



ABN: 89791717472

COMPETITION AUTHORITY

28 FEB 2011

DATE RECEIVED

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Mr John Hall  
Chief Executive Officer  
Queensland Competition Authority  
Level 19, 12 Creek Street  
Brisbane QLD 4001

28 February 2011

Dear Mr Hall

A handwritten signature in black ink that reads "John".

### **February 2011 Draft Report SEQ Interim Price Monitoring – All other matters**

Thank you for the opportunity to respond to the Queensland Competition Authority's<sup>1</sup> Draft Report titled "South-East Queensland Interim Price Monitoring for 2010/11 Part A Overview; Part B Detailed Assessment" including related appendices and consultants reports. The subject of this response is all matters not considered in Unitywater's response on the proposed Weighted Average Cost of Capital submitted 21 February 2011.

Unitywater has used best endeavours to respond in a fulsome way to the Authority's draft report, albeit that the condensed timeframe for response has been challenging. Unitywater has therefore focused this response to critical matters in relation to operating, capital or auxiliary expenditure forecasts for 2010/11, where findings in the 2011 Draft Report suggested the Authority required additional information or made observations that require comment or correction.

Unitywater has included at Attachment 1 a table that provides source references for comments in relation to matters arising from the Authority's draft report that are discussed in this letter. Unitywater provides the following comments on matters that are more critical or material.

#### **Capital projects reviewed**

Unitywater agrees with several of the Authority's findings and submits supplementary information for further consideration in relation to a number of specific findings. To support its response, Unitywater, has included Attachments 2, 3 and 4 being information that relates to the following capital projects:

- South Caboolture Sewage Treatment Plant Upgrade and Augmentation (Stage 2). Additional information provided relates to documentation for technical, design and construction requirements and the proposed program of work; and

<sup>1</sup> Referred to as "the Authority" in this letter for enhanced readability.



- Water Supply Facilities – Switchboard Replacement Program. Additional information provided relates to information to assist SKM to consider the prudence and efficiency of the project.

The Authority found that proposed expenditure for a number of projects was to remain in the 2010/11 budget however the Authority expressed a desire to undertake further review of the budget for 2011/12 and beyond, prior to making a decision on the prudence and efficiency of the project costs. Unitywater intends to provide additional information as part of the 2011/12 Interim Price Monitoring submission for the following projects:

- Noosa sewage treatment plant;
- Kawana sewage treatment plant;
- Burpengary sewage treatment plant Stage 2 Augmentation;
- Heavy vehicle replacement program;
- Water meter replacement program; and
- WPS pump replacement.

Unitywater requests the Authority amends the commentary relating to the removal of the project 'Water main off-take and supply main from Northern Interconnector Pipeline'. The interconnector project was linked to the Water Supply Service Reservoir, Boundary Road Reservoir No3 (24ML) and both projects should be removed from the budget due to a revised instruction from the Water Grid Manager that supply would be arranged through an alternative project, saving significant costs.

### **SEQ Floods impact**

Unitywater agrees with the Authority that the impact of the South East Queensland floods cannot, at this time, be taken into account. The floods will be one of the explanatory variables when comparing forecast expenditure for 2010/11 with actual results in the next Interim Price Monitoring Submission.

Some planned capital and operating expenditure was delayed due to accessibility and safety concerns for Unitywater crews. These delays are in addition to the \$50M prudent deferral of capital expenditure put forward by Unitywater prior to the floods occurring.

Unitywater's rapid response and preparedness mitigated the impact of the floods on critical infrastructure within our region. Unitywater purposefully shed power to eliminate risks with inundation, however some plants did operate in overflow mode until flows subsided or operated at a lower capacity due to the electrical components being isolated. Full capacity was achieved much faster than anticipated, in most cases within 96 hours of the sewage treatment plants being inundated.

Unitywater experienced no drinking water hazards, however the water treatment plants in some isolated communalities of Dayboro and Kenilworth shut down. Unitywater cooperated with the other Grid Participants and the council-run Local Disaster Management Groups to maintain and restore essential supplies. There were no staff injuries due to the flood or restoration of capacity. The flood incident validated Unitywater's early efforts on its formation, to put in place a business continuity plan and disaster recovery plan. The disaster management response operated very well in its first



real time test. The rapid return to capacity permitted Unitywater crews to assist Queensland Urban Utilities with repairs to their critical infrastructure.

### **Under recoveries**

Unitywater requests that the Authority publish its views on whether under recoveries of MAR during price monitoring are recoverable during future periods. The Authority may consider options such as:

- Capitalising under recoveries during the price monitoring period into the regulatory asset base for recovery over a time period to be determined; but return over recoveries as soon as practicable on an NPV neutral basis; or
- Applying a standard unders and overs mechanism on a net present value neutral basis.

### **Demand forecasts**

Unitywater notes the Authority's comments on demand forecasts, in particular relating to price elasticity, data sources, consistency of long term and short term forecasts and daily per person usage targets.

Determining price elasticity is very difficult in Unitywater's case as one region is encountering lighter water restrictions but having a subsidy removed, whereas the other region is entering water restrictions for the first time during a period of increasing bulk water costs.

Unitywater suggests that the adoption of Planning and Information Forecasting Unit (PIFU) forecasts and differences between long and short term forecasts will be documented as part of Unitywater's ongoing review of demand forecast methods. Unitywater agrees that at the South East Queensland level PIFU is a strong indicator of growth but at the regional and local level other information should also be taken into account, particularly if part of a detailed study by the local council.

Unitywater largely accepts the Authority's PIFU forecasts at this point in time, however reserves its position as the demand forecast methodology is internally revised and improved.

Unitywater further suggests that assumptions for water volume per person per day are an important consideration in the demand forecast. At this point in time Unitywater accepts Frontier's forecasts for water volume per person per day, however reserves its position as the impact of both the recovery from the drought in the Moreton Bay Region and the imposition of permanent low level restrictions in the Sunshine Coast Region becomes clearer.

Unitywater notes the Authority's suggestions to develop more specific short term forecasts for connections and volumetric consumption for potable water, recycled water and trade waste. Unitywater is examining ways to address these issues, however implementing metered volumetric trade waste is probably some years away.



Unitywater agrees with the Authority that a thorough understanding of standards for quality and quantity is important; Population growth, dwelling demographics, dwelling growth, temperature, rainfall, prices, water restrictions, embedded efficiency infrastructure, as well as pricing structures should all be determined using a progressive selection process that takes into account the statistical significance of each variable. This will be important to incorporate in future planning.

Unitywater notes its forecast capital and operating expenditure projects and programs were built to a lower demand forecast than accepted by the Authority, further that the Authority has not scaled up the projects or programs to reflect the higher demand forecasts.

As more operational experience and information such as demand becomes clearer, Unitywater will continue to revise and improve its demand forecasts over the price monitoring period.

#### **Prudent deferral of Capital Expenditure**

Unitywater submits that the Authority correctly quantified Unitywater's proposed \$50M prudent deferral of capital expenditure, however Unitywater contends that the \$50M deferral should be fully reflected in 2010/11 and does not carry over to the next period. Unitywater understands this will reduce MAR in the Authority's final report and deliver benefits to customers in future periods as the asset base will be lower than would otherwise be the case.

#### **Operating Expenditure Efficiency Targets**

Unitywater submits that the Authority's assumption of 2% efficiency targets on non-bulk operating costs, does not take into consideration the start up and developing capability of Unitywater or the work required to amalgamate systems and processes from the six regional water businesses that have been joined. Unitywater suggests that the efficiency targets commence from 1 July 2013 once establishment and consolidation activities are complete. Unitywater would like to further engage with the Authority through the interim price monitoring submissions to refine efficiency targets.

#### **Employee Costs**

Unitywater further contends that SKM's view regarding the primary constraints within the SEQ Urban Water Arrangements Reform Workforce Framework (2010) (SEQ Framework), as being no forced redundancy or overall loss of employment as a result of water reform does not reflect a full understanding of the SEQ Framework. Unitywater suggests that the SEQ Framework is a far broader document and as such places considerable constraints on Unitywater's flexibility and capacity to reorganise labour. For example, start and finish times, locations of work or duties, pay scales and penalty rates for particular groups or individual can only be varied with agreement predicated on a no disadvantage test.



## **Employee Costs Natural Attrition**

Unitywater notes the Authority's observation that natural attrition provides a source of potential efficiencies even within the constraints of the SEQ Framework, however the natural attrition of required skills will require replacement. The SEQ Framework, does not specifically form a view on natural attrition, however it effectively grandfathers roles, pay scales, locations of work and duties by applying a no disadvantage test. There is also the burden of paying for work relocation in cash and time. Unitywater submits that the SEQ framework operates such that the only way to vary roles, position descriptions, locations of work or alike is through bilateral and in some cases multilateral agreement between Unitywater, the applicable employee or class of employee and the respective union or unions. This is a significant constraint and cost driver.

## **Availability of Relevant Skills**

Competencies required in order to operate Unitywater's business are in most cases not readily available. Unitywater increasingly has to train its workforce, and on certification those same employees are highly sought after by other public and private sector entities. Unitywater has a commitment to training field and planning staff in order to ensure Unitywater's Infrastructure Services Division retains a sufficiently skilled workforce to replace natural attrition and retirements from an aging workforce.

The Authority may not have fully considered that as a start up business Unitywater has new capabilities to establish, embed and retain. To a large extent the resources transitioned from local council comprised primarily of field based and engineering planning staff. There were several critical functions (such as retail, corporate and regulatory) that were previously provided through Council's Corporate offices or shared services. The retail function itself is essentially all new.

Unitywater is rapidly progressing toward, but is yet to attain, standalone capability. Unitywater's emerging capability, as well as the emerging regulatory and operational environment continues to identify functions or roles where specialist skills are required. Unitywater expects that it will continue to develop into a mature business over the first regulatory control period 2013-16.

**Corporate cost benchmarks:** Unitywater recognises the benefits of benchmarking to guide assessments of cost reasonableness. Unitywater notes SKM's use of the "Council on the Cost and Quality of Government Guidelines" (CCQG) that an appropriate level of corporate overhead expenditure should range between 10% to 12% of overall operating costs for agencies over 350 FTE.

Unitywater submits that the CCQG may not be an appropriate benchmark for Unitywater's corporate overhead expenditure for the following reasons:

1. CCQG guideline definitions of corporate overhead differ from the Authority's price monitoring definitional guidelines, particularly in the treatment of network operations overhead, retail costs and overhead expenditure of a non-recurrent nature. Unitywater is not aware of any adjustments made by SKM to align definitional differences prior to comparing Unitywater to the CCQG benchmark. For example,

where non-recurrent costs are excluded from corporate overhead, as indicated by CCQG guidelines.

2. Examples of agencies discussed in the CCQG guidelines, include libraries, health services and transport with 350 FTE's or more. Unitywater submits that the CCQG intended application of the guidelines may be too broad to generate meaningful comparisons for an infrastructure intensive industry such as water and sewage characterized by long life assets.
3. Best practice benchmarking would account for industry type, size, demographics, geological and geographical differences as well as maturity of the business by differentiating between developing and mature businesses.

Unitywater suggests that the CCQG may not be the most appropriate benchmark tool.

At this time even direct cost comparisons between the three South East Queensland distributor-retailers is problematic due to differing levels of reliance on Council provided services. Unitywater at this point in time is far more autonomous than the other two with very little return going to council by way of SLA.

Unitywater would welcome the opportunity to assist the Authority to identify an appropriate benchmark for cost comparison purposes.

### **Future Reviews**

Unitywater welcomes working with the Authority to review future proposed capital expenditure to address growth, compliance, replacement and improvements of the water network and sewage treatment plants. Unitywater notes that meeting growth in population and connections has a major impact of reconfiguring sewage treatment plants to meet revised licence conditions on discharge. Unitywater through its Asset Steering Committee and Board level Capital Works Committee ensures all projects receive a thorough assessment and consideration of alternatives or opportunities for prudent deferral.

### **Information gaps**

Unitywater confirms the Authority's view that information gaps in order to finalise the RAB remain, and the process may not be complete in time for the 2011/12 Interim Price Monitoring Submission. Unitywater has submitted the independently reviewed RAB assessments to the participating councils with comments expected by 10 March 2011. These comments will then be provided to the Minister for Energy and Water Utilities for final determination of the RAB.



### **Auxiliary Data Verification Report (cost disaggregation)**

Unitywater acknowledges SKM's commentary regarding the level of cost disaggregation provided by Unitywater. Unitywater agreed with the Authority to supply supporting worksheets that are in addition to and supplement the information templates. Those supporting worksheets disclosed disaggregated levels of information by individual assets as well as disaggregated operating costs mapped to services by project and natural account. The file is entitled "Unitywater IPRM File and Work-paper Mapping.xls" it was submitted with Unitywater's 2010/11 price monitoring submission. That file provides links to detailed work-papers and is mapped to the Authority's templates. Unitywater would welcome any opportunity to assist the Authority to locate and review the material.

### **Authority Amendments to Depreciation and Indexation**

Unitywater notes the Authority amended depreciation (\$3m) and indexation (\$8m). Unitywater is unable to reconcile the nature of the adjustments and requests further details of these adjustments prior to the final decision.

### **Contributed Assets**

The Authority's commentary on pages 151 of its Draft Report regarding exclusion of contributed, donated and gifted assets from capital expenditure in the periods 2008/09 and 2009/10 does not appear to reflect Unitywater's submission, as those items were included in capital expenditure and within the RAB roll forward.

Table 12 contained in Part B of the Authority's Draft Report requires further discussion which may impact on the RAB roll forward from 2008/09 and related consequential impacts on depreciation, indexation and return on assets.

### **Addendum on Weighted Average Cost of Capital (WACC)**

Unitywater reviewed the Authority's draft report and in particular the derivation of a cost of debt through the use of credit default swaps (CDS). Unitywater would like to draw the Authority's attention to an independent submission by JP Morgan in relation to Telecom New Zealand that considered the use of CDS and Interest Rates Swaps (IRS) to derive a particular corporate bond tenor. Unitywater suspects the use of CDS has been made without fully appreciating the nature of the financial instrument and refers the Authority to Attachment 5 of this submission.



Unitywater would welcome any further opportunity to discuss this submission or assist the Authority in determining findings for inclusion in its Final Report expected 31 March 2011. Any technical queries relating to this matter can be directed to Unitywater's Manager of Regulatory Affairs, Damian Platts, on (07) 5431 8235.

Yours sincerely



Jonathan P.O. Black  
**Chief Executive Officer**

**Attachments:**

1. Attachment 1 Unitywater references for individual comments
2. Attachment 2 South Caboolture STP Augmentation Documentation for SKM (cdrom) containing four files
  - a. South Caboolture STP Augmentation – Civil & Structural Drawings
  - b. South Caboolture STP Augmentation – Electrical Drawings
  - c. South Caboolture STP Augmentation – Project Program
  - d. South Caboolture STP Augmentation - Specifications
3. Attachment 3 Water Supply Facilities – Switchboard Replacement Program
4. Attachment 4 Water Supply Facilities – MBRC SCADA Telemetry Upgrade
5. Attachment 5 Telecom New Zealand JP Morgan Independent Opinion July 2009

Attachment 1: Unitywater more detailed individual comments

Reference document	Item number	Page number	Issue	Comment
QCA Draft Decision Part A	1	5	\$50M capex reduction has been phased by QCA using capitalisation 65% capitalisation assumption	Unitywater submits the Authority should amend the \$50M capital expenditure deferral to be fully reflected in the 2010/11 interim price monitoring period and not apply a 65% capitalisation assumption.
	2	6	Efficiency targets of 2%pa in non-bulk operating costs	Unitywater submits this does not take into consideration the start up costs of transitioning from SLA's and alike to stand alone capability. The efficiency targets should start to apply as from the business attaining standalone capability and has undertaken establishment and consolidation activities to effectively operate the business.
QCA Draft Decision Part B Price path	3	138	NPV neutrality	<p>Unitywater requests that the Authority publish its views on whether under recoveries of MAR during price monitoring are recoverable during future periods. One possible option may include capitalising the under recovery's in the RAB.</p> <p>Unitywater will further examine this with a proposal for the 2010/11 under recovery in its 2011/12 price monitoring submission.</p>
Cost Escalation	4	154	Indexation 2.5% versus capex escalation 5.0%	RAB outturn CPI indexation Unitywater capital expenditure was escalated by a cost escalation of 5%, this was consistent with the Construction Index pa Fy11-13 refer to section 3.2 budget assumptions of Unitywater's Price Monitoring Submission. Unitywater notes this rate is consistent with Allconnex capex cost escalation that the Authority found to be reasonable.)
Capex deferral	5	155 And 166	\$50M deferral	See item 1 above
Capex	6	157-167	Capex projects reviewed	<p>Unitywater submits additional information in relation to: Caboolture STP design and technical documents Switchboard program</p> <p>Unitywater submits that the water main interconnector – should be removed as it is linked project to Boundary Road Reservoir. The comment that it was removed due to a lack of information should be corrected.</p> <p>A further six projects Unitywater will provide additional information as part of FY11/12 price monitoring (Burpengary STP, Noosa STP; Kawana STP; Heavy vehicle replacement program; Water meter replacement program; WPS Replacement (Little Mountain pump bases and switchboard)</p>
Water Operating Expenditure	8	180	Benchmarking opex	Unitywater submits that the benchmarking analysis is simplistic and makes no allowances for differences in cost allocation methods, capital versus operating expenditure capitalisation policies, or mature versus establishing businesses.
Waste Operating Expenditure	9	181	Benchmarking opex	Refer to Item 9

Reference document	Item number	Page number	Issue	Comment
OPEX	10	187	Chemical costs	Unitywater submits that the Authority should form a single consistent view on efficiency targets either at the micro individual cost level or all at the macro project, program or MAR level, but not both. Unitywater suggests doing both compounds unrealistic efficiency targets on business with emerging capability.—
Opex	11	191	Regulatory fees	Unitywater submits that there is a logical inconsistency in that the Authority has applied efficiency gains to regulatory fees when in effect the Authority has already advised an estimate of regulatory fees for 2011/12 that increase not decrease in cost.
MAR	12	192	Estimated costs based on Council 3 <sup>rd</sup> quarter results	Unitywater submits that the Authority correctly notes that Unitywater's 2009/10 costs were estimates based on councils third quarter budget forecasts, however the Authority has not taken into account that no oncosts for labour in particular or provisions for accrual accounting were included in the third quarter budget forecasts.
Pricing NPV neutrality	13	194	QCA summary of UW approach  Unitywater acknowledge that for FY2011, the current estimate of MAR is above that anticipated when setting prices. Unitywater's policy in this instance has been to retain the original prices, as announced, and to smooth prices in subsequent years (from FY2012 onwards) so that MAR is achieved over a defined period, on a NPV neutral basis.	Unitywater submits that the Authority should publish its views if under recoveries of MAR during price monitoring are recoverable during future periods that may extend into the deterministic regulatory period commencing 1 July 2013. Possible options may include capitalising the under recovery in the RAB.  Unitywater will further examine this with a proposal for the 2010/11 under recovery in its 2011/12 price monitoring submission
Calculation	14	196	Footnote 48 should the adjustment for capex be by half not 65%	Unitywater submits that the formula should use 50% not 65%

Attachment 2 South Caboolture STP Augmentation Documentation for SKM - cdrom accompanies this response.

Attachment 3 Water Supply Facilities – Switchboard Replacement Program

# Project Definition and Deliverables

Ref:

PROJECT TITLE: Asset Replacement Program - Switchboards	PROJECT No. ???
Page 1	

PLANNED START DATE : 01/2010		PLANNED COMPLETION DATE: 06/2012		PROJECT CATEGORY: <input checked="" type="checkbox"/> HSE <input checked="" type="checkbox"/> Sustaining <input checked="" type="checkbox"/> Eff. Improvement <input checked="" type="checkbox"/> Development
RFA SUBMISSION DATE: _____				
PROJECT COST SUMMARY (AUD000's)	Estimate	BUDGET		
CAPITAL	\$4,550,000			
COMMISSIONING	\$227,500			
Net Book Value of Asset Disposal	\$50,000			

PROJECT COST DETAIL (AUD000's)	FIXED CAPITAL		COMMISSIONING		TOTAL	
	Estimate	BUDGET	Estimate	BUDGET	Estimate	BUDGET
Current year - (2010)	\$1,000,000		\$50,000		\$1,050,000	
Next year - (2011)	\$2,050,000		\$102,500		\$2,152,500	
Subsequent year - (2012)	\$1,500,000		\$75,000		\$1,575,000	
Total amount requested	\$4,550,000		\$227,500		\$4,777,500	
PROJECT BENEFITS						

PROJECT TEAM REVIEW AND APPROVALS		SIGNATURE	DATE
- PROJECT SPONSOR ( PLANNING MGR)	Ashley Lorenz		
<i>Signs to verify accuracy of scope, intent and ownership of project</i>			
PROGRAM MANAGER	Ralph Berry		
<i>Signs to confirm procedural requirements for project development have been met</i>			
PROJECT MANAGER	Rajan Khire		
DELIVERY MANAGER	Cameron Black		
<i>Signs to confirm PDD reflects scope, schedule and cost estimate</i>			
- MBW PROGRAM MANAGER	Ralph Berry		
<i>Signs to confirm acknowledgement of project and confirm the project is aligned with the capital program.</i>			

<b>PROJECTS OVER AUD 500,000 and all unbudgeted Projects</b>			
-CAPITAL WORKS MANAGER	Andrew Shoenmaker		
CAPITAL PROJECTS OVER AUD 1,000,000	ADDITIONAL APPROVAL	REQUIRED / NOT REQUIRED	

# Project Definition and Deliverables

Ref:

PROJECT TITLE: Asset Replacement Program - Switchboards	PROJECT No. ???
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Approval is sought for Capital Expenditure of AUD \$4,777,500 to provide asset replacement of deteriorated switchboards currently in service which have an unsatisfactory risk ranking and profile when considered against established criteria such as Safety / Reliability / Capacity / Asset Life

An amount of approximately AUD \$500,000 (\$50,000 for 10years) has been included in the 15 Year Capital plan for this project.

The increase against the initial 15 year Capital Plan for this project is due to insufficient data being previously available to quantify the scope of replacements and limitations in adequately ranking each asset on established risk / performance criteria.

Additional funds required to complete this project shall be provided through reallocation of existing capital works budgets in asset replacement areas

## 1 OBJECTIVE

The objective of this project is to provide safe and reliable assets to service existing water and sewerage pump stations and like assets.

## 2 EXISTING SITUATION (BACKGROUND)

The existing switchboard assets have deteriorated to a poor state providing higher risks to the safe and reliable operation of the network

## 3 PROPOSAL (DELIVERABLES)

This asset replacement program will replace approximately 100 switchboards across the Pine Redcliffe and Caboolture regions, which will be progressively manufactured and installed to align with the risk criteria and network upgrades including the SCADA upgrade project

## 4 ALTERNATIVES

Leaving the existing switchboards in situ and continuing with the insufficient investment program provides for exposure to unsafe installations and underperforming assets, additionally some of the existing sites will be required to be upgraded to accommodate the new SCADA upgrade

## 5 CONSEQUENCE OF DEFERRAL (WHY NOW)

The asset condition has deteriorated due to a limited replacement program, raising failure rates and breakdowns and loss of systemic control of the network whilst replacement parts are installed in an adhoc unplanned manner, this is both inefficient and costly to maintain.

## 6 PROJECT RISK ASSESSMENTS

### 6.1 PROJECT COST

The accuracy of the cost estimate for this project is  $\pm$  (25) % and includes a contingency allowance of (0)% The scope timing and cost of the asset replacement directly linked to available funds determining volume of work to be sought by the market and sequencing of each site upgrade.

Document Owner: <i>Capital Management Team</i>		Authorised By: <i>Capital Works Manager</i>		
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# Project Definition and Deliverables

Ref:

PROJECT TITLE: Asset Replacement Program - Switchboards	PROJECT No. ???
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## 6.2 TECHNOLOGY

The proposed facilities/equipment for this project will utilise current design practices for switchboard design upgraded to reflect the current and foreseeable needs of the business. The industry has advanced with new products providing greater safety reliability and functionality, therefore opportunities to redesign and seek high performance high reliability switchboards will be adopted into this project. Additionally with the installation of a new RTU device for each site this will enable an increase in the sophistication of network control into this project.

## 6.3 PRE-APPROVAL ENGINEERING

Initial investigation including preliminary inspections and reviews of performance data has been completed for this project and a summary table is provided as an attachment for reference.

## 6.4 HEALTH, SAFETY & ENVIRONMENT, (HSE)

Each switchboard site has been assessed for safety and compliance to applicable standards

## 6.5 HAZARD AND OPERABILITY STUDY (HAZOP)

A HAZOP has not been completed, though will be conducted in the associated SCADA project .

## 6.6 CONSTRUCTABILITY, MAINTAINABILITY & OPERABILITY REVIEW

The switchboard design is a standardised design template which will be modified to suit individual and specific site conditions. The design will have RPEQ sign off and reviewed internally by MBW engineering staff for conformance to business requirements:

## 6.7 SPARE PARTS REQUIREMENTS

As the design will use standard components, a reduced number of spare parts will continue to be held locally and depots to facilitate first response to any component failures, commonality in the design will provide savings in the reduction of component counts and diversity among the products.

## 6.8 VERIFICATION OF PROJECT OUTCOMES

The outcomes of this project will be quantified at each switchboard replacement and integration into the new SCADA platform being fully commissioned at the time of installation and tested to MBW standards

## 6.9 ASSET DISPOSAL

Existing switchboards will be returned to MBW for assessment of any salvageable components and the logged and disposed of in accordance with current council policy

Document Owner: <i>Capital Management Team</i>		Authorised By: <i>Capital Works Manager</i>		
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# Project Definition and Deliverables

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PROJECT TITLE: Asset Replacement Program - Switchboards	PROJECT No. ???
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## ATTACHMENTS

1. Switchboard Replacement Ranking spreadsheet

Attachment 4 Water Supply Facilities – MBRC SCADA Telemetry Upgrade

Comments	RTU ID	Source	Control Group	Asset Type	Asset No.	Old No	Safety	Reliability	Capacity	Asset Life	Ranking	Cost Estimate	Financial Year	Description	UBD Map	UBD Ref	CONTRACT PORTION
	CAB34	BIS	BEL	WPS	010	?	9	7	4	10	785	\$70,000	10/11	Bribie Island Water Treatment Plant and Pump Station First Avenue Woorim	54	B15	3
	10	PET	MAR	RES	100	RC-10	7	5	8	5	645	\$50,000	11/12	Margate Reservoir and Pump Station Jull St Margate	91	M11	3
	CAB35	BIS	BEL	RES	020	?	6	5	6	8	595	\$50,000	11/12	Bellara Reservoir & Pump Station (old) 328 Sunderland Drive Bellara	53	A10	3
	18	PET	MAR	TWR	180	?	7	4	5	5	575	\$50,000	11/12	Margate Water Tower			?
	3	NTP	NTP	PRV	210	621	6	4	6	8	570	\$40,000	11/12	PRV3 Todds Road Lawnton	98	K8	1
	56	STR	ACL	RES	610	661	6	4	5	9	565	\$40,000	11/12	Hutton Rd Reservoir No1	117	P17	1
	CAB22	WFD	WOD	RES	010	?	5	5	6	7	535	\$40,000	10/11	Wamuran Reservoir & Pump Station 24 Old North Road Wamuran	46	G1	1
	CAB20	RDM	RMT	RES	010	?	5	4	5	6	485	\$50,000	12/13	Round Mountain Reservoir Hatchman Court	37	K18	3
	CAB39	CBR	NIN	DOS	010	?	5	3	6	6	475	\$50,000	12/13	Pressure Flow & Chlorination Otto Road Toorbul	51	C3	3
	CAB81	MOR	NAR	WPS	020	?	5	3	6	5	465	\$50,000	12/13	Barrine Place Booster Pump Station Narangba	77	R1	3
Link W??	CAB11	MOR	NAR	TWR	010	?	4	4	6	7	460	\$50,000	12/13	Narangbah Reservoir Tower & Pump Station Cnr Oakey Flat Road & Stark Drive Narangbah	77	R9	3
SEQW??	CAB46	WFD	WOD	WPS	020	?	4	4	5	6	435			Woodford Water Treatment Plant Town Pump Station 28 Canando Street Woodford	36	C7	3
Oct-10	32	DTP	DAY	RES	810	681	4	3	5	8	430			Dayboro Low Level Res & Pump Stn	65	P16	1
	CAB12	MOR	NAR	WPS	010	?	4	4	4	7	430			Calaghan Road Pump Station Cnr Burpengary & Callaghan Roads Narangba	78	B6	3
	CAB36	BIS	BEL	TWR	010	?	5	2	4	7	430			Bongaree Tower 25 Welsby Parade Bongaree	53	C19	3
	CAB37	BIS	BEL	TWR	020	?	5	2	4	7	430			Woorim Tower 1 Jacana Avenue Woorim	54	E14	3
	CAB24	CBR	BCH	TWR	010	?	5	2	4	7	430			Beachmere Tower 10 Biggs Avenue Beachmere	60	J20	3
	6	PET	ROT	MON	060	RC-06	4	4	5	5	425			Saltwater Creek Flowmeter Anzac Ave	90	D2	3
	6	PET	ROT	MON	060	RC-06	4	4	5	5	425			Saltwater Creek Flowmeter Anzac Ave	90	D2	3
	CAB07	CBR	CAB	RES	010	?	4	3	5	7	420			Caboottle Reservoir Pump Station 152 King Street Caboottle	57	M1	3
	70	RGT	SAM	WPS	600	760	4	4	5	4	415			Samford Downs Pump Station	106	K11	1
	38	MAR	ROT	RES	380	RC-38	4	4	5	3	405			Rothwell Reservoir & Pump Station Callistemon Court	80	L17	3
	CAB14	MOR	MRY	MON	020	?	4	3	5	5	400			Pressure Sensor Excelsior Drive Morayfield	67	B7	3
	CAB32	MOR	NAR	PRV	020	?	4	3	5	5	400			Pressure Control Valve Andrew Avenue Deception Bay	78	R10	3
	CAB19	RDM	RMT	WPS	030	?	4	3	4	6	395			Lagoon Creek Pump Station 116 Beerburum Road Caboottle	47	R16	3
	CAB47	WFD	WOD	TWR	010	?	4	3	4	6	395			Woodford Tower Archer Street Woodford	35	F2	3
	30	RGT	SAM	RES	210	721	3	3	5	9	390			Clear Mountain Reservoir No1 (2 Meg)	107	B8	1
	83	IRB	IRB	RES	510	651	4	3	5	4	390			Ira Buckley Rd Pump Station & Reservoirs	97	L18	1
	6	STR	ACL	RES	500	650	4	3	5	4	390			Albany Creek Low Level Pump Station & Reservoirs	118	K4	1
	CAB27	CBR	NIN	WPS	010	?	4	3	4	5	385			Browns Road Pump Station 600 Bribie Island Road Caboottle	50	D17	1
	CAB64	MOR	MRY	MON	010	?	4	3	4	5	385			Flowmeter Facer Road Morayfield	67	D17	3
	CAB08	MOR	MRY	RES	010	?	4	3	4	5	385			Morayfield Reservoir High Level & Low Level Zone Pump Station 417 Oakey Flat Road Morayfield	67	J6	3
	CAB31	MOR	NAR	DOS	010	?	4	3	4	5	385			Saltwater Creek Pump Station 663 Old Gympie Road Narangba	78	N8	3
		MOR	NAR	MON	010	?	4	3	4	5	385			Flow and Pressure Potassium Street			3
	CAB33	MOR	NAR	MON	020	?	4	3	4	5	385			Pressure Sensor Marks Road Burpengary	78	R10	3
	71	RGT	SAM	RES	610	761	3	4	5	5	375			Samford Downs Reservoir No1	106	G12	1
	CAB53	CBR	CAB	MON	010	?	4	2	5	5	375			Flowmeter River Drive Bellmere	57	J3	1
		CBR	CAB	MON	020	?	4	2	5	5	375			Burnett Road Flow and Pressure			3
	CAB54	CBR	CAB	WPS	010	?	4	2	5	5	375			Lesley Avenue Pump Station Cnr King Street & Lesley Avenue Caboottle	47	G16	3
	7	PET	MAR	MON	070	RC-07	3	3	8	2	365			Gynther Road Flowmeter Rothwell	80	J19	3
	72	RGT	SAM	RES	620	762	3	4	5	4	365			Samford Downs Reservoir No2	106	C11	1
	CAB40	CBR	CAB	MON	050	?	4	2	5	4	365			Flowmeter Parkland Creek Caboottle	57	R4	3
	CAB66	CBR	CAB	MON	060	?	4	2	5	4	365			Flowmeter Greenfield Drive Moodlu	47	B13	3
Oct-10	31	DTP	DAY	RES	820	682	3	3	4	7	355			Dayboro High Level Reservoir	65	M13	1
	63	STR	ACL	RES	630	663	3	3	6	4	355			Barber Rd Pump Station & Reservoir Ferny Hills	117	M17	1
	CAB25	CBR	CAB	MON	040	?	4	2	5	3	355			Flowmeter Cnr Hickey Road & Beachmere Road	58	R3	3
	CAB-21	WFD	WOD	WPS	010	?	3	3	5	5	350			Boden Road Pump Station Cnr Boden & Childs Roads Elimbah	36	P19	3
	CAB55	WFD	WOD	RES	030	?	3	3	5	4	340			Webster Rd Reservoir Webster Road Delaneys Creek	35	J16	3
	88	PET	KLH	TWR	140	614	3	3	5	4	340			Kallangur Water Station	88	M16	1
	66	PTP	PET	WTP	100	510	3	3	5	4	340			Petrie Water Treatment Plant Petrie	98	G12	1
	7	STR	ACH	RES	410	641	3	3	5	4	340			Albany Crk High Level Reservoir Bunyaville Forrest Park	118	J8	1
	??	PET	PTH	TWR	130	613	3	3	5	3	330			Petrie Water Tower Woonara Drive Petrie	98	G12	1
	5	STR	ACH	WPS	400	640	3	3	5	3	330			Albany Creek High Level Pump Station	108	F17	1
	14	STR	ACL	RES	650	665	3	3	5	3	330			Barber Road High Level Reservoir Ferny Hills	117	K15	1
	2	STR	STR	WPS	700	670	3	3	5	3	330			Strathpine Booster Pump Station	108	R1	1
	CAB50	WFD	WOD	RES	020	?	3	3	3	5	320			Chambers Road Reservoir & Pump Station 33 Chambers Road Woodford	35	J6	3
							3	3	5	2	320						
	41	PET	KLH	TWR	280	628	3	3	5	2	320			Torrens Road Tower Petrie	88	H13	1
	60	PET	KLL	RES	150	615	3	3	5	2	320			Boundary Rd Reservoirs	78	H18	1
	??	RGT	CAS	WPS	350	735	3	3	5	2	320			Breen Rd Booster Pump (Allen Road) Joyner	107	H20	1
	87	RGT	SAM	RES	630	763	3	3	5	2	320			Samford Reservoir Bygotts Road	106	P16	1
	8	STR	ACH	PRV	230	623	3	3	5	2	320			PRV1 Cnr Sth Pine Road & Kremzow Road	108	R4	1
	123	RGT	CAS	PRV	360	736	3	3	5	1	310			PRV14 Albion Road	107	H10	1
	108	PET	KLH	WPS	190	619	3	3	4	2	305			Kallangur High Level Booster Marsden Road	88	N6	1
	76	RGT	SAM	PRV	310	731	3	3	4	2	305			PRV5 Cnr Gibbons Road & Mt Sampson Road Samford	106	K11	1
	20	STR	ACH	PRV	330	633	3	3	3	3	300			PRV10 Albany Creek Road	108	F16	1
	81	STR	ACL	TWR	310	631	3	3	3	3	300			Eatons Hill Tower & Pump & Reservoir	108	D12	1
	80	STR	ACL	WPS	300	630	3	3	3	3	300			James Cash Pump Station Eatons Hill	108	D12	1
	CAB42	BIS	BEL	MON	010	?	3	2	3	5	295			Pressure Sensor Botany Crescent Banksia Beach	52	L3	3
	64	RGT	RGT	WPS	100	710	3	3	3	2	290			Regent St Pump Station	97	P8	1
	CAB57	WFD	WOD	RES	040	?	3	2	4	2	280			McLeod Lane Reservoir & Chlorination	35	M11	3
	CAB23	CBR	BCH	RES	010	?	3	2	3	3	275			Beachmere Reservoir & Pump Station 688 Beachmere Road Beachmere	60	C15	3
	CAB58	RDM	RMT	WPS	010	?	3	2	3	3	275			OShea Road Pump Station Cnr OShea Road & Newlands Road Wamuran	36	I16	3
		MOR	NAR	PRV	010	?	3	2	3	2	265			PRV Burpengary Creek			3
	124	STR	ACH	PRV	250	625	2	3	2	1	215			PRV6 Cnr Coorparoo Road & Warner Road	108	E6	1
	21	STR	ACL	PRV	530	753	2	3	2	1	215			PRV33 Brisbane Road	97	P19	1
	125	STR	ACL	PRV	220	622	2	3	2	1	215			PRV7 Cnr Old North Road & Stanley Street	98	F20	1
	82	IRB	CLM	RES	220	722	1	1	6	1	175			Clear Mountain Reservoir No2 (5Meg) & No3 (7Meg)	107	C9	1
Recycled Water		BIS	WOR	RWP	010	?	1	1	4	1	145			Bongaree Recycled Water Pump Station			3
SEQW???	CAB68	BIS	BEL	RES	010	?	1	1	3	1	130			Banksia Beach WTP Pump Station Heathland Street Banksia Beach	42	R17	3
	CAB67	BIS	BEL	RES	030	?	1	1	3	1	130			Bellara Reservoir & Pump Station and TWR (New) 328 Sunderland Drive Bellara	53	A10	3
Abandoned???		CBR	BCH	MON	010	?	0	0	0	0	0			Flowmeter Campbell Road			3
Abandoned???		CBR	CAB	MON	030	?	0	0	0	0	0			Flowmeter & Pressure Graham Road Caboottle			

Attachment 5 Telecom New Zealand JP Morgan Independent Opinion July 2009

JULY 2009

INDEPENDENT OPINION FOR TELECOM NZ

STRICTLY PRIVATE AND CONFIDENTIAL

This Independent Opinion has been prepared for Telecom Corporation of New Zealand by:

Rowan Cook, PhD (Finance), AIAA

Vice President, Fixed Income

J.P. Morgan

J.P.Morgan

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## Question 1 from Telecom NZ to J.P. Morgan

Please explain the transaction steps that TSP would be required to undertake in order to swap 5 year fixed rate debt to a margin over 1 year fixed, to be described as a margin over the 1-year NZ government bond yield. It may be useful to illustrate this with an example using the following information (data from 30 June 2006):

Assume the 5 yr fixed rate debt was issued at an all-in margin of +1.49% over the 5 yr NZ government bond yield, the 5-year swap rate is 6.95%, the 5-year NZ government bond yield is 6.09%, the 1-year swap rate is 7.54%, and the 1-year NZ government bond yield is 6.88%.

## J.P. Morgan response to Question 1

A swap of this nature is highly unusual. To be clear as to the likely pricing it is worth stepping through the details of a more typical structure first. We consider 3 scenarios where a hypothetical bond issuance is :

1. Swapped to 90-day bank bill floating rate exposure
2. Swapped to 12-month bank bill floating rate exposure
3. Swapped to the 1-year government bond yield on a periodic rate set basis

In all cases we assume TSP is funded with 5-year fixed rate debt priced at a yield equivalent to a spread of 1.49% above the 5y government bond yield. A 30 June 2006 the yield on such a TSP bond would be 7.58% (that is, 6.09% + 1.49%).

For simplicity, no allowance has been made for the costs of execution of the swap for each strategy. These costs will only add to the net cost to the bond issuer.

### Scenario 1: TSP swaps their bond exposure for exposure to the 90-day bank bill rate

In this scenario TSP would enter into an interest rate swap transaction with a bank to exchange these fixed-rate bond obligations for some other payment profile. The typical payment profile sought under such a swap arrangement would be a 'floating rate' profile where the rate of interest paid to the bank by TSP resets every 3 months and the rate of payment is referenced to the prevailing New Zealand 90 day bank bill rate.

The margin the bank would charge above this benchmark rate would depend on the value of the coupon payments to the bank counterparty. J.P. Morgan estimates the margin to the New Zealand 90 day bank bill rate would be about 65 basis points as at 30 June 2006. This is approximately the difference between the fixed-rate bond yield and the corresponding par swap rate as quoted in the market.

Figure 1 shows the interest payments associated with a fixed for floating interest rate swap arranged for a hypothetical 7.58% fixed-rate 5-year bond issuance by TSP at 30 June 2006. The floating rate benchmark is the New Zealand 90-day bank bill rate.

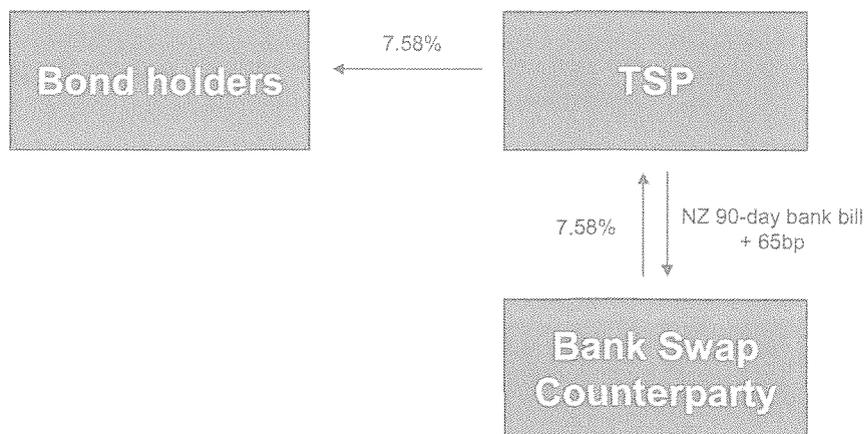


Figure 1: Interest rate swap structure for hypothetical TSP bond issuance; interest payments swapped to a margin to the NZ 90-day bank bill rate.

**Scenario 2: TSP swaps their bond exposure for exposure to the 12-month bank bill rate**

In this scenario the floating-rate payment profile would be benchmarked to the 12-month bank bill rate with an annual reset of the rate (see Figure 2). Again, the margin to the New Zealand 12 month bank bill rate would be about 65 basis points. Similarly to the 90-day bank bill example, the margin charged would be approximately the spread between the bond yield and the corresponding rate on a par interest rate swap.

Figure 2 shows the interest payments associated with a fixed for floating interest rate swap arranged for a hypothetical 7.58% fixed-rate 5-year bond issuance by TSP at 30 June 2006. The floating rate benchmark is the New Zealand 12-month bank bill rate.

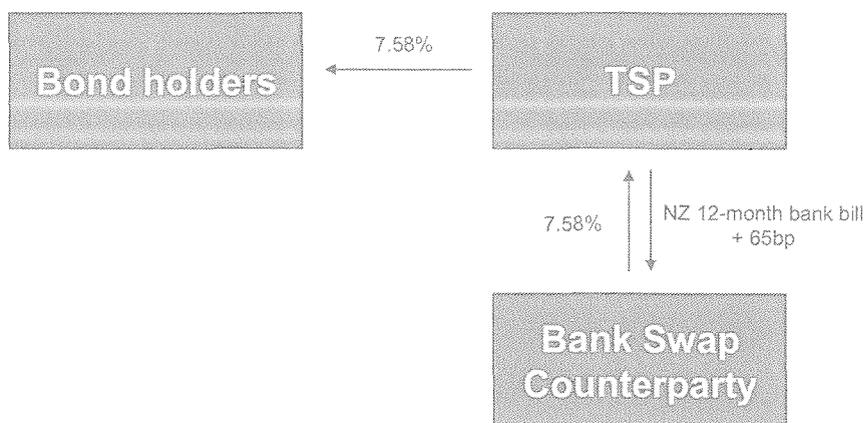


Figure 2: Interest rate swap structure for hypothetical TSP bond issuance; interest payments swapped to a margin to the NZ 12-month bank bill rate.

Therefore, assuming the 12-month bank bill rate is the same as the 1-year swap rate, if this interest rate swap was undertaken by TSP, the cost of debt capital for TSP in year one would be approximately 8.19% (that is, 7.54% + 65 basis points).

It is worth highlighting that the long-term average cost of finance has not changed, and that the relatively higher payments made initially in this example (relative to the 5-year fixed rate cost of funds) will be offset by relatively lower payments made in later years.

Further, note that the cost of funding for TSP in this scenario is not directly related to the cost of funding for the NZ Government. The difference between these two measures represents the credit risk premium applied to bank counterparties relative to the NZ Government. This difference will wax and wane as market perceptions of their relative credit worthiness and the relative investor appetite for government debt. For instance, in the United States and the United Kingdom the difference between long term government bond yields and long term interest rate swap rates has become negative due to the recent very high rate of issuance by the governments driving up bond yields.

### Scenario 3: TSP swaps their bond exposure for exposure to the NZ Government 1-year rate

Finally we consider the scenario which the Commerce Commission is considering where the 5-year TSP fixed rate cost of debt is swapped to a floating rate benchmarked to the NZ government 1-year bond yield (see Figure 3).

A swap of this nature would be highly unusual though not inconceivable. The margin to be added by the swap counterparty above this benchmark rate would be approximately the credit spread from before (~65bp) plus the 1-year 'swap spread' between the 1-year swap rate and the 1-year government bond yield (which is 66bp). Therefore, if this interest rate swap was undertaken by TSP, the cost of debt capital for TSP in year one would be approximately 8.19% (= 6.88% + 66bp + 65bp).

Figure 3 shows the interest payments associated with a fixed for floating interest rate swap arranged for a hypothetical 7.58% fixed-rate 5-year bond issuance by TSP at 30 June 2006. The floating rate benchmark is the New Zealand 1-year government bond yield.

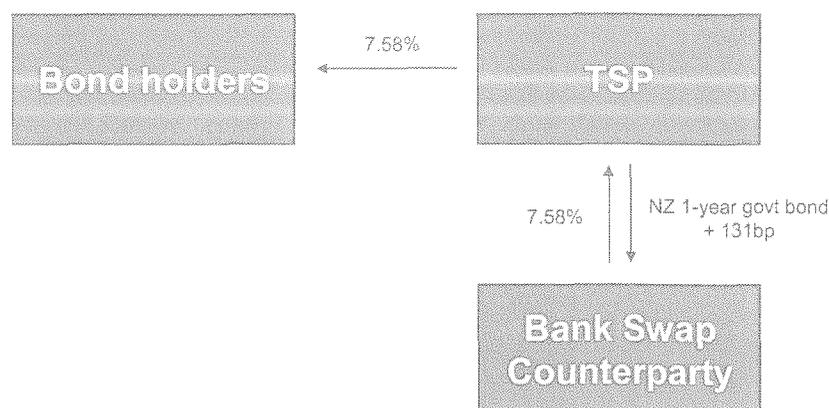


Figure 3: Interest rate swap structure for hypothetical TSP bond issuance; interest payments swapped to a margin to the NZ 1-year bond yield.

### Question 2 from Telecom NZ to J.P. Morgan

The Commerce Commission has been advised that in addition to the use of interest rate swaps, the TSP would also enter into a portfolio of CDS transactions to enable the 5 yr debt margin to

be converted to a 1 year debt margin. In your view is this feasible, or even possible. If the CDS transaction package could be implemented, please comment on the pricing and collateralisation implications of a \$1 billion transaction size.

## **J.P. Morgan response to Question 2**

There are a number of issues to be addressed within this single question, and we address each one separately.

Overall, the scheme proposed is at the absolute limits of feasibility from an execution point of view, and the pricing which would arise would be profoundly unattractive to all parties.

### **Issue 1: Is it legal for a company to buy or sell protection on itself?**

This is not a trivial matter at all. Such a structure is strictly prohibited in a number of countries including Germany, however there is no absolute prohibition in most Commonwealth jurisdictions.

### **Issue 2: Could an investment bank face a counterparty in a credit default swap contract where the reference entity for the contract is the counterparty itself?**

This is not a trivial matter either. Were J.P. Morgan to consider such a trade it would be given very close scrutiny by a number of groups within the firm. Such a trade would be very problematic with respect to J.P. Morgan's global risk policies. In particular:

- Whether or not there are any material non-public information or insider trading issues to be assessed.
- In the scenario where the counterparty is buying protection on itself, the question arises as to whether such a trade would constitute a 'guarantee' or an 'insurance' arrangement. If the structure was a 'guarantee' this would be problematic for J.P. Morgan from a United States tax standpoint. Moreover it would raise the question of why the company would want to buy protection on itself unless it knew something.
- In the scenario where TCNZ has sold protection to J.P. Morgan, it is not clear that this cash collateral would not be subject to a claim by the liquidator in the event of default by TCNZ.
- The transaction would be subject to a far-reaching review by the Reputational Risk Committee of J.P. Morgan.

### **Issue 3: What would the pricing be for a NZD1bn transaction?**

A transaction of this size is far in excess of typical daily volumes in the credit default swap market, which are <USD25mm for TCNZ. This is in part because credit default swap markets are typically used for investors seeking to hedge the credit exposure for bonds they own, or for outright speculation. A transaction of this size would significantly affect the prices for credit default swaps in the market.

J.P. Morgan would need approval from its senior management before undertaking a trade of this size. On an indicative basis, such a trade could probably be done if it was priced >100bp from market mid-quote levels.

### **Issue 4: Does cash collateralising the transaction help?**

The transaction could not be done without full cash collateralisation.