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ASSET MANAGEMENT STRATEGY

MAXIMISING VALUE FROM OUR ASSETS THROUGH ROBUST AND INTEGRATED PROCESSES

STRATEGIC ASSET MANAGEMENT PLAN (PART 1 OF 3)

AM2787

FEBRUARY 2019

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Version	Issued	Status	Prepared by	Checked by	Approved by
0.14	7-02-2019	Draft for Board approval	Marc Peril	Charlie Littlefair	
0.13	16-01-2019	Draft for Service Solutions Committee endorsement	Marc Peril	Giuliano Gava	
0.8	8-12-2018	Draft for executive endorsement	Marc Peril	Duncan Sinclair Leon Fouche Brenton Marshall (AMCL)	

Acknowledgements

This strategy in conjunction with the asset management system manual has in part been derived from the former asset management manual (AM1000), prepared by Gordon Logan.

Table 5 Asset management system focus area actions have been adapted from the 2018 Asset management system review report prepared by Asset Management Consulting Limited (AMCL).

Schedule 2 Service Delivery KPI's have been reproduced from the SSC paper "Revised KPI Reporting" (November 2017) prepared by Mark McCormack and John Hribar.

Endorsement and approval

This strategy will be endorsed by

- The Strategic Asset Management committee
- The Executive
- Customer Service Solutions committee

This strategy will be approved by the board.

Document review and amendment

The group managers for Strategic Asset Management and Liveable & Sustainable Futures shall be accountable for review and amendments of this asset management strategy. The Asset Management System manager shall be responsible for maintenance of this asset management strategy.

- Major amendments shall be approved by the board
- Minor amendments shall be approved by strategic asset management committee
- Amendments to the Key Performance Indicator (KPI) schedules will be made as the revised KPI's are approved.

This Asset Management Strategy shall be reviewed every two to three years (twice per five year water pricing period).



Contents

1.	Our commitment	4
2.	Why manage assets?	6
3.	What assets do we manage?	8
4.	Why have an asset management system?	9
5.	Purpose of the asset management strategy	10
6.	How we manage our assets	12
7.	Objectives - What are we trying to achieve?	15
8.	Asset management system review and improvement plan	21
9.	Challenges and responses	22
	Schedule 1 - Corporate Key Performance Indicators	27
	Schedule 2 – Service Delivery Key Performance Indicators	28
	Appendix A - Key Strategic Asset Management Documents	37
	Appendix B - Definitions	38

1. Our commitment

We are committed to providing the leadership necessary to:

- *'Manage South East Water's assets in a way that will meet customer needs, support the health and wellbeing of the public and workforce, protect the environment and maximise the value realised from our assets over their total lifecycle while balancing financial, environmental and social costs, risks, quality of service and performance related to assets.'* South East Water Asset Management Policy (AM1811) and
- Improve South East Water's asset management capability and systems

This will support the pursuit of South East Water's vision and the delivery of South East Water's customer outcomes.



Figure 1: South East Water's purpose vision and customer outcomes

We recognise that the following factors are critical to successful delivery of asset management:

- Leadership plays a vital role by providing direction and aligning the organisation to a common purpose
- A co-ordinated whole of organisation approach is required. Asset management is not conducted in isolation
- Plans must be supported by capable resources and the required resources and capabilities will change in response to our plans and the external environment

The general managers for Future Water Strategy, Liveable Water Solutions, Customer Service Delivery and Finance & Digital are accountable for this Asset Management Strategy and its communication, implementation and continual improvement.

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2. Why manage assets?

South East Water's purpose, vision and customer outcomes are underpinned by delivery of services to customers and the broader community. The services (and products) we deliver include:

- Drinking water supply (Potable Water)
- Sewage collection
- Sewerage treatment (Treated effluent)
- Recycled water supply (Class A and C Recycled Water)
- Biosolids management (T1C2 and T3C2 Biosolids)
- Energy management (Renewable and non-renewable three phase power, demand reduction)

Assets are core to service delivery:



Services: We must understand the needs of our customers and the requirements of our stakeholders to ensure we deliver appropriate service at the right service level

Assets: We must provide the right assets, with the right capabilities in the right places to enable service delivery

Asset Management: We must have capable leadership, capable people, business processes and accurate asset information, to enable us to efficiently and effectively carry out the right work on the right assets.

Figure 2: Assets are core to service delivery

Our ability to deliver services is underpinned by: our asset systems; and our asset management capability which supports the assets. In turn our asset management capability is enabled by: leadership, people, competence and knowledge, processes, data and information, systems and technology, and resources.

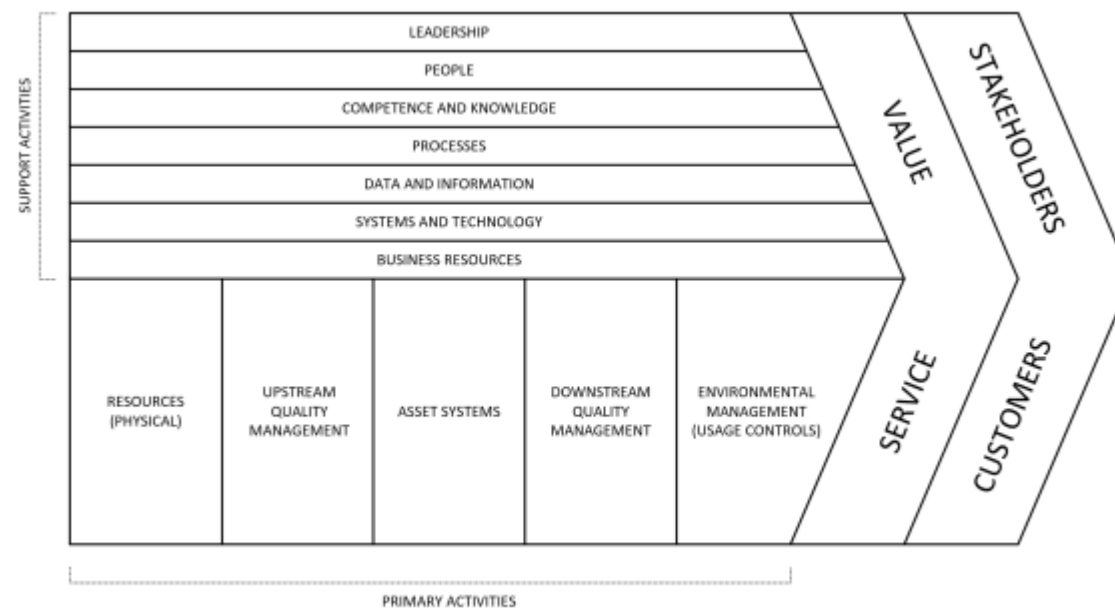


Figure 3: Extended South East Water service delivery value chain model (Adapted from Porters Value Chain Model)

3. What assets do we manage?

South East Water manages an asset portfolio valued in excess of \$4 Billion. The asset portfolio includes:

- Physical infrastructure assets underpinning service delivery
- Corporate assets underpinning service delivery
- Information technology and operational technology
- Information
- Intellectual property

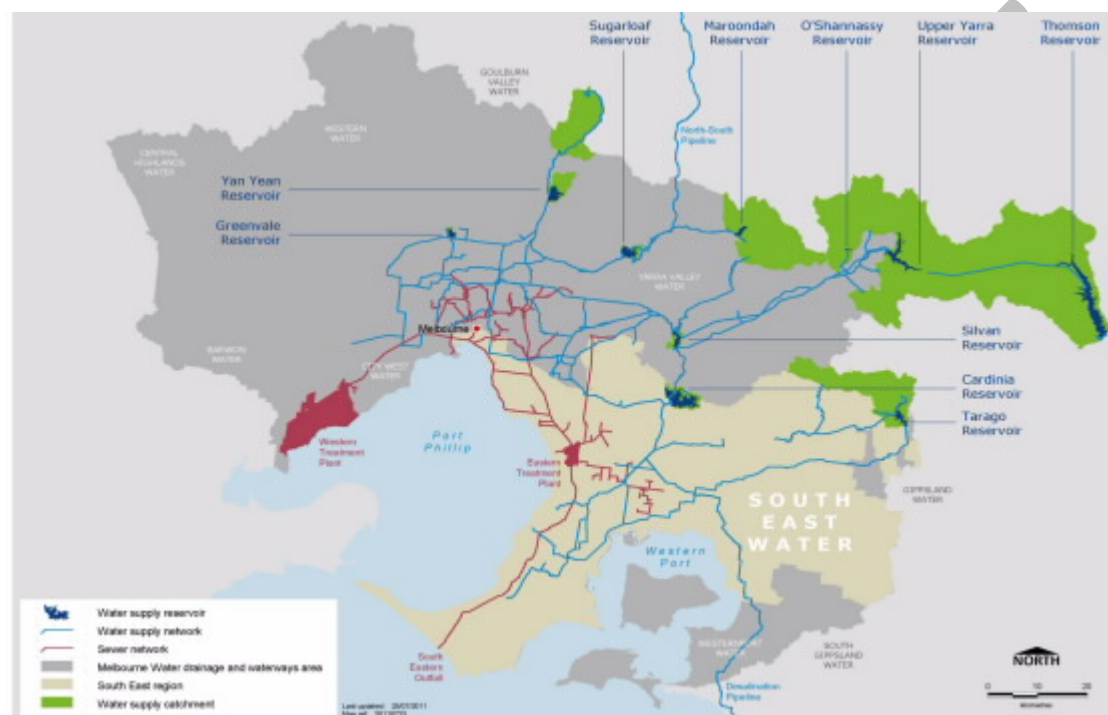


Figure 4: Our major asset networks

4. Why have an asset management system?

South East Water has committed to achieve certification against the ISO55001 asset management standard within the 2018-23 pricing period. This standard aims to ensure that organisations have the systems in place to achieve their objectives through the effective and efficient management of their assets. By more formally practicing the discipline of asset management we are aiming to deliver safe and reliable services that meet our customer's expectations at the lowest lifecycle cost, whilst managing the risks associated with our assets. The application of a certified asset management system is expected to deliver the following benefits:

- Provide assurance that the organisational objectives can be achieved consistently and sustainably over time
- Improve asset and in turn organisational performance in financial and service delivery terms
- Improve vertical alignment between stakeholders, strategic objectives, investment plans and asset management activity
- Improve coordination and horizontal alignment across South East Water and the asset lifecycle
- Increase transparency of asset management decision making
- Balance of asset cost performance and risk through whole of life optimised decision making
- More systematic management of asset risk
- Align South East Water with state government asset management policy
- Demonstrate compliance (In particular with the asset management accountability framework described below)
- Improve organisational sustainability

The asset management system is intended to be integrated with, compatible with and complementary to South East Water's other existing management systems. BS2721 Management System Register describes South East Water's management systems.

Asset Management Accountability Framework (AMAF)

In February 2016 the department of treasury and Finance released the Asset Management Accountability Framework (AMAF). The AMAF came into force on the 1st July 2016. It *"...establishes a flexible and nonprescriptive set of requirements which aim to ensure Victorian public sector Accountable Officers manage asset portfolios appropriately. It applies to non-current assets (physical and intangible), including information and communication technology (ICT) assets, controlled by government departments, agencies, corporations, authorities and other bodies that are captured by the Standing Directions of the Minister for Finance made under the Financial Management Act 1994 (FMA)."* It is aligned with the ISO55001 standard.

The AMAF is based on the following guiding principles:

- Service delivery focused
- Integrated into planning frameworks
- A whole lifecycle approach
- Informed decision making
- Responsible and accountable
- Considerate of government policies and priorities

The AMAF includes 41 mandatory requirements applicable to asset management at South East Water. The board are required to attest to compliance with the mandatory requirements of the AMAF annually. South East Water's Finance, Audit and Risk Management (FA&RM) committee must be satisfied with the Attestation of compliance with the AMAF. This attestation forms part of the larger attestation of compliance with the standing directions of the Minister for Finance.

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5. Purpose of the asset management strategy

This document is a portfolio wide asset management strategy for South East Water. It is a key part of South East Water's asset management system, specifically intended to:

- Provide further definition on the asset management policy aims
- Define the strategic asset management objectives
- Outline our high level approach to managing South East Water's assets
- Articulate our long term approach to developing and maintaining asset management capability
- Articulate our approach for developing and maintaining asset management plans
- Set out how the asset related objectives are to be delivered in an optimised way
- Enable South East Water to become compliant with ISO55001
- Demonstrate leadership commitment to the development of South East Water's asset management capability
- Drive continuous improvement of the asset management system

This strategy focuses on asset management at South East Water and its' contribution to service delivery and the achievement of South East Water's organisational objectives. As far as possible it is kept asset agnostic. It forms a key part of South East Water's SAMP (Strategic Asset Management Plan) and broader asset management system as shown in the diagram below.

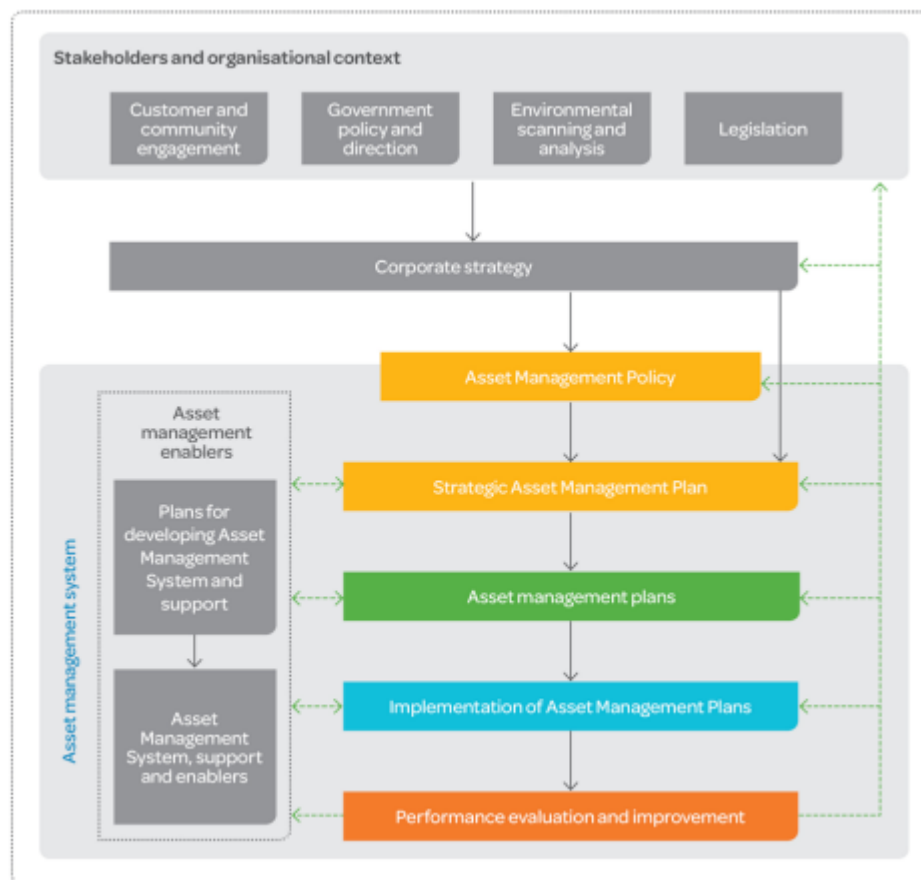


Figure 5: South East Water Asset Management Framework

The Strategic Asset Management Plan is comprised of three documents:

- The asset management strategy (this document)
- The asset management system improvement plan
- The asset management system manual

A brief summary of each of the key high level documents is provided in Appendix A. This asset management strategy should be read in conjunction with these documents.

6. How we manage our assets

Our asset management approach can be expressed as, in managing assets we aim to maximise the value derived from our assets by balancing, cost, performance and risk in their various forms.

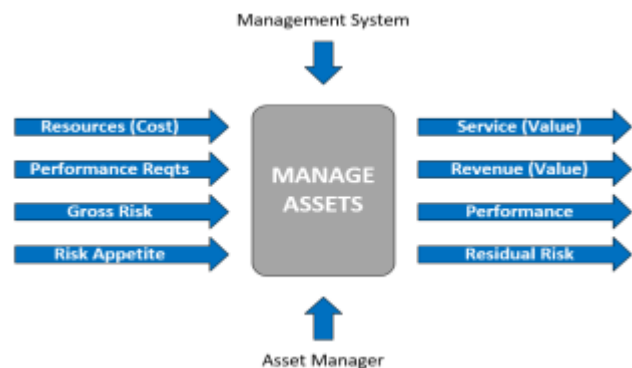


Figure 6: What asset management does (Adapted from AMC Asset Management Fundamentals training notes)

Value to South East Water and its stakeholders is defined in South East Water's organisational objectives. Value derived from assets has been defined in our asset management objectives. We create value by delivering services such as water supply, sewage collection and treatment;

Cost can be financial, environmental or social

Performance is defined in our specified service levels and

Risk is the effect of uncertainty on objectives

For any asset South East Water aims to maximise the value derived from the asset over the life of the asset, for the lowest life cycle cost, at an acceptable risk and in a manner that is aligned to our organisational objectives, stakeholder's requirements and compliance obligations.

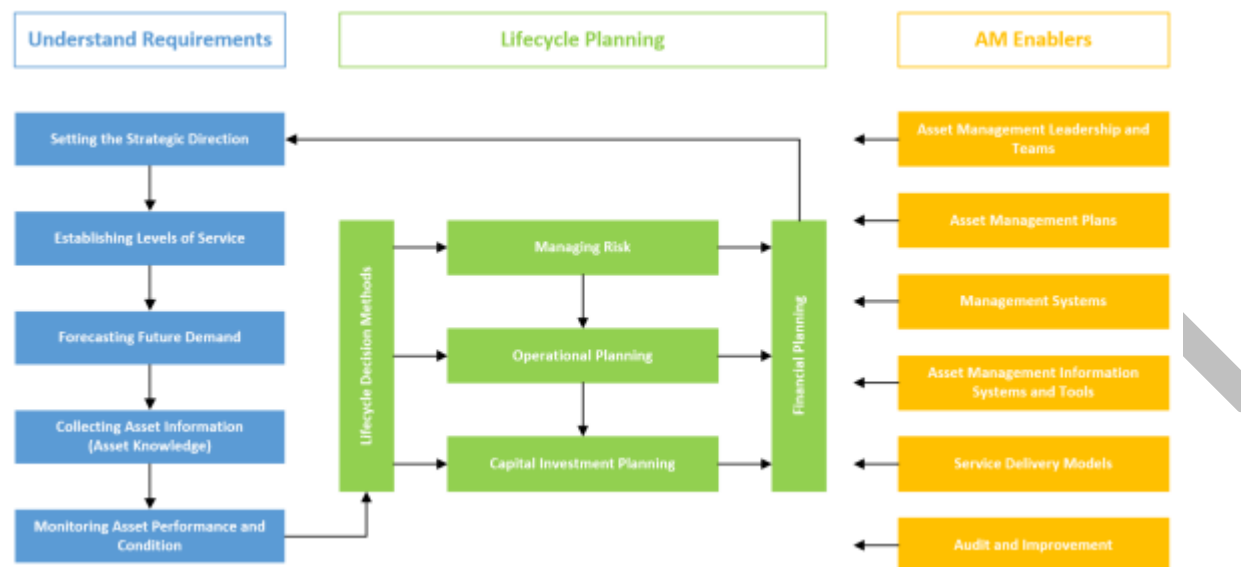


Figure 7: The Asset Management Process (Reproduced From IIMM 2015 Fig 1.3.4 Page 1-10)

Scheduled maintenance, emergency management and replacement activities are developed and administered based on value, cost, performance, and risk. This risk-based approach is used as part of asset management decision making and the development of asset management strategies for an asset category or asset portfolio. E.g. For critical assets (i.e. treatment plants and storages) action has to be undertaken to avoid asset failure and to mitigate the consequences of failure. These assets ought to have low likelihood of failure and efforts made to manage risk and mitigate the consequences for failure so far as is reasonably practical (SFAIRP). Hence, investment in these assets is directed towards mitigating risk and management activity is focused on proactive activities including monitoring, inspection, capacity and contingency planning.

For the less critical assets (i.e. reticulation mains, hydrants) some failures are expected and management activity is focused on maintaining levels of service e.g. availability, reliability, capability (Pressure and flow). Spending for this group of assets would aim to ensure that response and repair times are in line with South East Water's customer charter and that repeat failures on the same asset are within acceptable limits.

This concept shown in the figure below:

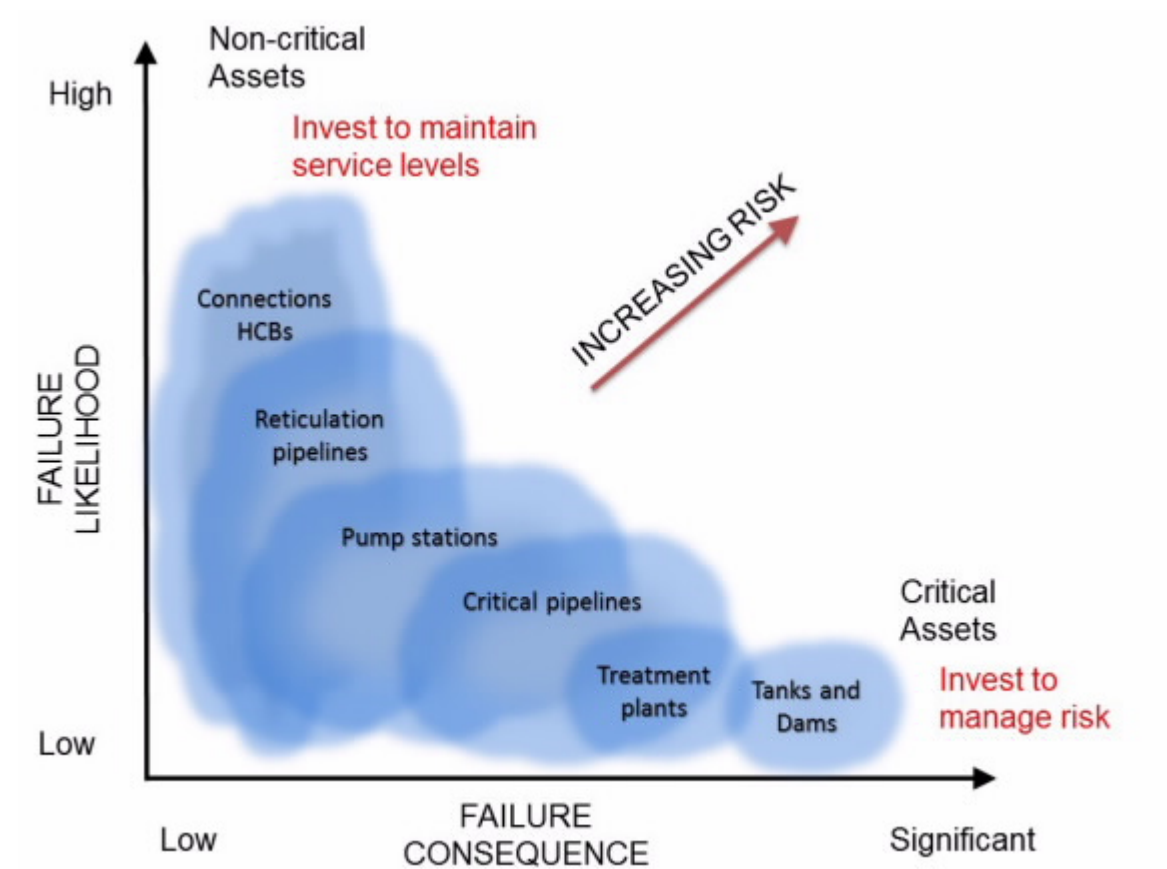


Figure 8: Asset risk management approach

7. Objectives - What are we trying to achieve?

7.1 Organisational Objectives

Asset management is the coordinated activity of an organisation to realise value from its assets. *“Asset management translates the organisations objectives into asset related decisions, plans and activities, using a risk based approach.”* (ISO55000 CL 2.1) Our organisational objectives express what is of value to South East Water and its stakeholders.

Our Purpose, vision, customer outcomes and values are the highest expression of South East Water’s organisational objectives. (Further explanation of the customer outcomes is provided in figure 9 below.) As per figure 1 our ability to deliver the customer outcomes and broader organisational objectives is enabled by our people, technology, financial capability and governance.

In the context of asset management prudent financial management and strong governance enable South East Water to:

- Provide the levels of services and infrastructure required by our customers and stakeholders
- Minimise the prices our customers pay
- Meet our financial performance commitments to our share holder the Victorian Government
- Invest in emerging opportunities to create and capture additional value through our customer programs, service enhancements, intellectual property development and our commercial subsidiary, IOTA

... within our financial capacity and risk appetite over the longer term.

Our specific financial targets are documented in corporate plan. It should be noted that asset management activity accounts for over 80% of South East Water’s cost base and asset management integrates service planning, asset planning and long term financial planning. (Refer to Figure 7).



Figure 9: South East Water's Customer Outcomes

The corporate and service delivery KPI's are documented in schedules 1 and 2 of this strategy. The service delivery KPI's are aligned to the customer outcomes. Details of the targets associated with the customer outcomes is available in [South East Water's pricing submission \(Detailed version\)](#).

Our organisational objectives are defined in greater detail in our:

- Pricing determination
- Corporate plan
- Customer charter
- Ministerial Performance Reporting Framework and letter of expectations
- Organisational strategies key strategies among these relevant to asset management include:
- Urban water strategy
- Melbourne sewerage strategy (In Development)
- Emissions reduction pledge
- UN global compact commitments
- Governance policies (Refer to policy register BS2728)
- Stakeholder requirements

- Compliance obligations (Refer to compliance obligations register BS2486)

South East Water's organisation objectives and their sources are catalogued in BS2764 organisational objectives register. They are predominantly related to the services we deliver to our customers and the cost of delivering these services. The diagram below illustrates the primary sources and drivers of our organisational objectives:

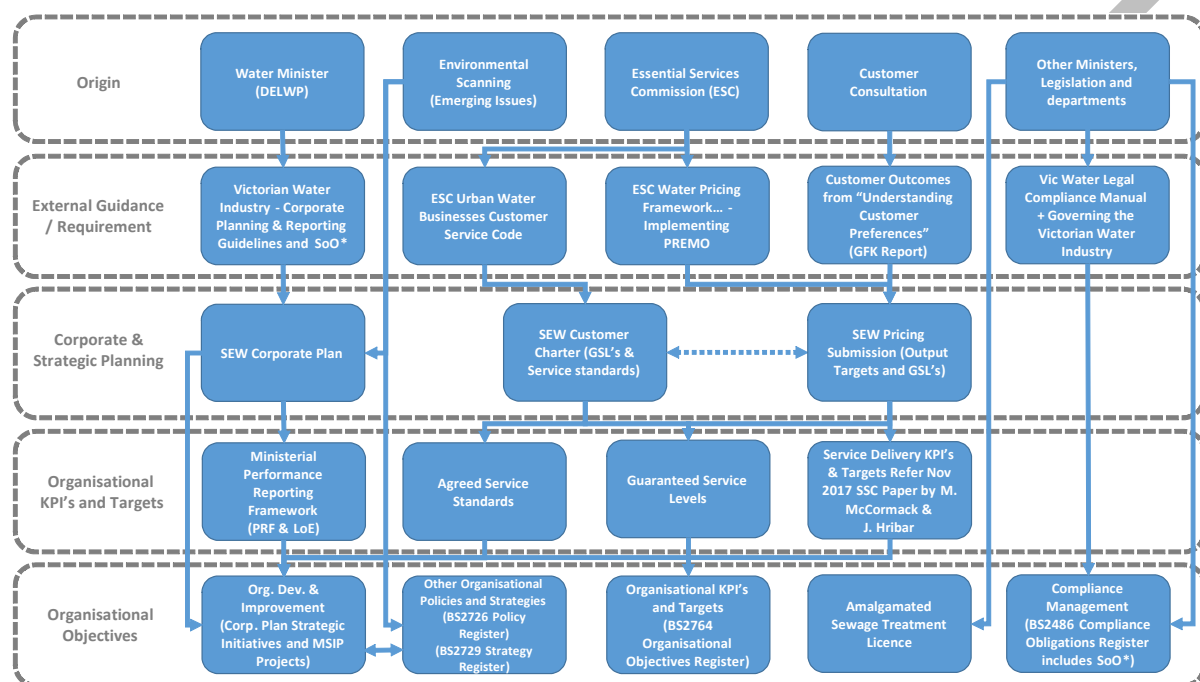


Figure 10: Derivation of organisational Objectives

7.2 Asset Management Objectives Overview

Our assets exist to provide value for South East Water, our customers and our stakeholders. We create value by delivering the below in a safe, cost effective and sustainable manner:

- Delivering services to agreed service levels
- Delivering products to agreed quality specifications
- Managing asset related risks

- Delivering stakeholder requirements

South East Water's asset management objectives are a re-expression of the organisational objectives in asset and asset management terms. They specify what our assets must do and how the assets must be supported to enable delivery of our organisational objectives i.e. service delivery. They are expressed as a combination of outputs and outcomes:

- Output based objectives are generally numeric and measurable e.g. service levels
- Outcome based objectives result in a more subjective result and are less amenable to direct measurement e.g. customer satisfaction

The asset management objectives are expressed at three levels:

- Assets (and asset based services)
- Asset management practice
- The asset management system

7.3 Asset performance objectives

7.3.1 Asset performance outcomes

In order to deliver the customer outcomes, specified service levels and organisation objectives, we must manage our assets so that they are:

SAFE	For our people	Our assets shall be safe for our people
	For customers	Our services shall be safe for customers
	For the community	Our assets shall be safe for the community
RESILIENT		Our assets are appropriately protected, secured and durable so that they are resilient to external impacts, including but not limited to aggressive environments, climate change, 3 rd party damage, cyber-attack and physical intrusion
CAPABLE		Within resource constraints assets shall have the capacity to deliver sufficient product of the required quality to meet customer demand and specified service levels
DEPENDABLE		Assets shall be able to perform as and when required (available, reliable, maintainable, and supported so that they can dependably deliver specified service levels)
ENVIRONMENTALLY SUSTAINABLE		Our assets shall protect the environment [#] and human health from pollution impacts ([#] Includes beneficial uses. e.g. Aquaculture and recreation)
COMPLIANT		We will meet our commitments (including legislative obligations, licences, agreements, regulation and specified service levels.)
ENERGY AND EMISSION EFFICIENT		Energy consumption and greenhouse gas emissions are reduced through efficiency and optimised utilisation
COST EFFECTIVE		We deliver services for the minimum whole lifecycle cost [#] ([#] "Cost" is assessed as cost to South East Water, cost to our customers and costs to the wider

	community)
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Table 1: Asset performance outcomes

7.3.2 Specified service level outputs

Our assets must be capable of reliably delivering output service levels specified in:

- The pricing submission
- 2018-23 Corporate Plan
- The Essential Service Commissions urban water customer service code
- South East Water's customer service charter
- The Water Ministers Performance Reporting Framework
- The amalgamated Environmental Protection Authority and South East Water sewage treatment licence (74189)

7.4 Asset management practice outcomes

In order to deliver the customer outcomes, and organisation objectives, our asset management practice must:

CONSIDER NON ASSET SOLUTIONS	Influence demand and customer behavior to manage resources and support efficient and effective service delivery
DELIVER VALUE	Our assets and the services they support deliver value for our customers, stakeholders and South East Water
SUPPORT ASSETS	South East Water is able to respond to service interruptions and emergencies efficiently and effectively (Repeat service interruptions are effectively minimised)
	Assets are supported with up to date and accurate asset information
	Assets are supported with appropriate resourcing
	Assets are supported by the maintenance, improvement and enforcement of standards and specifications for assets, asset information and life cycle delivery activities.
CREATE ALIGNMENT	Our asset based services, objectives, plans and asset management activity are vertically aligned with the requirements of our stakeholders and corporate strategies.
	Asset management processes are appropriately documented and controlled to create horizontal alignment across South East Water and its supply chains
ALIGN ASSET MANAGEMENT (AM) DECISION MAKING	Asset management decision making shall be guided by stakeholder requirements
	Asset management decision making balances cost performance and risk
	Asset management decision making supports conservation of financial and non-financial resources (such as water and energy)
	Asset management decision making considers climate change impacts, adaptation and appropriate mitigations

PROTECT THE ENVIRONMENT	In carrying out asset management activities we are sensitive to, and considerate of, the communities and environments we operate in and work to protect the beneficial uses these environments provide to the broader community.
SUPPORT RISK MANAGEMENT	Asset management decision making and resource prioritization shall be risk based.
	Assets shall be maintained and supported in an appropriate condition and within an acceptable risk profile.
	Asset management decision making is made within the constraints of South East Water's risk appetite and tolerance
	Manage risks posed by critical assets to a SFAIRP (So far as is reasonably practicable) level
ENHANCE KEY RELATIONSHIPS	Build and maintain constructive and collaborative relationships with key stakeholders
SUPPORT OUR PEOPLE	Our people and contractors are aware, and competent in delivery of their roles
SUPPORT IMPROVEMENT	The performance of our assets, and our asset management capability is maintained and augmented through innovation and continuous improvement
CONTROL AND MANAGE CHANGE	Asset and asset management system changes must be managed and controlled

Table 2: Asset management practice outcomes

7.5 Asset Management System outcomes

To support delivery of South East Water's specified service levels, asset performance outcomes and broader organisational objectives we are developing the asset management system so that it achieves the following:

ISO55001 CERTIFICATION	Become certified to ISO55001 before June 2020
AMAF COMPLIANCE	Become fully compliant with the AMAF before June 2020
ASSET MANAGEMENT MATURITY LEVEL THREE	Achieve asset management maturity of level three (competent) against the IAM 39 Subject asset management maturity scale
MANAGEMENT SYSTEM INTEGRATION	Become integrated into a broader corporate integrated management system

Table 3: Asset management system outcomes

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8. Asset management system review and improvement plan

The 2018 Asset management system review identified the following key focus areas for improvement.



Figure 11: 2018 AMS Review focus areas (Adapted from 2018 AMCL South East Water AMS Review Report)

The table below provides further detail on the focus areas for improvement

FOCUS AREA	IMPROVEMENT ACTIONS
Strategic clarity	<ul style="list-style-type: none"> • Develop a register of corporate strategies (In progress) • Develop a register of asset strategies • Review change management framework and redevelop if necessary. Apply adopted change management framework to the Asset management system • Document sourcing strategy • Review reliability strategy • Document operational strategy • Document shutdown strategy • Document organisational objectives and specified service levels to support alignment of stakeholder requirements, organisational strategy and asset management activity • Review South East Water change management model
Document control	<ul style="list-style-type: none"> • Continue implementation of knowledge management • Implement records management to achieve PROV compliance

	<ul style="list-style-type: none"> • Establish an enterprise content management maturity target and track progress toward achieving this target • Augment information management capability • Decide of future of roles of SharePoint and Open Text • Incorporate QMS document hierarchy into SharePoint metadata structure • Establish a controlled document register • Align ownership of control documents with the organizational restructure
Asset Management system	<ul style="list-style-type: none"> • Integrate the asset management system with South East Water's other management systems • Complete asset management governance model • Document operating model • Undertake risk assessment for the asset management system • Develop audit program for the asset management system based on monitoring risk controls
Asset management plans	<ul style="list-style-type: none"> • Develop Asset management plan (AMP) template and minimum requirements • Review existing asset management plans and conduct gap analysis • Implement critical assets framework • Increase maturity of AMP's with respect to risk management • Develop overarching performance and condition framework • Update asset management plans
Core investment process	<ul style="list-style-type: none"> • Implement program and project management systems to enable the optimized delivery of linked projects • Align all improvement effort affecting the core investment process • Implement a corporate investment prioritisation methodology • Consider how sustainability and reliability could be given greater weight in planning and design decision making • Develop a configuration management framework • Develop a system engineering plan for requirements verification and validation • Develop a plan for commissioning, handover and operator training • Document fixed asset disposal procedure • Complete operations implementation plan
Asset Information Strategy	<ul style="list-style-type: none"> • Develop asset information strategy and standards • Establish information governance • Establish master data standards • Establish information asset register • Decide on level of BIM maturity • Develop asset information requirements • Improve control over asset information transactions at asset handover

Table 4: 2018 AMS Review focus area actions

9. Challenges and responses

9.1 Asset management system – strategic initiatives

CHALLENGE / CHANGE / OPPORTUNITY	STRATEGIC RESPONSES (STRATEGIES & ACTIONS)
Information governance is currently spread across multiple areas of South East Water	<ul style="list-style-type: none"> Establish information governance
Business process management. South East Water's procedures and processes are currently spread across multiple repositories. This compounded by the QMS and iServer architecture vying for ascendancy.	<ul style="list-style-type: none"> Develop a process governance framework. Confirm the respective roles of process maps documented in iServer and procedures documented in the QMS Repatriate management system elements still residing within the US alliance integrated management system
Asset management accountability framework compliance obligation and asset management system improvement opportunity	<ul style="list-style-type: none"> Certification to ISO55001 Enhance asset management capability
Multiple asset registers	<ul style="list-style-type: none"> Deliver the unified asset register project (Maximo based asset register)
Management of risk associated with critical assets and aligning the AMS to the board risk appetite	<ul style="list-style-type: none"> Implement the critical asset framework
Broadened scope of AMS to include <ul style="list-style-type: none"> Business support assets Information communication and technology (ICT) assets Data and Information assets Intellectual property 	<ul style="list-style-type: none"> Establish asset management governance model (In progress) Establish asset management roles and responsibilities Establish information governance framework at the corporate level
Emissions reduction statement of obligations Emissions reduction pledge	<ul style="list-style-type: none"> Emissions reduction projects in support of the Climate Change Mitigation and Adaptation objectives Develop asset support systems for new solar generation assets
Capacity of asset planning function	<ul style="list-style-type: none"> Planning panel development (In progress)
Expiry of major contracts All major contract models will require re-evaluation. This will be followed by either a contract extension or retendering.	<ul style="list-style-type: none"> Retendering the renewals contract (In progress) Review the meter reading contract Review the performance of the pipes and structures program (Prior to October 2020) Principal education services and reinstatement contracts (2019).

	<ul style="list-style-type: none"> Principal maintenance contracts (2021/22) Principal connections contracts for water tapings and pressure sewer (2020)
<p>Quality of as-constructed information</p> <p>Digital engineering opportunity</p> <p>Asset hand over information transaction enhancements</p>	<ul style="list-style-type: none"> Develop asset information strategy Develop asset information requirements documentation Increase contractual control over asset information transactions (E.g. commissioning and handover documents)
<p>Melbourne Water pricing submission impact on South East Water. (Melbourne Water's bulk charges make up 75% of South East Water's OPEX). Issues to consider include:</p> <ul style="list-style-type: none"> Bulk Tariff design Melbourne Water CAPEX program Understanding the efficiency of OPEX Industry strategies translating to pricing submission proposals Waterways and drainage investment and linkages to service outcomes? (our customers see South East Water's brand on the bill) 	<ul style="list-style-type: none"> Work towards a position where South East Water provides a positive submission to the ESC endorsing Melbourne Water's pricing submission proposals by: Coordinating a unified position in response to Melbourne Water proposals Collaborating with Melbourne Water to assure our business requirements and customer commitments align with their pricing submission proposals Assuring we pay a fair and reasonable allocation of Melbourne Water's cost Advocating for affordable bulk water and sewerage prices for customers
<p>Liveability agenda:</p> <p>Integrated water management</p> <p>Implications of Melbourne's Transformation from a "Drained city" to a "Water sensitive city" (Refer to WSAA Next Gen Urban Water publication.)</p> <ul style="list-style-type: none"> Major projects opportunities E.g. Level crossing removals, Melbourne Metro and other major transport projects 	<ul style="list-style-type: none"> Enhance relationships with key stakeholders Enhance collaboration with priority Councils Enhance collaboration with other infrastructure agencies Enhance stakeholder management capability
<p>Digital utility program</p> <p>Spatial data management opportunities</p>	<ul style="list-style-type: none"> Manage meters as an asset Add meter feature to GIS Implement project SIM recommendations Progress development of WRPIS (Water Recycling Plant Information System) Designed Assets in Asset Web Map/GT Viewer trial
<p>Maintaining reasonable access to sewer assets in private property</p> <p>Increasing density of greenfield housing developments and brown infill developments</p>	<ul style="list-style-type: none"> Augmentation of sewer design standards Maintenance of manual excavation capabilities in maintenance supply chain Augment design standards and build over conditions for assets in the vicinity of retaining structures

(E.g. small lot sizes, building boundary to boundary, and basement construction)	
Aging asset applications	<ul style="list-style-type: none"> Review all asset applications
Opportunity to increase regulated return on assets at next pricing submission by positioning now to be assessed as “Leading” under the Essential Service Commissions PREMO framework (Performance, Risk, Engagement, Management and Outcomes evaluation model.)	<ul style="list-style-type: none"> Decide on PREMO target rating for 2023 pricing submission to enable South East Water to develop a “Leading” submission for the 2023 pricing submission should it wish to do so Monitor and report performance against current pricing submission
Multiple management systems Management system resourcing	<ul style="list-style-type: none"> Integrate management systems to generate productivity and effectiveness improvements
Land development system capacity and resourcing	<ul style="list-style-type: none"> Introduce master agreements for developer driven assets in lieu of stage agreements
Collaboration with the land development industry	<ul style="list-style-type: none"> Future asset networks in approved precinct structure plans within our operating region shall be strategically planned to enable timely development at the lowest community cost and in turn support the economic growth of greater Melbourne

Table 5: AMS - Strategic initiatives

9.2 Assets – Strategic initiatives

CHALLENGE / CHANGE / OPPORTUNITY	STRATEGIC RESPONSES (STRATEGIES & ACTIONS)
Asset ownership – Extent (beyond property boundary and potentially share arrangements with customers)	<ul style="list-style-type: none"> Actively develop conditions of connection and asset support methodologies for new on property assets (E.g. Aquarevo Rain to hot water assets)
New asset types <ul style="list-style-type: none"> Solar generation assets Biogas power generation assets Aquarevo – closed water loop water estate Fishermans Bend – development of sustainable, integrated brownfield development 	<ul style="list-style-type: none"> Augment change management maturity within the asset management system Develop support systems for new asset types
Asset information deficiencies	<ul style="list-style-type: none"> Improve our asset configuration management maturity Improve management and control of as constructed drawings as well as their capture at handover.
Climate change act 2017 asset management	<ul style="list-style-type: none"> Asset management plans must consider must consider climate change adaptation
Adapting to new EPA Act, Waters of Victoria	<ul style="list-style-type: none"> Augmenting our lagoon integrity management capability

State Environmental Protection Policy (SEPP) and EPA Sewerage Management guidelines. Discharging general environmental duty to proactively manage pollution risks	<ul style="list-style-type: none"> • Augmenting our asset management plans with respect to delivering proactive management of the risk of ground water contamination from WRP lagoons • Raising our asset management maturity with respect to asset decommissioning and disposal
Asbestos cement mains <ul style="list-style-type: none"> • Public • Manual • Waste volume created by lift and relay renewals • Environmental risk from renewal by excavation • Cost 	<ul style="list-style-type: none"> • Continue research and development of pressure main structural liner technology • Continue development and trialing of pipe extraction tool • Engage Asbestos Safety Eradication Agency (ASEA)

Table 6: Assets - Strategic initiatives

Corporate level improvement initiatives are documented in the corporate plan strategic initiatives.

Management system improvements are in the management system improvement plan. Improvement to the asset management system are documented in detail in the asset management system improvement plan.

Schedule 1 - Corporate Key Performance Indicators

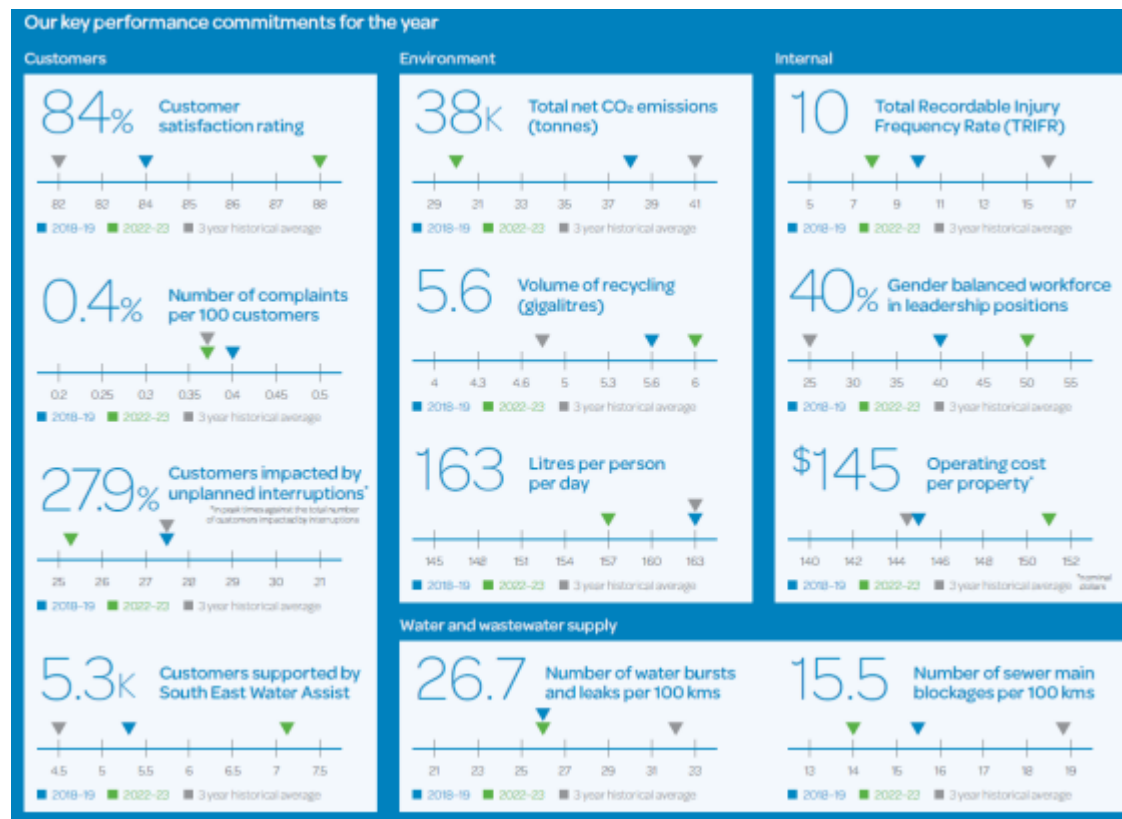

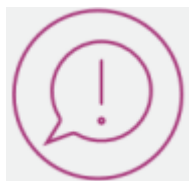


Figure 12: Corporate Key Performance Indicators (Reproduced from 2018/19 Corporate Plan)

Schedule 2 – Service Delivery Key Performance Indicators

1. Get the basics right, always											
<div><div>Safe and reliable services are the most critical priorities when it comes to delivering value for our customers. They've told us it's important that we maintain current high levels of service and that as experts in our field, they trust and expect us to continuously innovate and improve. We propose to continue finding more efficient ways to deliver the essential services our customers expect.</div><div></div></div>											
Ref	Indicator		Unit	Reporting							
				MRD	Corp	Price	DTF	ESC	NPR	Spt Link	
DWQ 1	% compliance with drinking water and recycled water standards		%				✓	✓			
CRS 4	No. of water quality complaints	/ 100 cust.		✓		✓		✓	✓		
REW 9	No. of customers receiving 6+ unplanned water supply interruptions in a year	No.		✓			✓	✓			
RES 5	No. of customers receiving 3 or more sewer blockages in the year	No.					✓		✓		
Operational											
CRS 4	Colour Water Quality Complaints	/ 100 cust.							✓		
CRS 4	Taste & Odour Water Quality Complaints	/ 100 cust.							✓		
CRS 4	Other Water Quality Complaints	/ 100 cust.							✓		
REW 5	No. of unplanned water supply interruptions	/ 100 km					✓		✓		
REW 5	No. of planned water supply interruptions	/ 100 km							✓	✓	
REW 9	No. customers receiving 5 unplanned water supply interruptions in a year	No.								✓	
RES 5	Number of customers receiving 2 sewer blockages in the year	No.									

2. Warn me inform me

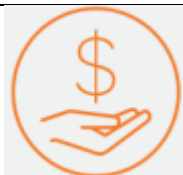


While fixing supply interruptions is important to our customers, so is how we warn them or keep them informed when there is a disruption. We propose to keep finding new ways to minimise customer impacts from network disruptions using a real-time website, SMS alerts and advanced network monitoring and analytics to identify events earlier. We propose to couple this with better scheduling of works, notifications and direct monitoring of customer disruption levels to guide ongoing improvements, with a focus on minimising interruptions in peak times as well as maintaining our high standards related to fixing faults.

Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	Spt Link
Strategic									
REW 8	Average duration of unplanned water supply interruptions	Avg. mins		✓	✓		✓		
N/A	% of customers impacted by unplanned water supply interruptions in peak* ¹	%		✓	✓				
N/A	% of customers notified per unplanned interruption* ²	%			✓				
N/A	% of planned water interruptions restored within notification period	%		✓	✓				A A A
Operational									
N/A	% of customers who have given us email/mobile details	%							
N/A	Email and SMS bounce-back* ³ rate	%							
REW 3	Total minutes to rectify bursts and leaks – Priority 1	Avg. Mins		✓			✓		
REW 3	Total minutes to rectify bursts and leaks – Priority 2	Avg. Mins		✓			✓		
REW 6	No. of water supply interruptions restored within 5 hours	%	✓	✓			✓		

¹ between 6am & 9am and 6pm & 10pm, ² for customers who have given us email/mobile details, ³ undelivered message returned indicating incorrect contact details

3. Fair and affordable for all



Given the essential nature of the services we provide, customers expect that our services and charges are fair for all. Many are concerned about bill certainty, control and affordability, however willingness to pay to increase investment to support vulnerable customers is low. We propose to deliver fair and affordable services through an ongoing focus on efficiency in how we deliver all customer outcomes, combined with leveraging the benefits of digitisation and continuous improvement across our vulnerable customer program.

Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	Spt Link
Strategic									
N/A	Operating cost per property	\$ / prop.		✓	✓				
N/A	No. of customers supported by South East Water Assist program	No.			✓				
N/A	Average level of debt upon entry into the South East Water Assist program	\$		✓	✓				
Operational									
N/A	Asset operations and maintenance cost per property	\$ / prop.		✓					
N/A	Customers assisted – No. of plumbing assistance service	No.		✓					
N/A	Customers assisted – No. of utility relief grant scheme	No.		✓					
N/A	Customers assisted – No. of payment plans	No.		✓					
CRS 7	No. of payment issue complaints	/ 100 cust.	✓	✓			✓	✓	

4. Make my experience better



Customers are unwilling to pay more for an improved service experience – they simply expect it. To deliver value efficiently, we propose to better understand customer experiences and needs across various segments, and to focus on resolving contacts the first time by more effectively managing and consolidating customer data and interactions. We propose to increase education around existing services and the value we provide to drive awareness and uptake of preferred channels and to improve value perceptions.

Ref	Indicator	Unit	Reporting							
			MRD	Corp	Price	DTF	ESC	NPR	Spt Link	
Strategic										
CRS 3	Total complaints	/ 100 cust.			✓		✓	✓		
N/A	Value for Money ^{*1, 2 & 3}			✓	✓					
N/A	Customer satisfaction ^{*2}	%		✓	✓					
Operational										
N/A	EWOV Investigations	/ 1000 cust.		✓		✓				
N/A	Customer inquiries resolved on first contact ^{*3}	No.		✓						
N/A	Customer effort score ^{*2 & 3}	%		✓						

^{*1} Committed to develop target by 2018-19, ^{*2} Measure based on customer feedback post interactions, ^{*3} 2017-18 is baseline year

5. Support my community, protect my environment



Customers place importance on us ensuring long-term water security while also protecting the bay and minimising our impact on the environment. To enhance water availability and create more liveable communities, we propose expanding the delivery of urban water recycling, investigating transformational agricultural water recycling opportunities, and providing water efficient education to our community. We also propose to reduce our carbon emissions and to mitigate sewer spills through advanced network monitoring.

Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	Spt Link
Strategic									
N/A	Number of significant sewage spills (dry weather)	No.			✓				
CRR 5	CO2 equivalent emissions (Tonnes)	Tonnes	✓	✓	✓		✓	✓	
N/A	Percentage of customers in greenfield areas receiving recycled water	%			✓				
N/A	Volume of alternative water as a % of total water used*	%			✓				
Operational									
RES 6	No. of sewage spills from reticulation & branch sewers	per 100km					✓		
RES 7	No. of sewage spills from reticulation & branch sewers fully contained < 5 hrs	%	✓	✓			✓		
RES 9	No. of residential sewer supply customer-interruptions restored within 4 hours	%		✓					
N/A	Sewerage system connections	%		✓					
RES 1	No. of sewer blockages	per 100km					✓		
RES 3	Total time taken to repair sewer blockage/ spill	Avg. Mins					✓		
N/A	Power consumption	kWh							
IE3	Availability of alternative water supply to greenfield areas	%							

* in designated greenfield areas

Benchmark



Water industry performance comparisons are annually published by the Essential Services Commission comparing Victorian Water companies, whilst the Bureau of Meteorology publishes comparisons for 86 water utilities and councils across 182 indicators within the annual Nation Performance Report for Urban Water Utilities.

Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	
ESC									
REW 1	No. of bursts and leaks – Priority 1	No.					✓		
REW 1	No. of bursts and leaks – Priority 2	No.					✓		
REW 1	No. of bursts and leaks – Priority 3	No.					✓		
REW 1	No. of bursts and leaks (Total)	per 100km					✓	✓	
REW 2	Total minutes to respond to bursts and leaks	Avg. mins					✓		
REW 2	Total minutes to respond to bursts and leaks – Priority 1	Avg. mins					✓		
REW 2	Total minutes to respond to bursts and leaks – Priority 2	Avg. mins					✓		
REW 2	Total minutes to respond to bursts and leaks – Priority 3	Avg. mins					✓		
REW 3	Total minutes to rectify bursts and leaks	Avg. mins					✓		
REW 6	No. of water supply interruptions restored within 5 hours - planned	%					✓		
REW 7	No. of water supply customer- interruptions – planned	Avg. mins					✓	✓	
REW 7	No. of water supply customer- interruptions - unplanned	Avg. mins					✓		
REW 8	Total customer minutes to restore water supply – planned	Avg. mins					✓	✓	
REW 8	Total customer minutes to restore water supply - unplanned	Avg. mins	✓				✓		
REW 8	Average duration of water supply interruptions – planned	Avg. mins					✓		
REW 9	No. customers receiving 1 unplanned water supply interruptions in a year	No.					✓		
REW 9	No. customers receiving 2 unplanned water supply interruptions in a year	No.					✓		
REW 9	No. customers receiving 3 unplanned water supply interruptions in a year	No.					✓		
REW 9	No. customers receiving 4 unplanned water supply interruptions in a year	No.					✓		

Benchmark (continued)

Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	
REW 10	No. of residential water customer- interruptions exceeding 5 hrs - planned	No.					✓		
REW 10	No. of residential water customer- interruptions exceeding 5 hrs - unplanned	No.					✓		
REW 11	No. of planned residential water customer-interruptions during peak hrs ^{*1}	No.					✓		
REW 13	Non-revenue water	%					✓	✓	
REW 14	Infrastructure Leakage Index (ILI)	ML					✓	✓	
REW 14	Real Water Losses	kL/con/day					✓		
REW 14	Real Water Losses	kL/km/day					✓		
RES 2	Total minutes to respond to reported sewer blockage/spill	Avg. Mins					✓		
RES 6	No. of sewage spills from reticulation and branch sewers – Priority 1	per 100km					✓		
RES 6	No. of sewage spills from reticulation and branch sewers – Priority 2	per 100km					✓		
RES 8	No. of sewage spills to customer properties	/ 100 cust.					✓		
RES 9	No. of residential sewer supply customer-interruptions restored within 4 hrs	No.					✓		
RES 10	No. of sewer spills within a house	No.					✓		
TDW 1	No. of trade waste customers with agreements ^{*2}	No.					✓		
CRR 3	No. of sewage spills from emergency relief structures & pumping stations ^{*3}	%					✓		
N/A	Rising main spills (reported to EPA)	No.							
N/A	Pumping station failure spills (reported to EPA)	No.							
N/A	Blockage spills (reported to EPA)	No.							
CRR 6	Treatment plant bio solid reuse (Tonnes)	%					✓	✓	
CRR 7	Trade waste volume received (ML)	%					✓	✓	
CRS 1	Average call connect time to operator – Fault line	Avg. secs					✓	✓	
CRS 1	Average call connect time to operator – Account line	Avg. secs					✓	✓	
CRS 2	No. of calls connected to operator within 30 seconds - Fault line	%					✓	✓	
CRS 2	No. of calls connected to operator within 30 seconds - Account line	%					✓	✓	
CRS 4	No. of water quality complaints	/ 1000 cust.				✓	✓		
CRS 5	No. of water supply reliability complaints	/ 100 cust.		✓			✓	✓	
CRS 6	No. of sewerage service quality and reliability complaints	/ 100 cust.	✓	✓			✓	✓	

^{*1} (5am-9am and 5pm- 11pm) ^{*2} Containing customer specific acceptance criteria, ^{*3} Volume of sewage spilt as a % of the volume of sewage transported

Benchmark (continued)

Ref	Indicator	Unit	Reporting						
			MR D	Corp	Price	DTF	ESC	NPR	
CRS 9	No. of flow rate complaints	per 100 cust					✓	✓	
CRS 10	No. of sewage odour complaints	per 100 cust	✓	✓			✓	✓	
CRS 11	No. of other complaints	per 100 cust					✓		
CRS 12	No. of GSL payments	No.					✓		
DWQ1	Standards for drinking water quality (% connections meeting <i>E.Coli</i>)	%		✓			✓		
DWQ1	Standards for drinking water quality (Zones compliant with <i>E.Coli</i>)	No.					✓		
DWQ1	Standards for drinking water quality (% connections meeting turbidity)	%					✓	✓	
N/A	Compliance with recycled water standards	%							
UPP 1	No. of instalment plans at the end of the reporting period	%					✓		
UPP 2	No. of restrictions applied for non- payment of bill during the report period	/ 100 cust.					✓	✓	
UPP 3	Legal action initiated for non-payment of bill	No.					✓	✓	
UPP 4	Restriction duration – Residential	%					✓		
UPP 5	Avg. debt levels for residential customers subject to restriction & legal action	Avg. \$					✓		
UPP 6	No. of customers awarded hardship grants	No.					✓		
UPP 7	No. of physical visits associated with GSL process management	No.					✓		
UPP 8	No. of customers entering hardship programs - by the level of debt	No.					✓		
UPP 9	% of customers in hardship program meeting instalment plans (%)	%					✓		
UPP 10	No. of concessions applied	No.					✓		
N/A	No. of customers successfully exited from South East Water assist program	No.							
N/A	% of customers who have given us mobile details	%							
N/A	% of customers who have given us email details	%							

Benchmark (continued)									
Ref	Indicator	Unit	Reporting						
			MRD	Corp	Price	DTF	ESC	NPR	
NPR									
IE1	Total volume of sewage treated only to a primary level	ML						✓	
IE13	Total number of sewer overflows reported to the environmental regulator	No.						✓	
IE2	Total volume of sewage treated to a secondary level but not to a tertiary	ML						✓	
IE3	Total volume of sewage treated to a tertiary level	ML						✓	
F1	Total revenue - water	\$000						✓	
F2	Total revenue - sewerage	\$000						✓	
F3	Total Income for utility	\$000						✓	
F4	Residential revenue from usage charges - water	%						✓	
F9	Written-down value of fixed water supply assets	\$000						✓	
F10	Written-down value of fixed sewerage assets	\$000						✓	
F13	Combined operating cost - water and sewerage	\$/property						✓	
F13.1	Combined operating cost - water and sewerage: bulk utility	\$/ML						✓	
F14	Total water supply capital expenditure	\$000						✓	
F15	Total sewerage capital expenditure	\$000						✓	
F17	Economic real rate of return - water	Ratio						✓	
F18	Economic real rate of return - sewerage	Ratio						✓	
F19	Economic real rate of return - water and sewerage	Ratio						✓	
F20	Dividend	\$000						✓	
F22	Net Debt to Equity	%						✓	
F23	Interest cover	Ratio						✓	
F24	Net profit after tax	\$000						✓	
F25	Community Service Obligations	\$000						✓	
F26	Capital works grants - water	\$000						✓	
F27	Capital works grants - sewerage	\$000						✓	
IF11	Operating cost - water	\$000						✓	
IF12	Operating cost - sewerage	\$000						✓	
H1	Water quality guidelines	text						✓	

Appendix A - Key Strategic Asset Management Documents

DOCUMENT No.	TITLE	PURPOSE	TIME HORIZON	UPDATE CYCLE	STATUS	CONSULTED	ENDORSEMENT	APPROVAL
BS2764	Organisational objectives register	To document all of South East Water's organisational objectives and their sources in one place	1-5 years	As required	Work in progress draft			
AM1811	Asset management policy	A statement by the organisation of the principals by which it will manage its assets	5 years	2 Yearly	Current Next update due in 2020	Strategic Asset Management Committee	GMLWS, GMF&D and GMCSD + Executive + FA&RM &/or SSC	Board
AM2698	Asset management objectives	SMART objectives to articulate the required performance of the AMS and assets. To set out what will be delivered by when.	5 years	5 Yearly	In revision to align with pricing submission. Included in AM2787	Strategic Asset Management Committee	Executive + FA&RM &/or SSC	Board
AM2787	Asset Management Strategy (SAMP Part 1 of 3)	To articulate: <ul style="list-style-type: none"> The long term approach to developing asset management capability The long term approach from which the Asset Management Plans are developed. How the asset related objectives are to be delivered in an optimised way. 	5 years	2.5 years (Twice per 5 year pricing period)	In development	Strategic Asset Management Committee	Executive + FA&RM &/or SSC	Board
AM2788	Asset Management System Improvement plan (SAMP Part 2 of 3)	To outline improvement plan for current and following year	2 years	Annual	Currently in spreadsheet form only	Strategic Asset Management Committee	Executive + FA&RM &/or SSC	Board
AM2651	Asset Management System Manual (SAMP Part 3 of 3)	To outline how the AMS works	N/A	2 yearly Min. Generally by exception continuously	Well progressed	Strategic Asset Management Committee	Strategic Asset management committee	Executive
	Asset strategies	Outlines the approach for a specific group of assets				Strategic Asset Management Committee		
	Asset management plans	Detail the specific activities for a group of assets				Strategic Asset Management Committee		
	Implementation plans	Detail how planned activities are to be delivered				Strategic Asset Management Committee		
	2018-23 Pricing submission and determination	Sets pricing, service standards and the funding envelope for the 2018-23 pricing period.	5 Years	5 Yearly	Approved December 2017	Strategic Asset Management Committee	Executive + CSSC	Board + ESC
AM2766	Asset product and service value chain framework	To articulate how resources, assets, quality and environmental controls together enable the delivery of services	5 Years	2 Yearly			Management System Leaders Forum	Strategic Asset management committee

Appendix B - Definitions

Asset – Assets are defined as an entity that has potential or actual value to South East Water including but not limited to related data, information intellectual property required to deliver services to our customers.

Asset Management – The Coordinated activity of an organisation to realise value from assets.

Asset Management Objectives – An asset management objective can be strategic, tactical or operational. Objectives can relate to different disciplines (such as financial, health and safety, environmental and operational goals or levels of service) and can be applied at different levels (such as strategic, organisation-wide, project, product and process. For asset or asset systems, asset management objectives are measurable, such as the level of performance or condition required of the assets. In the context of asset management systems, objectives are set by the organisation consistent with the organisational objectives and asset management policy.

Asset Management Plan – Information that specifies the activities, resources and timescales required for an individual asset, or a grouping of assets, to achieve the organisation's asset management objectives.

Asset Management Policy – The intentions and direction of an organisation regarding asset management as formally expressed by its top management. Principles and mandated requirements derived from, and consistent with, the organisational strategic plan and objectives.

Asset Management System – Management system for asset management whose function is to support the asset management policy and asset management objectives.

Consequence – An outcome of an event

Control – Measure that maintains and / or modifies risk

Critical Asset - A critical asset is an asset that 'has the potential to significantly impact the achievement of organisational objectives' as per ISO55000 CL3.2.7. ISO55000 CL3.2.7 notes:

- "Assets can be safety-critical, environment critical or performance critical and can relate to legal, regulatory or statutory requirements;
- Critical assets can refer to those assets necessary to provide services to critical customers; and
- Asset systems can be distinguished as being critical in a similar manner to individual assets."

Criticality – An assets criticality is taken to be its consequence of failure

Likelihood – Chance of something happening

Objective – Result to be achieved

- An objective can be strategic tactical or operational
- Objectives can relate to different disciplines (Such as financial, health, and safety, and environmental goals) and can apply at different levels (such as strategic, organisation wide, project product and process
- An objective can be expressed e.g. as an output or outcome, service level)

- In the context of asset management systems, asset management objectives are set by the organisation, consistent with the organisational objectives and asset management policy to achieve specific measurable results

Organisational objective – Overarching objective that sets the context and direction for an organisations activities .

Risk - Effect of uncertainty on objectives

- An effect is a deviation from the expected. It can be positive, negative, or both, and can address, create or result in opportunities or threats
- Objectives can have different aspects and categories, and can be applied at different levels

Risk is usually expressed in terms of risk sources, potential events, and their consequences and their likelihood.

DRAFT



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