to the highest standard and understanding that comprehensive surveying sets the foundation for an effective project.

Partnering Consultants

To complement our coastal project design and planning where needed, we regularly work with a number of specialist consultants that we share office space with. Below are a couple of key professionals who we regularly partner with from 4Sight and LDE.



Samuel Morgan MSc (Hons) BSc
4Sight - Coastal Geomorphologist

Samuel Morgan is a Coastal Geomorphologist with an interest in beach and estuarine morphology.

His academic background has mostly focused in estuarine geomorphology and processes which he has applied to beach processes and morphology. Samuel's professional career and practical experience have focused on beach and coastal management issues and his strongest application to date has been interpreting beach monitoring data sets with respect to beach management strategies.



Keren Bennett BSc
4Sight - Coastal Ecologist

Keren is 4Sight's ecology manager. Her work sees her designing, managing and implementing surveys; carrying out ecological impact assessments, and producing detailed reports based on her findings for private, corporate and local government clients.

Her extremely high level of technical expertise has been gained through years of experience working in streams, rivers, wetlands and coastal environments all over New Zealand. Sampling fish and macro invertebrate communities, carrying out assessments of habitat features and analysing water quality in a variety of different environments are just a few of the projects she has undertaken over the years.



Simon Karl BSc
4Sight - Coastal Planner

Simon Karl is highly proficient at producing technical leadership of planning assessment and consenting components of projects. Simon is also well equipped to lead delivery of any ecological work or contamination issues should they arise.

Simon is experienced at reviewing and understanding complicated engineering information, then preparing well written technical reports for government and commercial sectors. Simon has worked with Urban Solutions on the design and consent of the Island Bay Revetment project and the Dunkirk Revetment project.



Nigel Mather BSc MSc
4Sight - Land Contamination

Nigel is a dedicated environmental professional with 15 years experience and a strong focus on delivering high quality and pragmatic advice to clients.

Working across a broad range of environmental management and risk assessment practices, both in New Zealand and Australia, Nigel's experience includes contaminated land assessment and remediation, environmental due diligence and risk assessment (transactional and advisory services), and HSE management systems implementation and auditing.



Aaron Holland BEng (tech) MIPENZ CPEng
LDE - Civil Engineer

Aaron has more than 25 years of engineering experience and is a Senior Chartered Civil Engineer.

He has managed numerous structural and civil design projects in the Auckland region and has experience in coastal infrastructure design and civil infrastructure development. Aaron also has experience in the design of jetties, boat ramps and sea walls and has conducted environmental engineering including flood level analysis, coastal inundation, erosion and sediment control planning.

Typical Project Lifecycle



* Above typical project scope and lifecycle is specific to project needs

Areas of Expertise



COASTAL



- Seawalls & revetments
- Wharves, Jetties & Pontoons
 - Breakwaters
- Beach Replenishment
 - Boat Ramps
- Marine Facilities
 - Drystacks
- Sea Level Rise Adaptation
- Naturalistic Headlands and Groynes
 - Dune Restoration
 - Slipways



NETWORK UTILITIES



- Public Stormwater
 - Drainage
- Wetlands & Ponds
- Flood Protection Schemes
- Underground Utilities



ACTIVE TRANSPORT



- Shared Paths
 - Footpaths
 - Bush Tracks
 - Cycleways
 - Boardwalks
 - Stairs
- Pedestrian Bridges
- Retaining Walls
- Amenity Lighting
- Kauri Dieback Mitigation



PROJECT MANAGEMENT



- Client Side Project Management
 - Programme and Portfolio Management
- Business Cases and Project Strategy
 - Project Planning and Reporting
- Procurement Strategy, Tendering and Contract Management
 - Risk and Issue Management
- Cost Management and Quantity Surveying
- Stakeholder and Iwi Engagement
 - Professional Services Contract Management
- NZS3910 Contract Management and Engineer to Contract
- Project Closeout and Operational Handover



PUBLIC OPEN SPACES



- Carparks
- Streetscapes
- Playgrounds
- Soft Landscaping
- Courts & Hard Surfaces
 - Lighting
- Street Furniture
- Art Installation
- Fitness Equipment
 - Park Assets
- Sports Fields & Turfs
- Changing Rooms & Toilets
- Building Renewals

Coastal Portfolio

Our portfolio shows a depth and breadth of experience in designing well-functioning, environmentally sustainable and elegantly designed coastal projects. The projects outlined have all been well received by our clients and the community.

Kohimarama & St Heliers Beaches

Kohimarama & St Heliers, Auckland

- Client:** Auckland Council
- Completion:** 2009
- Services:** Feasibility Design, Preliminary Design, Resource Consenting*, Detailed Design*, Construction Documentation, Tender Stage Services, Construction Stage Services
- Scope:** Beach replenishment, naturalistic groynes, boat ramps, boardwalk, stormwater division
- Budget:** \$10 million

*Note: Beca and Tonkin & Taylor provided specialist input for sediment transfer analysis, stormwater design and resource consent application, under the management by Lorenzo Canal.

The Kohimarama & St Heliers project necessitated fresh thinking to rebuild the eroded beach and vulnerable seawall along Tamaki Drive while preserving the iconic Pohutakawa trees.

The design is an award winning scheme that transformed Kohimarama Beach into a premier destination for beach goers. The naturalistic rock headlands were the first of their kind and have become a part of the Tamaki Drive coastal landscape. The solution diverted storm water to either end of the beach and piped it out to a rock shelf. The rock headland formations were hand shaped and coloured to match the surrounding cliffs and recede into the existing environment. This innovative and cost effective solution, elegantly solved the problems of protecting Tamaki Drive from the encroaching sea and has become an integral part of Kohimarama's unique appeal to residents and tourists.

To complete the beach refurbishment, a timber boardwalk was added to enhance the foreshore esplanade reserves. This design has transformed a previously degraded coastal landscape into premium sandy beaches that give the community an enhanced coastal lifestyle and provide a visitor experience that is second to none.



Kennedy Point Breakwater and Ferry Upgrade

Waiheke, Auckland

Client: Auckland Council

Completion: 2006

Services: Feasibility Design,
Preliminary Design,
Resource Consenting,
Detailed Design,
Construction
Documentation,
Tender Stage Services,
Construction Stage
Services.

Scope: 200m Long Breakwater,
Concrete Boat Ramp
with Pontoons

Budget: \$3.3 Million

Kennedy Point Breakwater was constructed to provide much needed shelter to allow Waiheke freight service to continue at Kennedy Point. The construction of the breakwater provided wave dissipation to the Ferry Terminal at the site.

Providing project management, the business case, concept design and consultation, Urban Solutions provided evidence to support the resource consent which was fully notified and required a hearing. Leading a team of expert witnesses, we ensured that the consent was granted with no appeal.

We provided engineering staff to carry out construction monitoring, while also acting as Engineer to Contract. The breakwater on Waiheke Island has provided enduring wave protection for the ferry terminal.



Point England Beach

Point England, Auckland

Client: Auckland Council

Completion: 2009

Services: Feasibility Design, Preliminary Design*, Resource Consenting*, Detailed Design*, Construction Documentation, Tender Stage Services, Construction Stage Services

Scope: Beach replenishment, naturalistic groynes, improved access

Budget: \$1.1 million

*Note: Resource Consent Planning and Design Services provided by Tonkin & Taylor as a sub-consultant to Urban Solutions.

Over the years Point England Beach had become eroded, impacting its functionality as a public amenity. The design focused on replenishing sand and constructing an artificial rock reef to transform the face of the coastline and provide a recreational amenity for the community.

The project involved importing sand and constructing an artificial rock reef structure (groyne) to ensure the beach retains its sand. As a result, 250m of beach is now replenished, providing an all-tide sandy beach. This project was included in the Council's \$10 million citywide coastal upgrade programme, endorsed by the Arts, Culture and Recreation Committee in March 2009.

Urban Solutions was engaged by Auckland Council to be project managers and designers for the beach project in partnership with Tonkin & Taylor. The construction was carried out by Smith and Davies and the reef was constructed by LandformsNZ.



Mt Wellington Seawall Renewal

Tamaki Estuary, Auckland

Client: Auckland Council

Completion: 2016

Services: Detailed Design Review, Construction Documentation, Tender Stage Services, Construction Stage Services

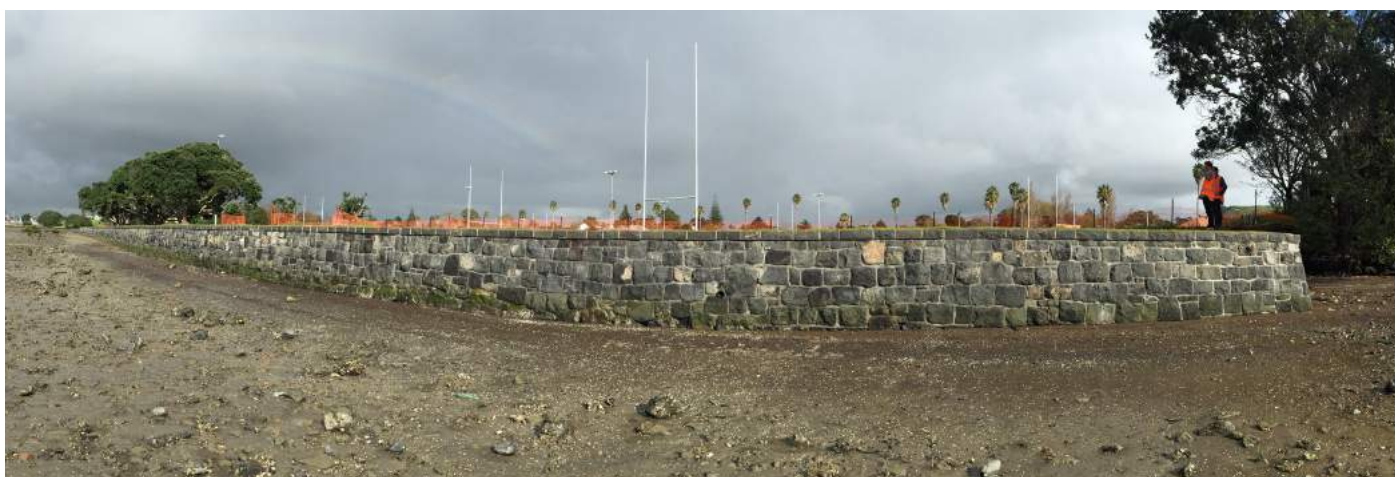
Scope: 440m Seawall Renewal and Repair

Budget: \$500,000

In April 2014, Auckland Council Coastal Management Services completed a coastal structure condition assessment for a 6km section of the Tamaki Estuary within the Maungakiekie – Tāmaki Local Board Area at the request of Local Sports Parks (Parks, Sport and Recreation Department).

The intent of the assessment was to assist Local Sports Parks with future reporting to the Maungakiekie-Tāmaki Local Board regarding ongoing management options and related regulatory requirements.

Urban Solutions were engaged by the Maungakiekie – Tamaki Local Board to repair the 440m section of sea wall which the report identified as having a "fair to poor" condition rating. The coastal edge is located adjacent to multiple sports fields and the non-engineered edge was prone to erosion and over-topping. The team provided project management services including preparation of tender documentation, through physical works, construction supervision and contract management. This constructed engineered seawall will complement the new Tamaki Path and allow for safer recreation at the coastal edge. The wall has been tested during the January storm event and performed well.



Dunkirk & Riverside Reserve Rock Revetments

Tamaki Estuary, Auckland

Client: Auckland Council

Completion: 2018

Services: Feasibility Design, Preliminary Design, Resource Consenting, Detailed Design, Construction Documentation, Tender Stage Services, Construction Stage Services

Scope: 800m of Rock Revetment, 300m of Maintenance

Budget: \$3.5 million

With an eroding coastline along the Dunkirk and Riverside Reserves, an upgrade was required to mitigate the effects of the sea. With some areas completely unprotected, others had sections of unengineered ad-hoc seawalls which were failing. Urban Solutions were engaged to upgrade this coastline.

Due to the size of the project, an initial condition assessment was undertaken to prioritize the work. This resulted in the coastal edge being divided into two separate sections, an unconsented section adjacent to Dunkirk Reserve and a consented section adjacent to Riverside Reserve. The 800m of failing protection adjacent to Dunkirk Reserve was identified as the most critical section for renewal and construction began on this section first.

Urban Solutions were engaged to provide an asset condition survey, business plan, concept design, public and iwi engagement, consenting, design and construction management services.



Marine Sport and Recreation Facility at Bomb Point

Hobsonville, Auckland

Client:	Hobsonville Land Company
Completion:	2017
Services:	Feasibility Design, Costing and Reporting
Scope:	200m Long Jetty/ Pontoon System, Marine Sport Facility, Carpark and Access Road
Budget:	\$2.5 million

Westlake Boys High School Rowing Club and the Hobsonville Yacht Club are currently situated at the landing in Catalina Bay and are required to vacate their existing premises because of development within the area. Urban Solutions were engaged to undertake a feasibility study to investigate an alternative location to facilitate the rowing and yacht club.

This feasibility study documents the necessary investigations, assessments and preliminary design to support the decision making for the developed design and consenting of the new facility. The focus of the study was for the development of the jetty and pontoon as they are essential to the viability of the proposal and present the highest level of risk and uncertainty.

The scope for this project included a 200m long jetty and pontoon system suitable for all-tide access to allow for the launching and retrieving of small boats, a concrete access ramp from the proposed land based facility to the new wharf structure, car parking, 2 lane access road, rowing compound with a boat storage area and a Yacht Club building with associated storage. The jetty/pontoon system prevents any navigation hazards and provides multiple launching options.



Panmure Wharf Renewal

Tamaki Estuary, Auckland

Client: Auckland Council

Completion: 2018

Services: Feasibility Design,
Preliminary Design,
Resource Consenting,
Detailed Design,
Construction
Documentation,
Tender Stage Services,
Construction Stage
Services

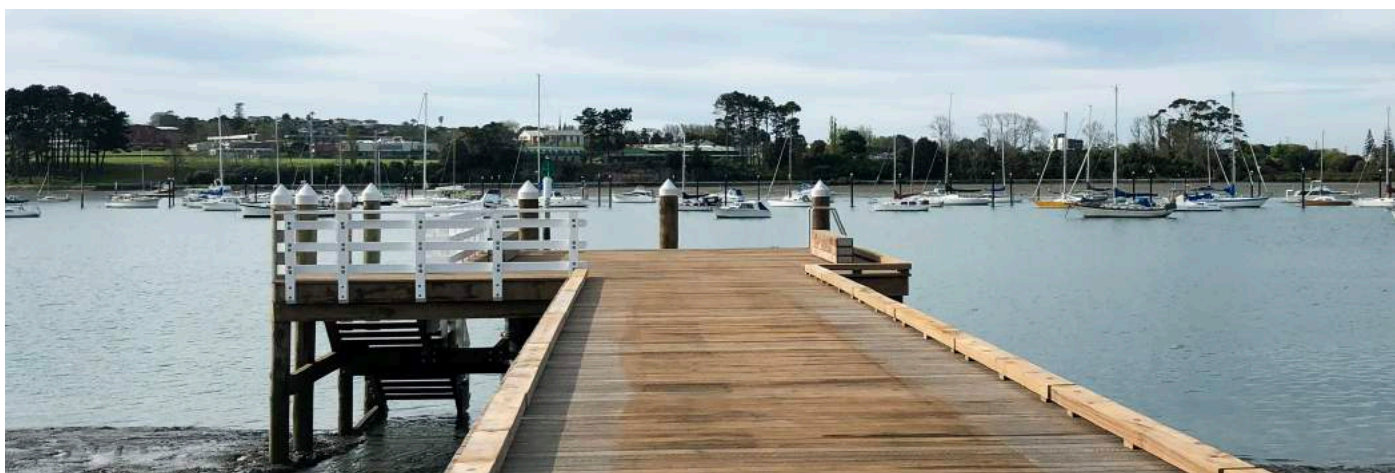
Scope: 40m Long Wharf

Budget: \$1.2 million

Urban Solutions have been facilitating maintenance activities at Panmure Wharf since 2016. In 2017, Urban Solutions produced a feasibility study to investigate options which looked into improving access for multiple user groups. During this process key stakeholders and wharf users were engaged.

The decision was made to renew the existing historical wharf to improve access for small crafts. Urban Solutions also consented a new all tide pontoon which would improve accessibility for the local water sports clubs.

Construction was completed in October 2018.



Coromandel Marine Gateway

Coromandel Town, Coromandel

Client: Pita Street Development

Completion: Ongoing

Services: 3D Model, Preliminary Design, Resource Consenting, Detailed Design

Scope: Marine Development

Budget: \$25 million

Pita Street Development initially contracted Urban Solutions to prepare a 3D model and output a series of photorealistic renders to assist with the consultation of local stakeholders.

Following this work Urban Solutions have been engaged to complete the investigation, developed design, consenting and detailed design of the Coromandel Marine Gateway. When finished the project will include 125,000m³ of dredging and excavation, dry stack storage for 180 boats, hardstand storage for 35 boats, 12 berths for charter boats, ferry berth, ferry terminal, 15 residential dwellings, 2 access roads, 2 carpark areas and a maintenance wharf for Mussel Barges.

The goal of the project is to create a development that will bring positive benefits to the Coromandel Township through the creation of new businesses in the heart of the town. The development will be completed in a environmentally sustainable manner.



Business Information

Health and Safety Policy

Urban Solutions Limited (the Company) regard the promotion of Health and Safety measures as an objective of directors, management, staff and contract personnel. The policy is written for the protection and maintenance of the health and safety of the Company's workers on the work site. The Company is committed to taking all steps necessary to reduce health and safety risks to as low as reasonably practicable.

The Company will achieve this by:

- Complying with the requirements of the Health and Safety at Work Act 2015;
- Providing and maintaining safe working conditions taking into account statutory requirements to promote an accident free workplace;
- Ensuring that all employees have read and understood, and have access to the Company Health and Safety Policy which is stored in the head office as well as in a shared online folder accessible to all staff and subcontractors.
- Promoting a health and safety conscious culture;
- Providing procedures, training and equipment necessary to reduce risk of employees being harmed while at work;
- Placing health and safety issues before commercial interests;
- Recording and investigating all accidents and near misses that may occur;
- Ensuring that specific hazards to the public related to works controlled by the Company are identified in the site specific safety plan and safeguards are in place and audited to prevent, control or mitigate risk of harm.

All employees have been consulted and agree with the aforementioned to conform to this policy. All Company employees are reminded that they have a legal responsibility to take reasonable care for the health and safety of themselves, their colleagues and any visitors to Company premises or worksites.

Health and Safety Pre-qualification

Urban Solutions is currently pre-qualified by impac Prequal Cat 2 with a 5 star rating. Valid from 19 May 2017 to 19 May 2019.

Sustainability Policy

Urban Solutions Limited is committed to leading the industry in minimising the impact of its activities on the environment.

The key points of its strategy to achieve this are:

- Actively promote recycling both internally and amongst its customers and suppliers.
- Meet or exceed all the environmental legislation that relates to the Company.
- Commit to a shared office based accredited program to offset the greenhouse gas emissions generated by our activities with like minded organisations.
- Minimise waste by evaluating our office and field based activities and ensuring they are as efficient as possible.
- Evaluate our transportation activities and minimize greenhouse emissions and wisely use energy sources.

