Long Term Plan 2021-31

Activity Plan

Technical Services and Design

(Internal Activity)

Adopted 21 & 23 June 2021



Approvals

Role	Position	Name	For Dra	aft LTP
			Signature	Date of sign-off
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1. What does this activity deliver?

The Technical Services and Design Unit (TSD) is the in-house design and professional services office of the Christchurch City Council. TSD designs or reviews a large portion of the infrastructure and buildings that form the Capital Programme of the organisation. TSD has existed under various names over many years and as a result, is the holder of significant institutional memory of the city's built assets.

This activity provides the following service to Council:

• Professional Service & Design

The major facets of this service include:

- Building and infrastructure design
 - Roading
 - Three waters assets
 - Buildings and Structures
 - Parks and streetscapes
- Construction contract management and Auditing of subdivisions.
- Land surveying
- Specialist technical advice
- Additional Non-recoverable Services provided:
 - Development of Council standards for infrastructure such as IDS (Infrastructure Design Standard) and CSS (Construction Standard Specifications)
 - o Maintain the City's Survey Benchmark Network
 - Provide technical input into Council submissions on Government Legislation/Policies etc.
 - o Lead Council's environmental compliance for construction projects through Global Consents and Guidelines (eg Coal Tar Guideline)
 - o RMA planning and assessments including geotechnical overlays

A snapshot of Provision and Use in 2018/19:

- Designed \$133.3M of the total \$395.4M Capital Programme
- \$137M Construction management of the total \$395.4M Capital Programme
- 221 topographic / cadastral surveys
- Responded to 546 Requests for Professional Services from across Council (Jan-Dec 2019)
 - Architectural and Structure, 79 requests
 - Contract Management, 64 requests
 - Parks and Landscape, 58 requests
 - Survey, 206 request
 - Transport, 81 requests
 - Water and Waste, 58 requests

This Internal Service supports all of the Community Outcomes through the organisational support provided by this Activity to the External Services of the Council particularly in the areas of transport, three waters, parks and reserves, community facilities and subdivisions.

- Safe and healthy communities in transport, three waters and reserves and parks areas
- Vibrant and liveable city centre in planning, urban design and transport areas
- Well connected and accessible city in planning, urban design and transport areas
- Healthy water bodies in three waters, transport and reserves and parks areas
- High quality drinking water in three waters and reserves and parks areas
- Unique landscapes and indigenous biodiversity in planning, urban design, reserves and parks, construction management areas
- Sustainable use of resources in planning, transport, three waters, facilities, reserves and parks areas
- Modern and robust city infrastructure and community facilities in planning and delivery of, transport, three waters, facilities, reserves and parks areas
- Great place for people, business and investment in the sum of all areas above

3. Strategic Priorities – how does this activity support progress on our priorities ?

TSD makes design decisions for the delivery of Council's new assets, repairs and renewals in collaboration with the asset owner business units.

Strategic Priorities	Activity Responses
Enabling active and connected communities to own their future	 Through design decisions, as well as advice, reviews and community interaction (such as through community working parties): Building on and enhancing public access and networks to strengthen the city's character and build community pride. Liaison with general public, property owners and other authorities on principles and details of design projects. Ensuring public spaces contribute to resident's wellbeing and provide opportunities to relax and interact through engagement and innovative design solutions.
Meeting the challenge of climate change through every means available	 Through design decisions, as well as advice and reviews: Integration of operational energy, water and waste needs and costs of buildings into building and infrastructure designs, specifications and material choices. Promotion of better landscape, building and urban design through sustainable design principles. Design and building of transport links that promote resource efficient and active modes of transport. Incorporation of more vegetation into the built environment to create a healthy urban environment.

Strategic Priorities	Activity Responses
	 Inclusion of more trees and gardens in the city centre that provide a well-connected and legible open space network. Promotion of innovative and sustainable design practice which will add value to projects out come Promote designs that improve water quality, provide more effective storm water management and increase biodiversity Involves wetland and waterway enhancement planning, design and construction, also reviewing consultant work to ensure compliance with water, wetlands and drainage guide (WWG) and six values (landscape, heritage, ecology, recreation, culture and drainage).
Ensuring a high quality drinking water supply that is safe and sustainable	 Through audits and design decisions as well as through advice and reviews: Ensuring design of reticulation and wellheads are compliant, including reviewing consultants work Developing Councils Construction Standard Specifications (CSS) requirements for bacteriological testing and chlorination and safe practices Construction monitoring to ensure hygiene requirements are met
Accelerating the momentum the city needs	 TSD designers and surveyors work both at the strategic and delivery ends in facilitating or making the design decisions for the City's public assets. Bring together inner city projects in a coherent and coordinate way as the city develops Maintain Christchurch City Council's Benchmark Network to enable vertical and horizontal builds to be referenced to the Christchurch Drainage Datum. Consider multiple demands and integrate aspects of the environment with the requirements of the council, public interest and statutory requirements Create high quality pedestrian and cycle linkages supplied with a range of street furniture and new plantings whilst continuing to provide a safe and efficient roading network for the movement of goods and people using private and public transport modes.
Ensuring rates are affordable and sustainable	This Internal Service protects and advises Council. Our design and professional experts hold local and institutional knowledge of Council processes and standards, which is more cost efficient to hold in house than to pay for externally. The lower charge-out rates due to non-profit nature of the unit means Council projects benefit from more senior design and advice than available in the market for the same cost. Design staff being directly employed by Council means staff make decisions for the long term value of the assets and the City without being influence by other possible commercial interests.

4. Increasing Resilience

Relevant Resilience Driver for the Technical Services and Design Activity Plan Activity Plan

The relevant resilience drivers for in this activity are:

- Ensure Continuity of Critical Services by actively managing and enhancing our natural and man-made resources. This includes designing physical infrastructure so that communities are protected, as well as ecosystem management for flood risk management.
- Provide and Enhances Protective Natural and Man-Made Assets by maintaining protective natural and man-made assets that reduce the physical vulnerability of city systems. This includes natural systems like wetlands and sand dunes or built infrastructure like sea walls and stopbanks.

Relevant Resilience Characteristics for the Technical Services and Design Activity Plan.

Relevant Resilience Characteristics for this activity are:

- **Resilient infrastructure** conceived, designed and delivered by the TSD teams using failsafe guides such as the IDS (Infrastructure Design Standards) and CSS Construction Standard Specifications).
- Review and updating of the guides to ensure they provide resilient infrastructure for the City now and in the future. (LOS 13.7.25.4)

Resilience in Technical Services and Design

Technical Services and Design (TSD) is a central in-house source of institutional knowledge. Our technical specialists have intrinsic knowledge of all Council infrastructure and can provide advice on the effects of any event on the Community and Council infrastructure. This was shown post the 2011 earthquake when the majority of TSD staff were transferred into SCIRT to provide technical knowledge of Council's infrastructure design and construction standards.

This internal activity reduces the reliance on external Consultants for technical advice and professional support on capital projects and some operational work. Having this group in house also provides Council with technical specialists and designers who are readily available during and post any disruptive event.

Examples:

- TSD's principle geotechnical advisor manages a 24/7 roster to access slope stability experts via the Port Hills Slope Stability Engineering Panel (SSEP). Through the roster, the panel members are available at short notice and under existing contract conditions which cover large scale events as well as smaller disruptions.
- TSD's structural engineers are available and experienced in bridge and Council facility building assessments as well as assisting in prioritisation based on GNS data in a large scale event.

5. Specify Levels of Service

	C/ M1	Performance Measures		hmarks		Future Perfor	mance Targets		Method of Measurement	
number	M+	Levels of Service (LOS)	Performance Trends		Year 1 2021/22 Year 2 2022/23 Year 3 2023/24		Year 10 2030/31	_	Outcome	
Technica	al Se	ervices & Design	· ·		·	·		·		•
13.7.25.4	t i s i c	Deliver professional and echnical support, ncluding land (cadastral) surveying, pre-design advice, building and nfrastructure design and construction contract management	2019/20: Achieved 2018/19: Achieved		Infrastructure design Standards and Council standard construction specifications are reviewed at least every 2 years.	Infrastructure design Standards and Council standard construction specifications are reviewed at least every 2 years.	Infrastructure design Standards and Council standard construction specifications are reviewed at least every 2 years.	Infrastructure design Standards and Council standard construction specifications are reviewed at least every 2 years.	Staff follow approved processes and meet their customers' expectations in the delivery of professional and technical support	Internal Service
13.7.25.2	t i s i i	Deliver professional and echnical support, ncluding land cadastral) surveying, pre-design advice, building and nfrastructure design and construction contract management	2019/20: 94% 2018/19: 90%		Define and agree briefs and key performance measures with the customer within 20 working days of request being received. 95% target	Define and agree briefs and key performance measures with the customer within 20 working days of request being received. 95% target	Define and agree briefs and key performance measures with the customer within 20 working days of request being received. 95% target	Define and agree briefs and key performance measures with the customer within 20 working days of request being received. 95% target	Respond to requests for Professional Services and Resourcing Requests from Operational Units on an as required basis.	Internal Service
13.7.25.3	t i s i c	Deliver professional and echnical support, ncluding land cadastral) surveying, pre-design advice, building and nfrastructure design and construction contract management	2019/20: 91% 2018/19: 81%		Deliver information within performance measure agreed with the customer 85% target	Deliver information within performance measure agreed with the customer 90% target	Deliver information within performance measure agreed with the customer 95% target	Deliver information within performance measure agreed with the custome 95% target	Measure number delivered to agreed KPM's, e.g. time, budget, quality, etc.	Internal Service

¹ C/M – Community or Management level of service (LOS)

Community LOS - Previously known as LTP LOS. These are LOS that are community facing and will be published in our Statement of Service Provision. Management LOS - Previously known as Non-LTP LOS. These are LOS that are measured in the organisation to ensure service delivery.

No S17A Service Delivery Review for this planning period.

7. What levels of service changed from the LTP 2018-28 and why?

No changes proposed to Levels of Service.

8. How will the assets be managed to deliver the services?

No Asset Management Plan for this activity.

Technical Services & Design											
000's	Annual Plan 2020/21	LTP 2021/22	LTP 2022/23	LTP 2023/24	LTP 2024/25	LTP 2025/26	LTP 2026/27	LTP 2027/28	LTP 2028/29	LTP 2029/30	LTP 2030/31
Activity Costs before Overheads by Service											
Technology Enablement	(3,354)	(3,896)	(4,029)	(4,087)	(4,269)	(4,412)	(4,607)	(4,696)	(4,800)	(4,915)	(5,037)
	(3,354)	(3,896)	(4,029)	(4,087)	(4,269)	(4,412)	(4,607)	(4,696)	(4,800)	(4,915)	(5,037)
Activity Costs by Cost type											
Direct Operating Costs	61	99	103	108	112	115	119	122	126	129	132
Direct Maintenance Costs	79	80	83	85	87	90	92	95	98	101	105
Staff and Contract Personnel Costs	(3,532)	(4,115)	(4,255)	(4,323)	(4,511)	(4,660)	(4,863)	(4,959)	(5,071)	(5,194)	(5,324)
Other Activity Costs	39	40	41	42	43	44	45	46	47	49	50
	(3,354)	(3,896)	(4,029)	(4,087)	(4,269)	(4,412)	(4,607)	(4,696)	(4,800)	(4,915)	(5,037)
Activity Costs before Overheads	(3,354)	(3,896)	(4,029)	(4,087)	(4,269)	(4,412)	(4,607)	(4,696)	(4,800)	(4,915)	(5,037)
Overheads, Indirect and Other Costs	3,304	3,852	3,956	3,996	4,150	4,280	4,476	4,576	4,696	4,818	4,937
Depreciation	50	43	72	91	119	132	132	119	104	97	100
Debt Servicing and Interest	-	-	-	-	-	-	-	-	-	-	-
Total Activity Cost	(0)	(0)	0	0	(0)	0	(0)	0	0	(0)	0
Funded By:											
Fees and Charges	-	-	-	-	-	-	-	-	-	-	-
Grants and Subsidies	-	-	-	-	-	-	-	-	-	-	-
Cost Recoveries	-	-	-	-	-	-	-	-	-	-	-
Other Revenues		-	-	-	-	-	-	-	-	-	-
Total Operational Revenue	-	-	-	-	-	-	-	-	-	-	-
Net Cost of Service	(0)	(0)	0	0	(0)	0	(0)	0	0	(0)	0
Capital Expenditure											
Replace Existing Assets	73	125	172	150	71	93	72	99	89	92	94
Total Activity Capital	73	125	172	150	71	93	72	99	89	92	94

10. How much capital expenditure will be spent, on what category of asset, and what are the key capital projects for this activity?

Planned C	apital Pro	gramme	Detail by Activity											(\$000)
Activity	Driver	ID	Project Name	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Technical S	Services & D	esign)												
	Asset Re	enewal												
		446	Delivery Package - Digital Survey Equipment Replacements & Renewals	72	86	150								308
		36935	Programme - Digital Survey Equipment Replacements & Renewals				71	93	72	99	89	92	94	610
		61634	Technical Services & Design - Vehicles & Equipment Replacements	54	86									140
Technical S	Services & D	esign To	tal	126	172	150	71	93	72	99	89	92	94	1,058

11. Does this activity have any significant negative effects on social, economic, environmental or cultural wellbeing, now or in the future?

This activity has NO significant negative effects on social, economic, environmental or cultural wellbeing, now or in the future, in fact we ensure through our design and contract management processes that we ensure positive effects.

12. What risks are identified and what controls and mitigations are planned?

for each risk, we suggest a maximum of	5 items against each risk)		rusesseu	Risk Level	Controls and Mitigations
Risk Title There is a risk that/of:	Caused By:	Resulting In:	Inherent	Residual	
Major Business Disruption There is a risk of: Major national/local disruptions, which has a major adverse impact on the "normal business of Council" including pandemic/epidemic (eg COVID-19, Swineflu) or other natural "Acts of God" (eg Earthquake or Tsunami) or another similar large impact 'Black Swan' event.	 Restrictions placed on staff movements and ability to access the office Significant reduction in physical availability and/or mental capacity of the workforce relating to the disruption (serious illness, injury, high stress) Inability to access existing hardware, software and other equipment Connectivity with Councils IT network and the constraints that involves Reduced external capacity/availability of infrastructure and resources which enable Council services to engage with external Council stakeholders / community members, including: breaks in internet / digital / phone networks roading/transport/rail networks and/or closed borders impacting procurement supply chains/resource availability. 	 Inability to deliver capital projects Inability to provide professional advice to Council and external stakeholders Staff not being able to work, without availability of their specialist hardware and software requirements Increase in staff mental health and well-being concerns, and need for support services/resources Increase in non-productive time. 	72.0	45.0	 Review/update Business Continuity Plan and ensure learnings and improvements from the COVID-19 experience are captured for future events Review hardware choices provided by Council's IT Department, and ensure they are fit-for-purpose Reduce/manage heavy reliance on individuals (and their institutional knowledge) by: identifying and/or establishing back-up arrangements undertaking capability development/upskilling of staff to capability pool record and maintain process mapping develop/maintain relationships with external/alternative providers recording and sharing institutional knowledge.
Sufficiency of Resources and Capability to Carry Out Agreed Obligations	 Lack of availability of highly technically skilled/qualified and specialist candidates Uncertainty around direction and future structure of Council 	 Loss of essential/core staff, overwhelmed by (unreasonable) changes Heavy reliance on outside 	72.0	56.0	 Managers proactively ensure PD's reflect role and job evaluations, along with remuneration scale reflecting responsibilities and changing
Council is unable to attract, develop and retain staff with the expertise and experience (in the numbers and at the required capability/skill level) needed to deliver services to Council.	 Miss-match of resource(s) to (variable) volumes/types of work (Previously) unplanned-for sudden changes to Council services/projects in response to changed EM requirements Lack of clarity around variable workforce planning requirements and related 	 consultants with the consequential loss in internal knowledge, and increase in costs Adverse drivers for staff to compete with each other, to withhold information and 			 recruitment marketplaces Organisational structure (people/processes) regularly reviewed and updated to reflect the needs of Council along with reflecting the changing recruitment

for each risk, we suggest a maximum of	entify, complete the following sections. You can have mc 5 items against each risk)	ore than one cause or result/outcomes	Assessed	Risk Level	Controls and Mitigations
Risk Title There is a risk that/of:	Caused By:	Resulting In:	Inherent	Residual	
	 budgetary availability, being explicitly linked to LTP/AP and AMP Aggressive project/business management new/changing legislative/technological requirements needing new skillsets limited training budgets to bridge skill gaps for staff as new technology / legislative requirements and/or service standards are implemented. 	 lessons, leading to loss of learning opportunities and collective growth as well as duplication of efforts and increased costs Lack of ownership of the issues and an inability to progress key initiatives in core functions of Council Over-taxed staff becoming sick, driving unbalanced workloads/resource availability, negatively impacting delivery to the business. 			 marketplace, workforce planning and internal operating environment Succession plans in place for all critical and specialist roles where scarcity in the market or in house knowledge dictates a need Council –wide promotion of a collaborative, learning, growth and trust based team environment.
 Funding Cutbacks Given a number of different background factors, including: the changing national economic/political (upcoming election) environment the reduced external income pipelines from tourists and visitors/overseas students, post-COVID-19 the LTP review/revision process currently going through EMs There is a risk of: Potential cut backs of funding for projects run by the Unit and TS&D team, through the changed LTP and/or Annual Planning process 	 Not replacing hardware in standard business cycles Not updating software to current versions Not investing in technology changes to improve efficiencies and current trends in the technical disciplines Not filling already open roles, which have been difficult to find suitable candidates for Not replacing existing vehicles and survey equipment at appropriate life cycles. 	 Increase in staff non-productive time due to software failures Inability to carry out our work to the standards required Falling behind "the industry" in technology use/adaptation Increase project design and delivery costs across the Council through the increase of Council's dependency on consultants. 	72.0	45.0	 Ensure requirements are detailed in the financial resources section of this Activity Plan Promote the additional value technological improvements provide to TSD and Council as a whole Support IT funding requests for updating existing software and hardware Maintain the existing three year hardware replacement cycles for CAD and Design Hardware.

Risk / Uncertainty: (for each risk you ide for each risk, we suggest a maximum of	entify, complete the following sections. You can have mo 5 items against each risk)	re than one cause or result/outcomes	Assessed	Risk Level	Controls and Mitigations
Risk Title There is a risk that/of:	Caused By:	Resulting In:	Inherent	Residual	-
Compliance with approvals, licenses, and consents There is a risk that: Council activities fail to comply with District Plan(s) and/or conditions of approvals, licenses and consents, from regulatory bodies. (NB This excludes H&S requirements).	 Staff being unaware of compliance responsibilities, or the applicable compliance requirements of the activity being undertaken new/changing legislative/technical requirements, which have not been clearly communicated to the sector Internal policies and processes are not well designed or communicated, and/or not appropriately followed to meet compliance obligations. 	 Prosecution by Regulatory Body Loss of National/Global Consents Reputational damage. 	72.0	45.0	 Environment Management Plans are developed during the design phase and are incorporated into the Tender and Contract documentation Environment Management Plans are to be managed and monitored during the construction phase of contracts.
Contractor Underperformance The Council engages outside Contractors for maintenance of assets and construction of new assets. Council also engages Consultants to provide advice and design services. There is a risk that: The performance of the engaged Contractors / Consultants does not meet: • industry or regulatory standards • sector best practice • the required quality level • agreed contractual obligations, T&Cs and/or contract specifications.	 Council specifications/requirements not being reflected/articulated clearly in the original Rfx documents and/or Contracts Failure to specify clear Contract KPIs and to undertake effective contract reviews/feedback with the Contractors/Consultants (meaning issues are not picked up at an early enough stage before they "blow-up") Council and/or the Contractors/ Consultants do not have a common understanding of the "agreed" Contract (eg terminology/language, ownership/accountability, financial liabilities and related T&C/specifications) Work not being carried out following best practice or specified Contract requirements Contractor/Consultants committing to undertake work which they do not have sufficient resource to deliver (personnel, equipment/time/finances), and/or being dependent upon third part suppliers who are unable to meet their agreed obligations with the primary Contractor/Consultant 	 Extra cost, extend/moving delivery timescale and/or milestones and disruption to the overall contract implementation and/or relationship with the Contractor/Consultant Reputational damage (internal to Unit/function and from external stakeholders) due to rework being required and consequential disruption to completion of the project and/or relationship with the contractor Reputational damage for failing to deliver the committed to Levels of Service (LoS) Cost increases for reworks Staff and public at risk to injury or death The Council will lose its reputation as a preferred/trusted partner. 	72.0	40.0	 Contractor performance monitored and Low Service Damages and KPI scoring carried out Monthly - Quarterly Any drop in performance or raise in LSD discussed at monthly contract review meetings Any continuation of poor performance discussed at higher level (CRM) relationship meeting Contactor raises 'Early Warnings' through agreed contract mechanism, and takes part in EW discussions with council Senior/Executive Council Management to be kept informed of any developments where Contactor/Consultant performance or EWs are notified, to attempt to prevent escalation of poor performance Contract Manager put in place for wellhead and chlorination work

Risk / Uncertainty: (for each risk you id for each risk, we suggest a maximum of	dentify, complete the following sections. You can have mc of 5 items against each risk)	Assessed Risk Level		Controls and Mitigations	
Risk Title There is a risk that/of:	Caused By:	Resulting In:	Inherent	Residual	
	 Contractor/Consultant is overstretched with extra work being asked by the Council Contractor non-compliance to agreed maintenance schedules Contractor does not follow the H&S, Quality Assurance and Traffic Management Plans Substandard invoicing narrative/information Council team not able to manage contractor/consultant well enough because of internal resourcing and competency issues, and/or lack of clarity associated with who is responsible for what internally (project/contract/procurement management) Consultant/Contractor over-committed to other works, without declaring/undertaking early warning process Consultant/Contractor staff allocated to the job not appropriately trained and/or qualified. 				 Ensure scope of work is clear and agreed in Contracts, with both parties having a common understanding Ensure appropriate audits are in place Understand the capacity and capability in the industry Review resourcing requirements for maintenance contract management. Implement monthly feedback to Contractors and Consultants, e.g. PACE system. Monitor KPI's in a timely manner.