DUXTON WATER

Initiation of coverage

Water – A scarce and valuable resource

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Water – A scarce and valuable resource

Duxton Water (D2O) is currently the only company listed on the ASX that solely invests in Australian Water Entitlements.

Water prices have lifted ~175% since mid-2007

Since July 2007, the Aither water entitlement pricing index has grown at a compound annual growth rate (CAGR) of ~8.3% p.a.

Although climatic conditions impact on water flows in the Murray Darling Basin (MDB) and thus supply, a key reduction in water availability was the government acquisition of 2,750 gigalitres (GL) from 2008 to 2019, aiming to return water to the MDB. A large majority of these acquisitions were in the Southern Murray Darling Basin (SMDB). We note the MDB Plan requires an extra ~450 GL to be recovered by mid-2024 provided it does not have negative socio-economic impact on river communities. We suspect this may be politically difficult, so have not factored this into our estimates.

The other key driver impacting the water supply/demand mix is the continuation of land use conversion in the MDB to higher value commodities. As more crops with higher gross margin returns per litre of water consumed are planted, irrigators will be prepared to pay more for their water. Thus, it is not difficult to assume a continuation of price appreciation in the entitlement market.

ACCC interim report on Murray Darling Basin water markets was tabled on 30 June 2020

The Australian competition and consumer commission (ACCC) is currently conducting an inquiry into the markets for tradeable water rights in the MDB. The ACCC has been asked to recommend options to enhance markets for tradeable water rights, including options to enhance their operations, transparency, regulation, competitiveness and efficiency. The interim review was provided to the Treasurer on 30 June 2020 with the final report due on 30 November 2020. We do not believe there will be material changes to the market operation aside from potentially more transparency on trading activity.

Forecast gross yield of 6.8% in FY21

D2O has guided to fully franked dividends of 5.9 cps in FY20 and 6.3 cps in FY21 implying a 6.3% gross yield in FY20 and 6.8% in FY21 compared to the 12 month forward gross yield of the ASX of ~5.0%. We are forecasting dividends will grow at ~0.4 cps p.a. in the medium term implying a gross yield in FY22 of 7.2%.

Valuation

We have derived a 12-month forward valuation for D2O of $1.67 based on an equally weighted blend of a discounted cash flow model ($1.73), a 12 month forward gross yield of 5.5% ($1.69), and a valuation derived from selling the water entitlement rights and winding up the vehicle ($1.57).

DUXTON WATER

Duxton Water Ltd. engages in the provision of water distribution. It supports the agricultural industry including the irrigators, a water supply through water entitlement leasing system where there is perpetual entitlement exclusive access to a share of water from a specified pool of water set aside by the Government for consumption. The company was founded on April 20, 2016 and is headquartered in Stirling, Australia.

https://www.duxtonwater.com.au/

Stock	D2O.ASX
Price	A$1.33
Market cap	A$159m

Company data	
Reported net asset value (May 2020)	A$1.60, ($315m)
Net asset value (pre allocation for capital gain) (May 2020)	A$1.78, ($350m)

Next news	
Monthly	Portfolio updates
Late August	Interim result

D2O Share Price (A$)

Source: FactSet

Financials

Duxton Water D2O-ASX

Year end 31 December

MARKET DATA		
Last Price	**$**	**1.33**
52 week high / low	$	1.58 - 1.01
Valuation (12 month forward)	**$**	**1.67**
Market capitalisation	**$m**	**158.8**
Shares on issue (basic)	m	119.4
Options / Performance shares	m	0.0
Other equity	m	0.0
Potential shares on issue (diluted)	**m**	**119.4**

12 month relative performance versus S&P/ASX Small Ordinaries

KEY RATIOS		FY18	FY19	FY20E	FY21E	FY22E
Reported NPAT	$m	**7.3**	**7.4**	**7.7**	**8.2**	**8.5**
Adjustments & Significant items	$m	(1.2)	0.6	0.0	0.0	0.0
Underlying NPAT	**$m**	**6.1**	**8.0**	**7.7**	**8.2**	**8.5**
EPS Reported	**¢**	**8.5**	**6.4**	**6.4**	**6.8**	**7.1**
EPS Underlying	**¢**	**7.1**	**6.9**	**6.4**	**6.8**	**7.1**
Underlying EPS growth	%	202%	(4%)	(6%)	6%	4%
P/E Underlying	**x**	**21.2**	**21.0**	**20.7**	**19.5**	**18.7**
Dividend	**¢**	**5.1**	**5.5**	**5.9**	**6.3**	**6.7**
Yield (Y/E/ spot)	%	3.4%	3.8%	4.4%	4.7%	5.0%
Payout ratio	%	72%	80%	92%	92%	94%
Franking	%	88%	100%	100%	100%	100%
Gross Yield (Y/E/ spot)	**%**	**4.6%**	**5.5%**	**6.3%**	**6.8%**	**7.2%**
Market cap (Y/E / Spot)	**$m**	**163.9**	**172.6**	**158.8**	**158.8**	**158.8**
Net debt /(cash)	$m	36.1	93.5	102.9	111.3	120.3
Enterprise value	**$m**	**200.1**	**266.1**	**261.7**	**270.1**	**279.0**
EV/EBITDA	**x**	**18.2**	**20.7**	**18.5**	**18.0**	**17.7**
EV/EBIT	x	18.2	20.7	18.5	18.0	17.7
Net debt / Enterpprise Value (mkt)	x	0.18	0.35	0.39	0.41	0.43
Gearing (net debt / EBITDA)	x	3.3	7.3	7.3	7.4	7.6
Net debt / Water entitlements	**%**	**19%**	**28%**	**32%**	**32%**	**33%**
Interest cover (Underlying EBIT / NI)	x	18.4	7.3	4.5	4.4	4.3
ROE (Average Equity)	%	6.0%	6.0%	5.4%	5.7%	5.9%
ROA (Average Assets)	%	7.4%	6.6%	5.6%	5.8%	5.8%
Net tangible assets	$m	125	143	142	144	145
Net tangible assets	¢	115	119	119	120	121
Operating cashflow per share	¢	(16.7)	21.2	6.4	7.2	7.4
Price / Operating Cash Flow	x	(9.1)	6.8	20.6	18.4	17.9

Net Asset Value (NAV) (A$)	FY18	FY19	FY20E	FY21E	FY22E
Reported	1.37	1.76	1.60	1.70	1.79
Excl. tax provision on unrealised gains	**1.51**	**2.00**	**1.77**	**1.92**	**2.04**
Water entitlements (Ml)	61,109	83,045	85,545	88,045	90,545

Valuation		A$
Discounted Cash Flow (12 month forward)		1.73
12 month value at a forward gross yield of	5.5%	1.69
Wind up (Market value entitlements less management termination fee)		1.57
Average		**1.67**

INTERIM SUMMARY	A$m	1H18	2H18	1H19	2H19	FY19
Lease income		*1.4*	*1.4*	*2.2*	*3.5*	5.8
Alloocation/ Other income		*3.8*	*19.7*	*62.5*	*25.4*	87.9
Total income		***5.2***	***21.2***	***64.7***	***29.0***	**93.7**
Gross profit		***0.8***	***14.7***	***9.1***	***15.6***	**24.7**
Operating expenses		*(1.8)*	*(2.7)*	*(4.4)*	*(7.4)*	(11.9)
EBITDA		***(1.0)***	***12.0***	***4.7***	***8.2***	**12.9**
Net interest		*(0.1)*	*(0.5)*	*(0.9)*	*(1.3)*	(2.3)
Pretax profit		***(1.1)***	***11.5***	***3.8***	***6.8***	**10.6**
Tax expense		*(0.5)*	*(2.6)*	*(1.2)*	*(1.9)*	(3.2)
NPAT		***(1.6)***	***8.9***	***2.5***	***4.9***	**7.4**
Dividend (A¢)		***2.5***	***2.6***	***2.7***	***2.8***	**5.5**

PROFIT AND LOSS (A$m)	FY18	FY19	FY20E	FY21E	FY22E
Lease income	2.8	5.8	8.5	9.0	9.6
Profit on Sale of Licenses / Other	1.9	2.8	0.0	0.0	0.0
Sale of temporary water allocation	23.5	87.9	61.5	63.3	65.1
Total Revenue	**28.2**	**96.5**	**70.0**	**72.4**	**74.8**
COGS	(12.7)	(71.7)	(52.3)	(53.8)	(55.2)
Gross profit	**15.5**	**24.7**	**17.7**	**18.6**	**19.5**
Operating costs	(1.0)	(1.4)	(1.4)	(1.5)	(1.5)
Management Fees	(1.0)	(1.8)	(1.7)	(1.7)	(1.8)
Performance Fees	(2.3)	(5.1)	(0.4)	(0.4)	(0.4)
Impairments	(0.2)	(3.6)	0.0	0.0	0.0
Reported EBITDA	**11.0**	**12.9**	**14.1**	**15.0**	**15.8**
Depreciation & amortisation	0.0	0.0	0.0	0.0	0.0
EBIT	**11.0**	**12.9**	**14.1**	**15.0**	**15.8**
Net interest	(0.6)	(2.3)	(3.2)	(3.4)	(3.6)
Pretax Profit	10.4	10.6	11.0	11.6	12.2
Tax expense	(3.1)	(3.2)	(3.3)	(3.5)	(3.6)
Reported NPAT	**7.3**	**7.4**	**7.7**	**8.2**	**8.5**

BALANCE SHEET (A$m)	FY18	FY19	FY20E	FY21E	FY22E
Cash	2.7	0.8	0.5	1.9	3.0
Receivables	5.4	6.8	4.9	5.1	5.3
Other	20.6	6.1	6.1	6.1	6.1
Current assets	**28.7**	**13.7**	**11.6**	**13.1**	**14.4**
Water entitlements	139.8	231.7	241.0	250.7	260.8
Other	0.5	1.7	1.7	1.7	1.7
Non current assets	**140.2**	**233.4**	**242.6**	**252.4**	**262.5**
Total Assets	**168.9**	**247.0**	**254.2**	**265.5**	**276.9**
Accounts Payable	2.5	5.4	3.9	4.0	4.2
Borrowings	0.0	0.0	0.0	0.0	0.0
Other	2.5	4.8	4.5	4.6	4.7
Current liabilities	**5.0**	**10.2**	**8.4**	**8.6**	**8.8**
Borrowings	38.8	94.2	103.5	113.2	123.3
Other	0.0	0.0	0.0	0.0	0.0
Non current liabilities	**38.8**	**94.2**	**103.5**	**113.2**	**123.3**
Total Liabilities	**43.9**	**104.4**	**111.9**	**121.8**	**132.2**
Equity	121.4	137.7	136.6	136.6	136.6
Retained earnings	3.6	5.0	5.6	6.2	6.7
Reserves / Other	0.0	0.0	0.1	0.8	1.4
Shareholder's equity	**125.0**	**142.7**	**142.4**	**143.7**	**144.8**

CASH FLOW (A$m)	FY18	FY19	FY20E	FY21E	FY22E
EBITDA	11.0	12.9	14.1	15.0	15.8
Change in working capital	(20.5)	18.1	0.1	0.1	0.0
Net interest	(0.6)	(1.9)	(2.8)	(3.1)	(3.4)
Tax (paid) / refund	(1.3)	(3.8)	(2.5)	(3.4)	(3.6)
Other	(2.8)	(0.6)	(1.3)	0.0	0.0
Operating cash flow	**(14.2)**	**24.8**	**7.7**	**8.6**	**8.9**
Water entitlements acquired	(68.2)	(97.6)	(9.3)	(9.7)	(10.1)
Water entitlements sold	5.9	4.9	0.0	0.0	0.0
Net investment / Other	(0.6)	0.7	0.0	0.0	0.0
Investing cash flow	**(62.9)**	**(92.1)**	**(9.3)**	**(9.7)**	**(10.1)**
Change in Equity	43.9	16.4	(1.1)	0.0	0.0
Increase / (decrease) in borrowings	36.8	55.4	9.3	9.7	10.1
Dividend	(2.9)	(5.7)	(6.8)	(7.3)	(7.8)
Other	(0.9)	(0.7)	0.0	0.0	0.0
Financing cash flow	**76.9**	**65.4**	**1.4**	**2.5**	**2.4**
Change in Cash / FX	(0.2)	(1.9)	(0.2)	1.4	1.1
Year end cash	**2.7**	**0.8**	**0.5**	**1.9**	**3.0**

Investment thesis

Duxton Water (D2O) is currently the only company listed on the ASX that solely invests in Australian Water Entitlements.

Since listing, D2O has grown its entitlement portfolio value from ~$40m to $335m (FY19) through acquisitions ($206m) and revaluations ($95m), with a corresponding growth in physical water entitlements from ~24 Gl to ~84 Gl.

As at May 2020, 63% of its permanent entitlements are leased to over 70 irrigating businesses.

Duxton Water is focused in the SMDB. The value of surface water in the SDMB is estimated to be over $27bn, based on a total of ~11,325 Gl of surface water entitlements.

The amount of water entitlements on issue has been capped. However, the government utilised a buy-back program, which decreased the supply available for consumptive use to support environmental requirements. Of the ~11,325 Gl, circa 30% is now held by the Federal Government (20%) and the State governments (10%) and is unavailable for irrigation, thus leaving an available tradeable market of ~7,855 Gl.

Supply has been further constrained by long term trend of the inflows reducing. Average inflows into the Murray system over the past 20 years are 35% lower compared to the 128-year average.

In the SMDB, D2O's investment therefore represents just less than 0.75% of the total market and 1.6% of the available market. We note here that a large percentage of the remaining ~7,855 Gl is held by primary producers, so is not often traded.

Total entitlement and allocation trading in the southern connected Murray Darling Basin (MDB) was estimated by a market expert (Aither) to be $1.4bn to $1.5bn in FY19. Total revenue earned by D2O in FY19 was $96.5m (i.e. ~6.5% of the market).

We see water in the MDB as a scare resource that is likely to see an increase in demand given the continuation of land use conversion in the MDB to higher value commodities.

Institutional investors are pursuing higher value permanent crop strategies (nuts, citrus, table grapes) that require substantially more water and have an inelastic demand. As more crops with higher gross margin returns per litre of water consumed are planted, irrigators will be prepared to pay more for their water.

Furthermore, farmers have been increasing the productivity and the efficiency of the land, optimising marginal returns, which again increases their capability to pay more for water. Irrigators continue to look to outsource their water entitlements instead of investing in water themselves.

Thus, it is not difficult to assume a continuation of price appreciation in the entitlement market.

We expect the performance of water as an asset will continue to demonstrate a low correlation to traditional asset classes, such as shares and bonds. Aither data indicates that the correlation of the Aither Water Index to the ASX 200 since July 2007 has been -0.08.

Recent events

November 2012	Murray-Darling Basin Plan signed
September 2016	Duxton Water Ltd (D2O) listed on the ASX (64m shares at $1.10, ~$70mmarket capitalisation).
May 2018	~18m options issued at IPO exercised at $1.10 raising $20m
October/November 2018	$24m of new equity issued
April/May 2019	$19m new equity issued
September 2019	Share buy-back announced (up to 8.9m shares)

Potential positive near-term catalysts

D2O has recently increased its allowable gearing levels (net debt /market value of entitlements) from 30% to 35%. This will allow additional entitlements to be acquired, particularly if we see any further weakness in entitlement prices. We would see this as a positive development given our view that water prices will continue to appreciate.

As noted above, the SMDB market has a $27bn value. The rest of Australia is estimated to have another $20bn plus of water rights on issue. Whilst not announced, but clearly flagged, we expect D2O will look to expand out of the SMDB at some stage in the future.

The rapid expansion of permanent crops mean water inelastic demand requirements are significantly increased every year as the trees and vines mature.

Irrigators continue to look to out-source their water entitlements instead of investing in water themselves.

Dividend yield looks attractive

D2O has guided to an interim FY20 dividend of 2.9 cps, a final FY20 dividend of 3.0 cps and has targeted an interim FY21 dividend of 3.1 cps and a final FY21 dividend of 3.2 cps (all fully franked) implying a gross yield of 6.3% in FY20 and 6.8% in FY21.

We are forecasting dividends will grow at ~0.4 cps per annum for the medium term implying a gross yield in FY22 of 7.2%.

Valuation

We have derived a 12-month forward valuation for D2O of $1.67 based on an equally weighted blend of a discounted cash flow model ($1.73), a 12 month forward gross yield of 5.5% ($1.69), and a valuation derived from selling the water entitlement rights and winding up the vehicle ($1.57).

Risks

We have a more detailed risk assessment in Appendix 2.

The key risks to an investment in Duxton Water we note here are predominantly related to weather and regulatory outcomes and the resultant impact on supply and demand in the water entitlement market and thus pricing.

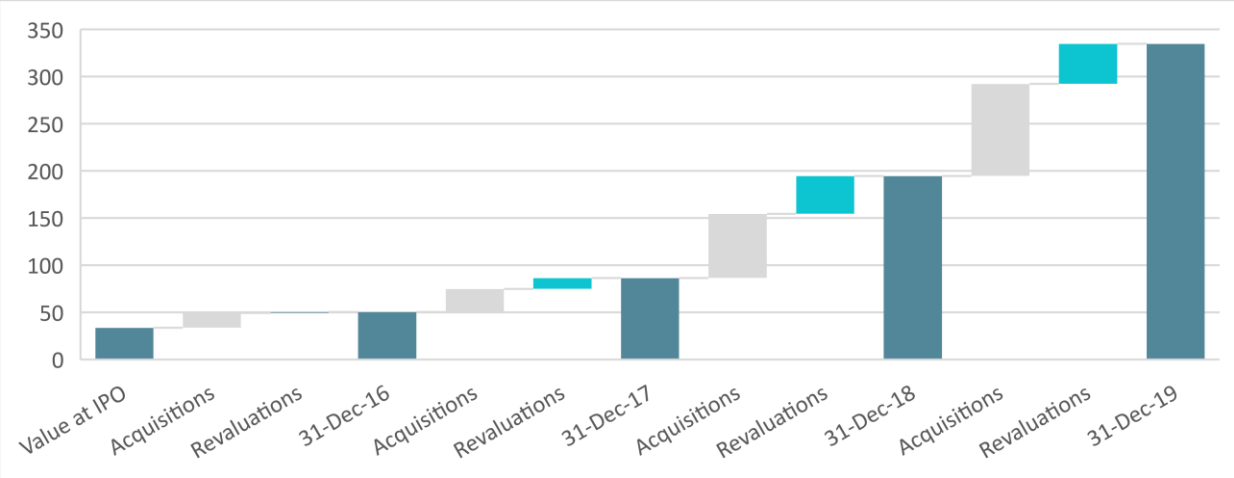
Company overview

Duxton Water Ltd (D2O) listed on the ASX in September 2016. D2O focuses on capitalising upon the increasing demand for scarce water resources as a vital input to agriculture, mining, urban consumption and water trading activity following the implementation of the Murray Darling Basin (MDB) Plan in 2012.

The company has provided a new source of capital to stimulate the growth of the Australia's water market. As a listed investment vehicle, it allows market participants to invest solely in Australian Water Entitlements.

Since listing, D2O has grown its entitlement portfolio from ~$40m to $335m (FY19) through acquisitions ($206m) and revaluations ($95m). NB: Revaluations reflect mark to market pricing (See Appendix 4).

Figure 1 – Duxton Water Entitlement Value ($m)



Source: Duxton Water

D2O earns revenue from:

- purchasing water entitlements and entering long-term lease arrangements with irrigators/water consumers
- the sale of temporary water allocations (from unleased allocations),
- trading of temporary water allocations, and
- the sale of portfolio licenses.

Figure 2 – Duxton Water Business Model

Source: Duxton Water

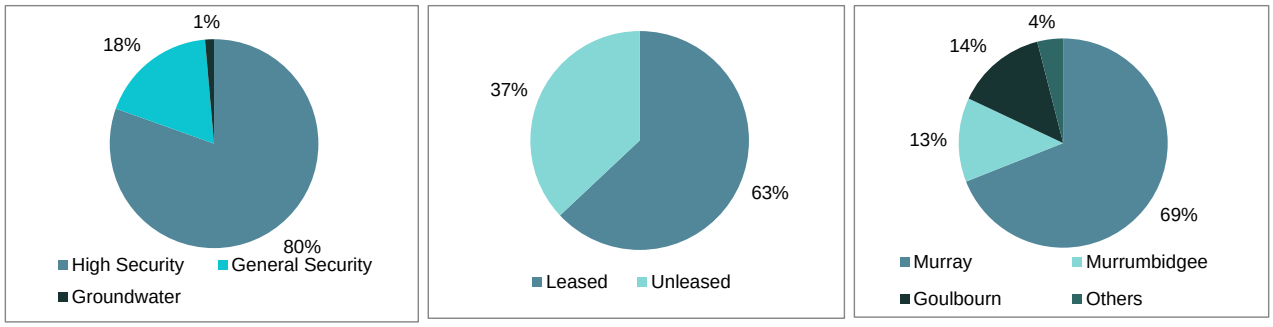
Total yield for the portfolio in the short term is influenced by climatic conditions/annual rainfall which impacts both water availability in the MDB river systems and irrigator demand for temporary water allocations. Longer term, if we continue to see growth in demand for the finite number of entitlements, supply and demand will take over and water prices will continue to appreciate. Thus, over time as leases roll off their current contracted terms, yields on historic cost entitlements will rise and temporary water allocation prices will appreciate.

D2O is currently the only company listed on ASX that solely invests in Australian Water Entitlements. The current portfolio is a mix of water entitlements in Victoria, New South Wales and South Australia.

The Company's current portfolio updated in the latest announcement for April 2020 has 64% of the portfolio leased on a value basis. D2O aims to have 70%-80% of its water portfolio held in long-term leases over time.

Duxton Water is managed by the Duxton Group, which actively farms across Australia producing a variety of agricultural commodities, including wine grapes, dairy, walnuts, dried fruit, apples and grain. The company therefore is involved in several broad agricultural communities and has good visibility into irrigators demands and the water market.

Figure 3 – Duxton Water Portfolio



Source: Duxton Water

Business case

D2O's objectives are to provide a return to investors in the form of regular dividends, franked to the maximum extent possible, with the potential for capital appreciation over the longer term, and to maintain the principal invested.

The company's key investment objectives and guidelines are:

- Invest only in Australian water entitlements,
- No more than 50% of water entitlements ($ value) in a single trading zone,
- Provide visible revenue streams and dividend streams as high as prudently possible and franked to 100% to the maximum extent possible,
- Gearing to be no more than 35% of total assets,
- Establish a portfolio which is diversified across Water Entitlement types, security classes and geographical regions within the Murray Darling Basin (MDB),
- Maintain of capital invested; and
- A long-term buy and hold strategy with the purchased and sale of assets as required to ensure that the portfolio is positioned to capitalise on growth opportunities.

D2O's business model is to generate revenue in the following ways:

Income is derived from purchasing water entitlements and entering into long-term lease arrangements with primary producers who pay D2O to access those water entitlements over the term of the lease. These leases are structured in a similar manner to commercial leases where the asset title is held by the lessor and fixed annual rent is paid by the lessee. In our view, this is the lower risk, more predictable revenue source.

The leases are paid quarterly, in advance, and if payment isn't made, Duxton Water has the optionality to sell the water on the spot market. Given the near-term visibility from this income stream, D2O has guided to leasing revenue of $8.7m in FY20, up from $5.8m in FY19, which we assume drops straight through to gross profit in the modelling.

Secondly, income is derived from the sale of annual water allocations from D2O owned unleased entitlements, together with the trading of water allocations in the market through the delivery of both spot allocation sales and risk managed forward allocation contracts. This revenue stream is far more difficult to forecast. In wetter years when farm dams are full and planted crops have been naturally watered, rather than requiring the purchase of water allocations to irrigate

crops, producers are more likely to offer up allocations to the market to supplement income. Thus, the volume of available allocations to trade increases with a respective lowering of pricing. In dry years when water allocations are lower, demand will push prices higher, thus impacting on demand.

However, this is the economic benefit of D2O investing in both High and General security entitlement. Ownership of high and general security entitlements is a balancing mechanism that contributes value to a portfolio in either wet or dry years. In a wet year, the increased allocation causes the price to fall, leading to a higher income yield for general security entitlements. In a dry year, the decreased allocation or zero allocation to general security causes the allocation price to rise, leading to a higher income yield for high security entitlements.

We believe that the value of the traded market may not vary that much, but in dry years there will be a lower number of Ml traded but at higher prices, whereas in wet years there will be a higher volume of allocations traded but at lower prices. Given demand is driven by the gross margin returns for the commodity planted per litre of water consumed, we would expect greater plantings in wetter years suggesting that the value of the market may be higher in wetter years.

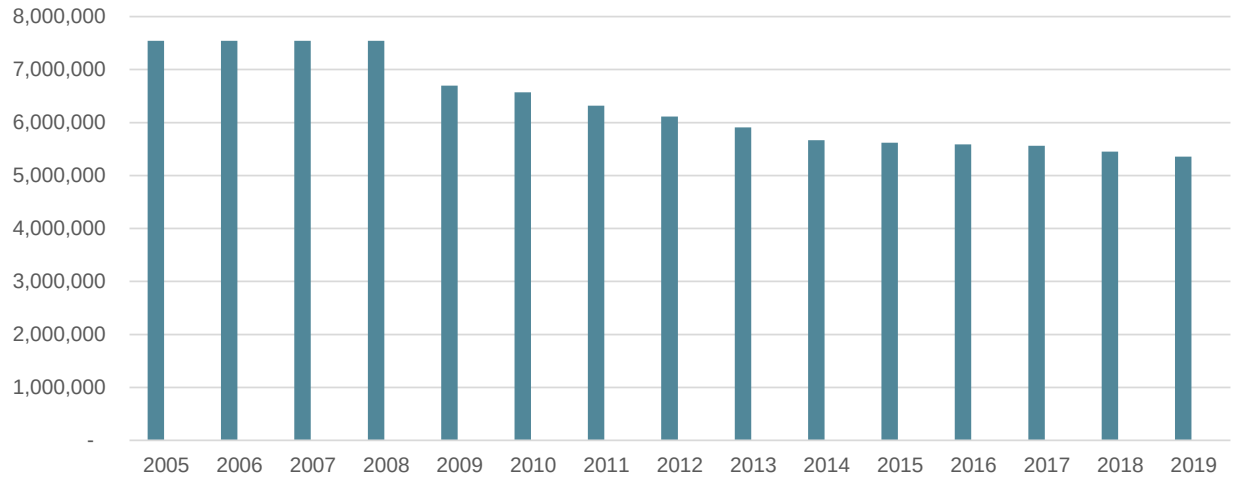
In FY17, 20,792 Ml of water allocations were traded for $1.6m, whereas by the end of FY19 we estimate ~150,000 water allocations were traded for a revenue of $88m. Given in FY19 average entitlements held by D2O over the year was ~72,000 Ml and ~50% of D2O's portfolio over the year was under long term leases implies ~35,000 Ml of unleased water was available to be traded over the year. Thus, D2O bought and sold over 100,000 Ml of allocations over the year. In our view, this is a higher risk source of income compared with long term leasing, which we reflect in our discount rate (see Valuation section Page 19).

Lastly, D2O can sell water licenses back into the market. This is contrary to D2O's long term aim to grow its portfolio and is only done opportunistically. The Board does not expect that Water Entitlements will be acquired with the intention of being held for re-sale.

D2O sees a growing demand for water and its products driven by:

- demand from farmers and institutional investors pursuing higher value permanent crop strategies that require substantially more water,
- the increasing demand for food,
- developing promotion of water trading,
- rising demand for water for urban consumption,
- impacts of climate change, and
- Government buybacks of Water Entitlements for environmental purposes in Australia.

Figure 4 – SMDB entitlements available for consumptive use lower given government buybacks (mega litres)



Source: Murray Darling Basin Authority

The government has acquired both high (31%) and general security (27%) entitlements with 30% of all water entitlements now held by Federal and State Government (20% and 10% respectively).

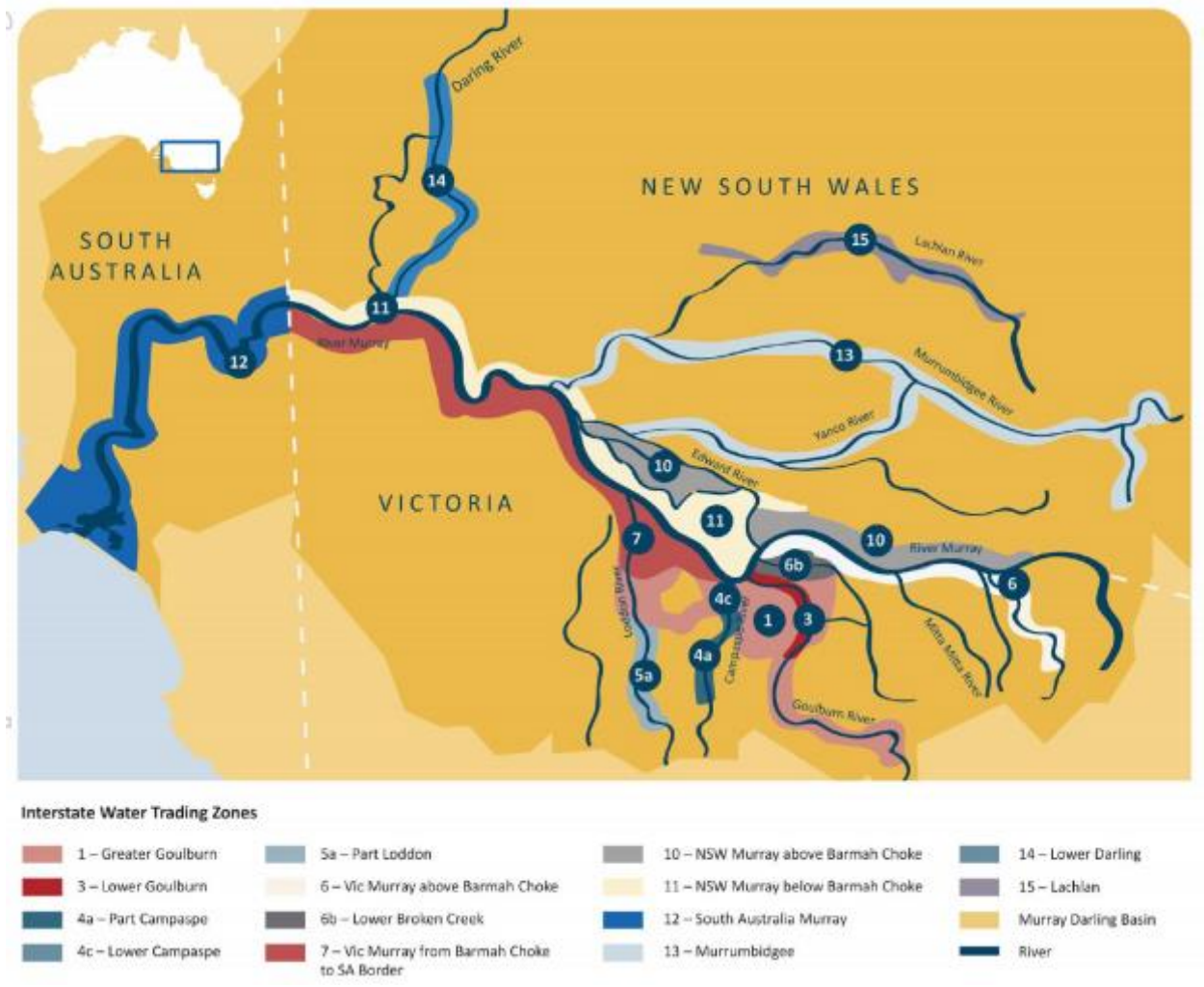
The water market in Australia

Water scarcity is a growing issue. Access to fresh water is a key limiting factor of production in Australian agriculture, which currently makes up approximately 60% of Australia's total water consumption. Future water availability is likely to be further constrained by a growing global population, impacts of climate change and government buybacks of water entitlements for environmental purposes. The variable supply of water, coupled with the rising demand for it, is likely to be a key economic driver underpinning the water market.

The Australian water market can be categorised into three distinct geographical markets which vary in size, activity and interconnectivity.

The Southern Connected Murray Darling Basin (MDB) is Australia's largest irrigated agricultural area, accounting for circa 40% of the country's gross value of irrigated agricultural production which is operated as a connected resource comprising 14 distinct water trading zones.

Figure 5 – The Murray Darling Basin Water Trading Zones



Source: Duxton Water

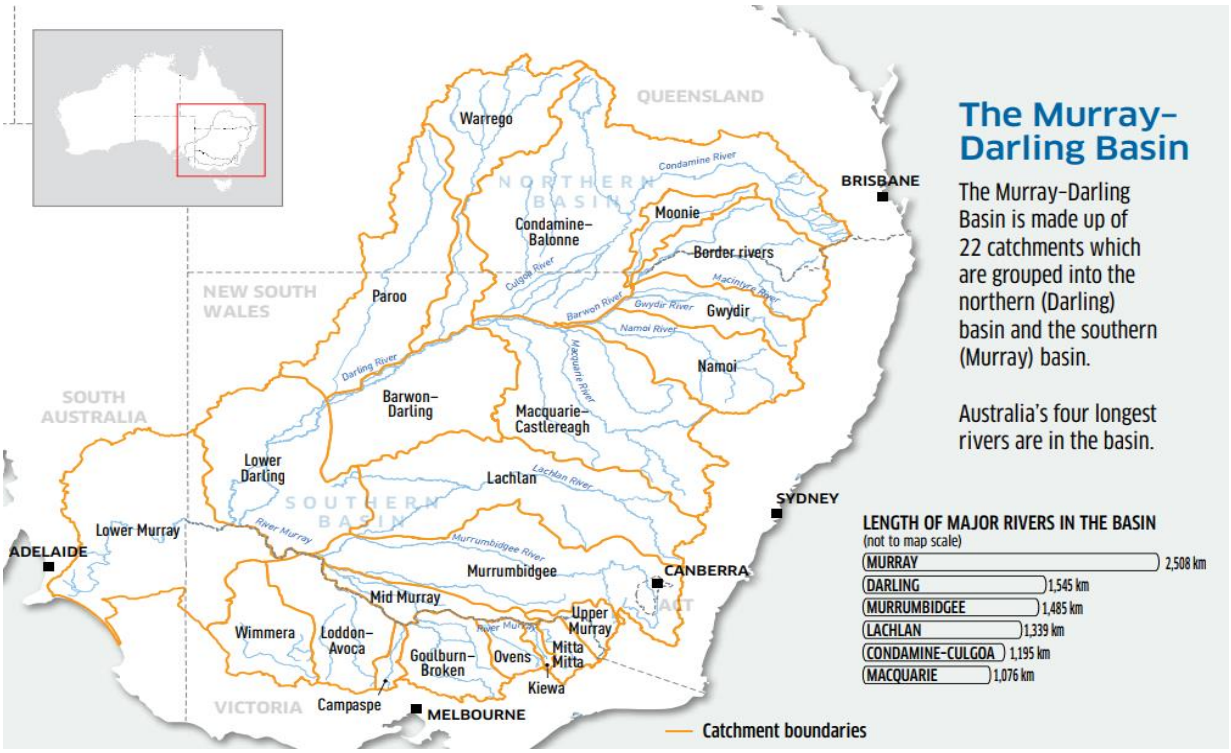
The Northern MDB, which is characterised by unregulated rivers or rivers regulated by single storages. Lastly, outside the southern and northern MDB in there are other water markets in Victoria, New South Wales, Queensland, Tasmania, Western Australia and the Northern Territory.

The Murray Darling Basin (MDB)

The MDB is commonly referred as Australia's food bowl. Although the region only accounts for 14% of Australia's total land area, it is Australia's most important agriculture region, generating approximately 40% of the country's gross value of irrigated agricultural production. Agricultural exports sourced from the Murray Darling Basin earn over $10bn a year.

Due to its interconnected water systems, the southern MDB region accounts for approximately 80% of Australia's water market trading activity. The Murray-Darling Basin drains one-seventh of the Australian continent, and represents one-third of its agricultural production, also one of the driest continents in the world. Over 2m people live in this area and it also stores 16 Ramsar listed wetlands. During the Millennium drought running from 2002-2009, it brought the nation's scarce resources into sharp focus, resulting in the passage of the Howard government's Water Act in 2007.

Figure 6 – The Murray Darling Basin



Source: Duxton Water

The total area of crops and pastures irrigated in the Murray Darling Basin is approximately 1.5m ha, or 71% of the total area of irrigated crops and pastures in Australia. As a result, the MDB region produces sufficient food to feed around 20m people.

The MDB river system carries one of the smallest volumes of water of its size (an average of 32,500 Gl a year). The volume is very variable and can range from 7,000 Gl in 2006 to almost 118,000 Gl in 1956. The average annual rainfall across the basin is around 530,000 Gl.

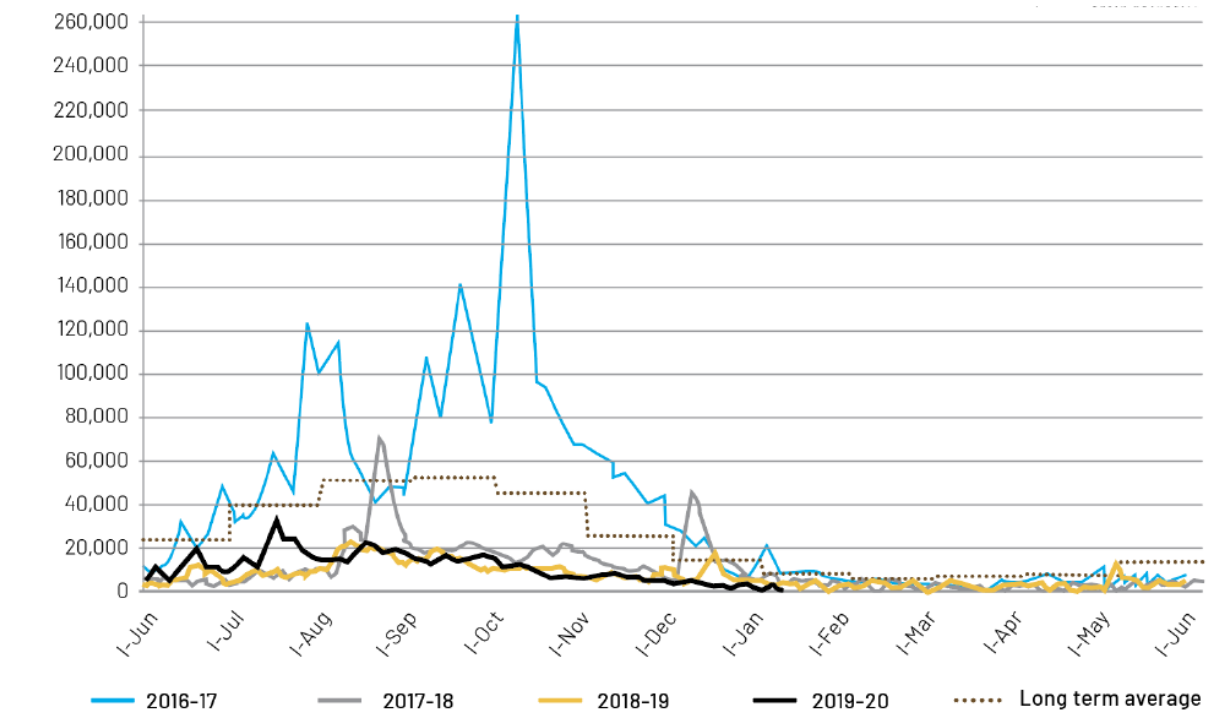
Only 4% of this rainfall makes it to the river system (because much of the basin is very flat), 2% drains into the ground and 94% evaporates or is transpired by plants. An average of about 1,375 Gl of groundwater is extracted annually. Groundwater is a finite resource and replenished only when surface water seeps into (recharges) the aquifers.

In recent decades, the health of the MDB has been affected by droughts and over-use of water resources. The key to improving the health of the basin's river system is through managing more natural and variable flows by leaving more water in rivers, wetlands and floodplains.

The Australian Government recovers environmental water by investing in water-efficient infrastructure on farms and buying back water. The water is then used to help improve the health of priority environmental sites.

The MDB accounts for ~66% of Australia's total water used for irrigation. Agricultural businesses in the region used approximately 6 million Ml of water to irrigate 1.4m ha of crops and pastures.

Figure 7 – The Murray Darling daily water inflows (Ml)



Source: Murray Darling Basin Authority

Murray-Darling Basin Plan

The MDB plan was a bipartisanship agreement on removing 2,750 Gl of water from irrigated agriculture back into the river system and is reviewed and revised constantly throughout its seven-year implementation phase. On 22nd of November 2012, it was signed into law after Commonwealth made a deal with each of the basin states: Queensland, New South Wales, Victoria, South Australia and the Australian Capital Territory.

It committed $10bn to reach a nationwide agreement on water use in the Murray-Darling to rectify the over-allocation of water licenses and return water back to the environment. The MDB Plan sets sustainable diversion limits (SDL), which states how much water can be used in the Murray-Darling Basin, while leaving enough water for the environment. The limits aim to ensure that there is sufficient water to maintain the environmental health of the Murray-Darling Basin, by limiting the amount of water that can be extracted from the Basin, while considering the social and economic impacts of water recovery.

The MDB Authority determined that the average baseline diversion level (the BDL), or the existing level of water extraction, for the Basin in 2009 was 13,623 GL. The MDBA also determined that the long-term sustainable diversion limit (the SDL) was approximately 10,873 GL per year or 2,750 GL lower than the 2009 BDL. The Australian Government committed to recover the additional 2,750 GL of water for the environment through a combination of licence buybacks and water recovery and efficiency projects. Any project needs to ensure that environmental, social, and economic outcomes are properly balanced.

Currently ~2,750 Gl has been recovered via a mix of government purchases of water license and taxpayer-funded infrastructure improvements. In return, farmers surrender the water they save to the government. Going forward, the government needs to decide whether to use the 'adjustment mechanism' to deliver an additional 450 Gl of environmental water on top of the Plan's 2,750 GL target.

The water markets

The Australian Water Entitlement trade market at approximately $50bn. Approximately 80% of Australia's water market trading activity occurs in the Southern Connected Murray Darling Basin (MDB) region. Total water availability in this region is circa ~7,550 Gl. As a result of water availability and interconnectedness of the southern MDB region, the Company has historically placed its whole focus on this region.

Australia has a variable climate and as such the available resource varies year on year. In some years Australia suffers flood conditions and in others drought conditions. Farmers in the MDB plant permanent crops such as nuts, vines, and citrus, as well as annual crops such as cereals and cotton. For these annual crops, farmers can scale their crop up or down as required and depending on the available resource.

In the past irrigators were given a right to the water resource based on their production. For example, someone with permanent crops may have been given an entitlement for a low volume with high security. The farmer with annual crops may have received a lower tier general security entitlement but at a higher volume. There are about 20 types of entitlements in the system and they all perform differently under different conditions.

Figure 8 – Water market mechanics

Source: Duxton Water

How does this work and why?

The regulatory "water year" starts on 1 July. The system and market are built so that the first priority of the water resource is given to the environment and human needs and then to protecting the conveyance of the river.

Once the above has been met the water is then allocated to the irrigators and other users. In the two major MDB markets in Victoria and New South Wales, there is slightly different entitlement classifications. Victoria has "high reliability" and "low reliability" entitlements whereas New South Wales calls them "high security" and general security" entitlements.

The first to be allocated water are the high security/reliability rights so even in dry conditions these perform well and usually get close to 100% of their entitlements. Then, the low reliability/general security rights receive their allocation when there is sufficient water in the system. In wet conditions, high security entitlements receive all or most of their allocation and the general security entitlements also perform well. In a dry year the high security rights tend to perform better than the lower tier general rights. They receive most of their allocation, while the general security may receive only a little or even none.

We note that there is often a significant improvement in low reliability/general security allocations as the water year progresses as most inflows to the MDB occur post the start of the water year from July to November.

As farmers reassess their balance sheets, they have and may look to sell their entitlements. D2O is in the business of acquiring these assets and then actively managing the portfolio to provide water supply solutions and security back to producers through leases and allocation sales. Under dry conditions D2O's revenue is protected by the leases providing a visible revenue stream with the allocation risk lying with the producer as it would if they actually owned the

entitlement themselves. And under wet conditions the leases continue to provide that revenue and there is simply more allocation in the system though the prices may be lower. Demand for allocation increases as annual producers expand their production.

In the Australian water market, there are two main types of property rights assigned to water:

Water Entitlement:

It is the perpetual entitlement to exclusive access to a share of water from a specified consumptive pool. The perpetual nature and other rights of Water Entitlements arises under state legislation, including the Water Management Act 2000 (NSW) (known as Water Access Licences), Natural Resources Management Act 2004 (SA) as amended (known as Water Licences) and the Water Act 1989 (Vic) (known as Water Shares).

Water Allocation:

It is the specific volume of water allocated to a Water Access Entitlement in a given season. This can fluctuate annually, based on seasonal availability.

As determined by the relevant water authorities, annual Water Allocations are made to High Security/High Reliability Water Entitlements before General Security/Low Reliability Water Entitlements. Whilst General Security/Low Reliability water holds more risk, the owner of the Water Entitlement may be compensated by a higher yield.

Cap and Trade System

The reason the system and the SMDB is so unique is that it is a unbundled cap and trade system. There was an unbundling from land meaning that you can own water without land and land without water. There was a cap put on the issuance of further water entitlements and a market created to facilitate the trade of those entitlements and allocation of usable water.

Under this regime, there is an explicit total pool of water resources available for consumption, which represents the cap, and water users are provided with entitlements to a share of the total consumptive pool. These entitlements are issued in perpetuity and defined as such that all water consumers, including aspiring ones, can only increase their share of a water resource pool by purchasing entitlements from an existing shareholder. The price charged for the water is determined in the market by the value placed on water by the market participants.

Carryover

Carryover mechanisms enable irrigators to store and carryover water into the new water year. This can be unused allocation from the previous water year, unused purchased allocations or a combination of both. The irrigator pays a fee to a water market participant to “hold” the water, who then gives it back in the new water year.

Water Prices

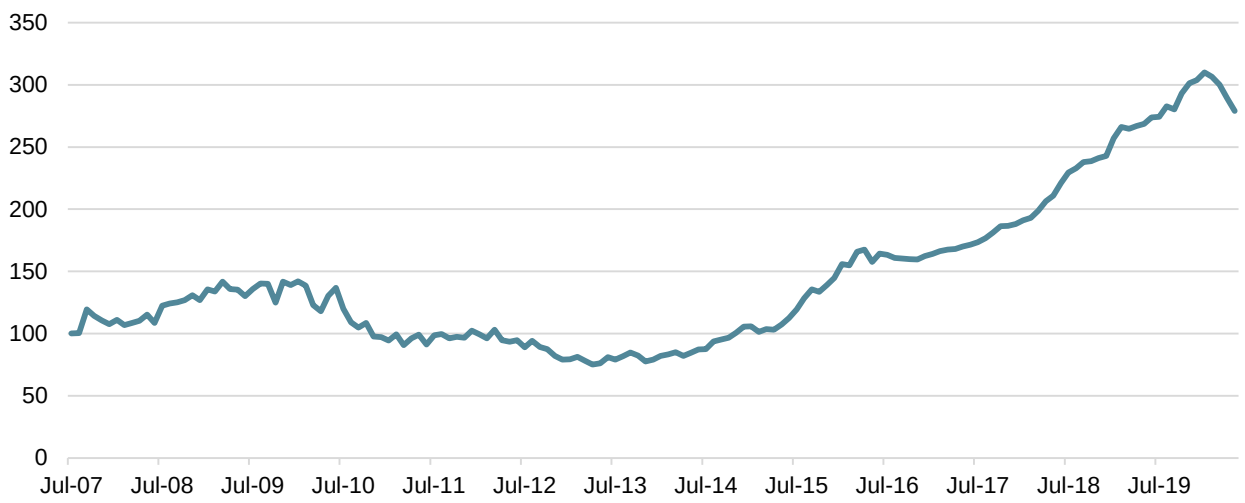
Water prices and the volume of water traded are driven by a number of factors, as detailed above. There is a strong, inverse relationship between water prices and the availability of water; water prices have steadily increased over periods where the availability of water decreased (such as droughts).

D2O believe water prices have strong demand characteristics over the long term as a result of a number of emerging trends in the market pushing up the demand for water. In order to meet growing demand, underpinned by population growth, water consumption from global irrigated farming will have to increase over the next 20 years.

Lower temporary prices affect the performance of the company’s unleased portion of the water entitlements.

As can be noted below average entitlement prices in the southern MDB have moved up quite materially since 2007 (Aither Water Index up over 175%) with current prices in the mid to high $4,000’s per Ml.

Figure 9 – Water entitlement price index



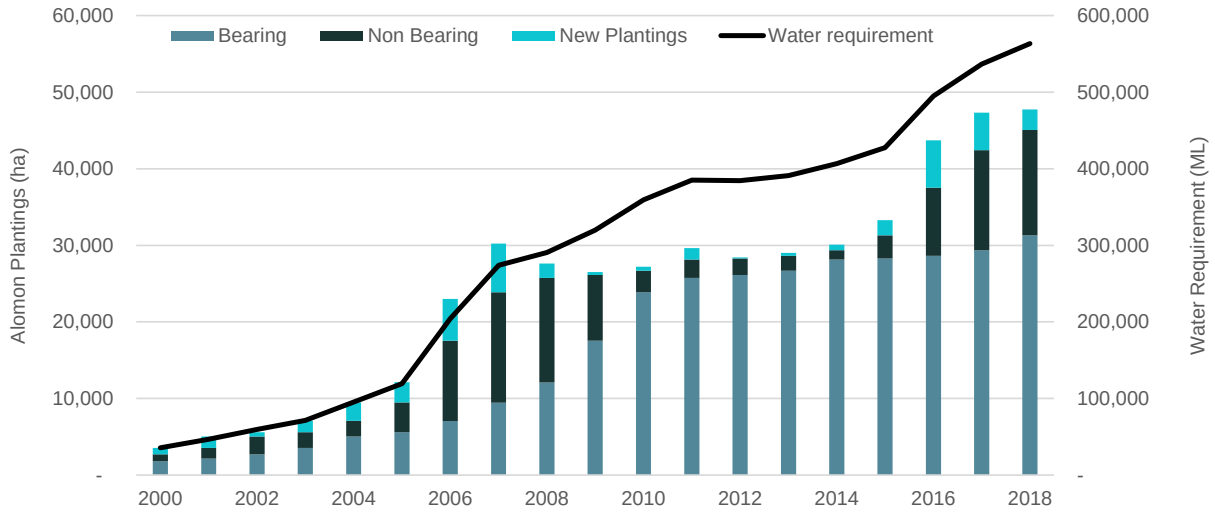
Source: Aither

Case study illustrating demand growth

In the MDB over 15,000 ha of almond plantations have been planted between 2016 and 2018. Once the trees are in the ground, they create a trajectory of growing water demand. At planting trees need ~3 Ml /ha of water which builds up to 14 Ml/ha at maturity (6+ years). This is estimated to equate to 630 Gl per annum of water to sustain production for plantings to 2018. We suspect this will have grown further. The 15,000 ha planted since 2016 alone will be consuming 45 Gl currently but the additional demand as they hit maturity will be at least 150 Gl going forward. The demand is somewhat set because water is a non-discretionary spend for permanent crops.

The cost of establishing a new hectare of almonds can be upwards of A$60,000. At current water prices, they would additionally require a further $90,000 of water entitlements to meet the trees demand at maturity. These trees require a constant water supply to stay alive, or the large initial outlay of capital is lost. In turn, this leads to the crops having an inelastic demand as the farmers are willing to pay more for water instead of decreasing their demand at higher prices. While the current permanent crops in the ground continue to push up water prices, further permanent crops continue to be established.

Figure 10 – Almond plantation growth and water demand



Source: Australian Almonds

Financial forecasts

How have we modelled D2O?

We have assumed lease income grows with the number of new entitlements acquired, a slow growth in the percentage of entitlements leased, and a slow lift in yields.

Figure 11 – Duxton Water Entitlements

A$m	FY17	FY18	*1H19*	*2H19*	FY19	FY20E	FY21E	FY22E
Water entitlements (Ml)	**36,759**	**61,109**	*73,666*	*83,045*	**83,045**	**85,545**	**88,045**	**90,545**
New entitlements	12,329	24,350	*12,558*	*9,379*	21,936	2,500	2,500	2,500
Cost / Ml ($)	1,822	2,559	3,662	4,990	4,230	3,706	3,892	4,047
Capital raised / required ($m)	22.5	62.3	*46.0*	*46.8*	92.8	9.3	9.7	10.1

Source: Duxton Water, MST Access

We are comfortable that yields will continue to grow as existing leases that were signed when water prices were significantly lower roll off and get re-contracted reflecting market prices for the respective entitlements.

Figure 12 – Duxton Water Lease income

A$m	FY17	FY18	*1H19*	*2H19*	FY19	FY20E	FY21E	FY22E
Year end entitlements leased	62.0%	39.0%	*53.0%*	*66.0%*	66.0%	66.5%	67.0%	67.5%
Average % Entitlements Leased	57.1%	50.4%	*39.2%*	*62.8%*	51.0%	66.3%	66.8%	67.3%
Leased income yield	9.7%	6.1%	*6.2%*	*5.2%*	5.7%	5.3%	5.4%	5.5%
Leased income	**2.4**	**2.8**	*2.2*	*3.5*	**5.8**	***8.5***	***9.0***	***9.6***

Source: Duxton Water, MST Access

Sale of temporary water allocations is far more subjective. We have conservatively assumed allocation prices will be lower, water volumes sold higher, and a lower average gross margin for the year.

Figure 13 – Duxton Water sale of Temporary Water Allocations

A$m	FY17	FY18	*1H19*	*2H19*	FY19	FY20E	FY21E	FY22E
Sale of temporary water allocation	**1.6**	**23.5**	*62.5*	*25.4*	**87.9**	**61.5**	**63.3**	**65.1**
COGS	(0.1)	(12.7)	*(55.5)*	*(16.2)*	(71.7)	(52.3)	(53.8)	(55.2)
Gross profit	1.5	10.8	*6.9*	*9.3*	16.2	9.2	9.6	9.9
Margin	92%	46%	*11%*	*36%*	18.4%	15.0%	15.1%	15.2%

Source: Duxton Water, MST Access

Other key assumptions that drive our forecasts include:

- 2,500 Ml of new entitlements are acquired every year. On this basis our modelling indicates the new net debt to market entitlement value ratio limit of 35% would not be hit until FY29.
- Percentage of portfolio invested in long term leases lifts from 64% up to 70% by FY27.
- Average yields on long term leases (based on cost) lift from 5.3% to 6.0% in FY28.
- We have conservatively assumed the sale of temporary water allocations revenue drops from $88m in FY19 to $62m in FY20 earning a gross margin of 15%, down from 18.4% in FY19.
- Forecast performance fee in FY20 of only ~$0.4m reflecting no appreciation in net asset value (NAV).
- Annualised operating costs (excluding management and performance fees) of $1.4m in FY20 growing at 3.5% per annum.
- Management fee of $1.8m in FY20, growing in line with our assumed increase in NAV.
- Interest costs of ~3.0%
- 100% franking of dividends based on a 60%-65% payout ratio of underlying earnings.

Profit and loss and balance sheet

We are conservatively forecasting a small increase in underlying NPAT in FY20, despite forecast gross profit lowering from $24.7m to $17.7m. The key reasons for the increases include:

- Only $0.4m cash performance fee in FY20 compared with $5.1m in the previous comparable period (pcp)
- FY19 included a $3.6m water value impairment, negated somewhat by a $2.8m gain on sale of a water license. We note D2O account for water entitlements at the lower of cost or market. At year end if an entitlement has a market value lower than cost, the value is impaired. Given our view on water pricing these will likely be reversed.

Figure 14 – Duxton Water profit and loss

A$m	FY17	FY18	*1H19*	*2H19*	FY19	FY20E	FY21E	FY22E
Lease income	2.4	2.8	*2.2*	*3.5*	5.8	8.5	9.0	9.6
Sale of temporary water allocations	1.6	23.5	*62.5*	*25.4*	87.9	61.5	63.3	65.1
Revenue	**4.1**	**26.3**	*64.7*	*29.0*	**93.7**	**70.0**	**72.4**	**74.8**
Cost of sales (temporary water allocations)	(0.1)	(12.7)	*(55.5)*	*(16.2)*	(71.7)	(52.3)	(53.8)	(55.2)
Gross profit on sale of water allocations	1.5	10.8	*6.9*	*9.3*	16.2	9.2	9.6	9.9
Gross profit on lease income	2.4	2.8	*2.2*	*3.5*	5.8	8.5	9.0	9.6
Profit on Sale of Licenses / Other	0.0	1.9	*0.0*	*2.8*	2.8	0.0	0.0	0.0
Gross profit	**4.0**	**15.5**	*9.1*	*15.6*	**24.7**	**17.7**	**18.6**	**19.5**
Management Fees	(0.6)	(1.0)	*(0.8)*	*(1.0)*	(1.8)	(1.7)	(1.7)	(1.8)
Performance Fees	(0.5)	(2.3)	*(0.5)*	*(4.6)*	(5.1)	(0.4)	(0.4)	(0.4)
Other operating expenses	(0.8)	(1.0)	*(0.8)*	*(0.6)*	(1.4)	(1.4)	(1.5)	(1.5)
Revaluations / (Impairments)	0.7	(0.2)	*(2.4)*	*(1.3)*	(3.6)	0.0	0.0	0.0
Total other operating expenditure	**(1.1)**	**(4.5)**	*(4.4)*	*(7.4)*	**(11.9)**	**(3.6)**	**(3.6)**	**(3.7)**
EBITDA	**2.9**	**11.0**	*4.7*	*8.2*	**12.9**	**14.1**	**15.0**	**15.8**
D&A	0.0	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
EBIT	**2.9**	**11.0**	*4.7*	*8.2*	**12.9**	**14.1**	**15.0**	**15.8**
Net interest	0.1	(0.6)	*(0.9)*	*(1.3)*	(2.3)	(3.2)	(3.4)	(3.6)
PBT	**3.0**	**10.4**	*3.8*	*6.8*	**10.6**	**11.0**	**11.6**	**12.2**
Tax	(0.9)	(3.1)	*(1.2)*	*(1.9)*	(3.2)	(3.3)	(3.5)	(3.6)
Reported NPAT	**2.1**	**7.3**	*2.5*	*4.9*	**7.4**	**7.7**	**8.2**	**8.5**
Reported PBT	**3.0**	**10.4**	*3.8*	*6.8*	**10.6**	**11.0**	**11.6**	**12.2**
Water Entitlement Impairments / (Revaluations)	(0.7)	0.2	*2.4*	*1.3*	3.6	0.0	0.0	0.0
Gain / (loss) on water entitlement sales	(0.0)	(1.9)	*0.0*	*(2.8)*	(2.8)	0.0	0.0	0.0
Total non recurring included in PBT	(0.8)	(1.7)	*2.4*	*(1.5)*	0.9	0.0	0.0	0.0
Underlying PBT	**2.2**	**8.7**	*6.1*	*5.3*	**11.5**	**11.0**	**11.6**	**12.2**
Tax	(0.7)	(2.6)	*(1.8)*	*(1.6)*	(3.4)	(3.3)	(3.5)	(3.6)
Underlying NPAT	**1.5**	**6.1**	*4.3*	*3.7*	**8.0**	**7.7**	**8.2**	**8.5**

Source: Duxton Water, MST Access

As noted above we are not forecasting an increase in net asset value (NAV) over the next six-months; i.e. FY20 NAV forecast at $1.60 in line with last published NAV (May) of $1.60.

Figure 15 – Duxton Water Net Asset Value – pre and post capital gain allocation

A$m	FY17	FY18	*1H19*	*2H19*	FY19	FY20E	FY21E	FY22E
NAV (pre capital gains tax)		1.51	*1.69*	*2.00*	2.00	1.77	1.92	2.04
Year end NAV	**1.18**	**1.37**	*1.54*	*1.76*	**1.76**	**1.60**	**1.70**	**1.79**
Shares on issue	71.2	108.6			119.9	119.4	119.4	119.4
Implied potential capital gain tax		14.7			28.8	20.7	25.5	29.6
Implied valuation lift to water entitlements		49.0			95.9	69.1	85.0	98.7
Book value water entitlements		**145**			**239**	**248**	**258**	**268**
Impairments etc		(6)			(7)	(7)	(7)	(7)
Balance sheet entitlement value	**76**	**140**			**232**	**241**	**251**	**261**

Source: Duxton Water, MST Access

Figure 16 – Duxton Water cash flow statement

Dec Year End	FY17	FY18	1H19	2H19	FY19	FY20E	FY21E	FY22E
Receipts from customers	4.7	22.2	*63.4*	*29.6*	93.0	0.0	0.0	0.0
Payments to suppliers and employees	(1.5)	(34.6)	*(47.2)*	*(15.3)*	(62.5)	0.0	0.0	0.0
Delta	(0.3)	23.4	*(47.2)*	*29.6*	(17.6)	0.0	0.0	0.0
EBITDA	**2.9**	**11.0**	*4.7*	*8.2*	**12.9**	**14.1**	**15.0**	**15.8**
Change in Working Capital/Other	(0.9)	(23.4)	11.5	6.1	17.6	(1.1)	0.1	0.0
Operating Cashflow - pre interest & tax	**2.0**	**(12.4)**	*16.2*	*14.3*	**30.5**	**13.0**	**15.1**	**15.8**
Cash interest earned	0.1	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
Cash interest paid	0.0	(0.6)	*(0.9)*	*(1.0)*	(1.9)	(2.8)	(3.1)	(3.4)
Tax Paid	(0.5)	(1.3)	*(3.2)*	*(0.5)*	(3.8)	(2.5)	(3.4)	(3.6)
Operating Cashflow - post int & tax	**1.6**	**(14.2)**	*12.0*	*12.7*	**24.8**	**7.7**	**8.6**	**8.9**
PPE Capex	0.0	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
Development & Maintenance capex	0.0	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
Water entitlements acquired	(24.3)	(68.2)	*(47.8)*	*(49.8)*	(97.6)	(9.3)	(9.7)	(10.1)
Water entitlements sold	7.0	5.9	*1.8*	*3.0*	4.9	0.0	0.0	0.0
Other Investing Cash Flow	3.4	(0.6)	*0.0*	*0.7*	0.7	0.0	0.0	0.0
Net investing	**(13.9)**	**(62.9)**	*(46.0)*	*(46.1)*	**(92.1)**	**(9.3)**	**(9.7)**	**(10.1)**
Increase in Equity	0.0	43.9	*18.6*	*(0.0)*	18.6	0.0	0.0	0.0
(Decrease) in Equity	0.0	0.0	*0.0*	*(2.2)*	(2.2)	(1.1)	0.0	0.0
Incr / (Decr) in Equity	**0.0**	**43.9**	*18.6*	*(2.2)*	**16.4**	**(1.1)**	**0.0**	**0.0**
Cash Dividends Paid	(0.8)	(2.9)	*(2.7)*	*(3.0)*	(5.7)	(6.8)	(7.3)	(7.8)
Debt draw down	2.0	36.8	*17.7*	*37.7*	55.4	9.3	9.7	10.1
Debt repayments	0.0	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
Other Financing Cash Flow	(0.0)	(0.9)	*(0.6)*	*(0.0)*	(0.7)	0.0	0.0	0.0
Financing cash flow	**1.2**	**76.9**	*0.4*	*65.0*	**65.4**	**1.4**	**2.5**	**2.4**
Incr / (Decr) in Cash	**(11.1)**	**(0.2)**	**(33.6)**	**31.7**	**(1.9)**	**(0.2)**	**1.4**	**1.1**
Cash beginning	14.0	2.9	*2.7*	*(30.9)*	2.7	0.8	0.5	1.9
FX Impact	0.0	0.0	*0.0*	*0.0*	0.0	0.0	0.0	0.0
Cash end	**2.9**	**2.7**	*(30.9)*	*0.8*	**0.8**	**0.5**	**1.9**	**3.0**

Source: Duxton Water, MST Access

Management agreement and fees

D2O is managed by Duxton Capital. The initial agreement is for 10 years with five year renewals post. The agreement can be terminated by either party after 10 years by giving six months notice.

The manager is paid 0.85% of the portfolio net asset value (NAV) per annum (paid monthly). NAV is calculated as reported net asset value (currently $1.60) multiplied by the number of shares on issue.

NAV is calculated by an independent third-party valuer, AITHER Pty Ltd, on a monthly basis, which is then reported to the Australian Stock Exchange (ASX).

The manager is also entitled to a performance fee (subject to a high watermark) of 5% p.a. on annual returns above 8%; and 10% p.a. on annual returns above 12%.

A termination fee is payable by the company to the investment manager if the contract is terminated in the first ten years (September 2026) of the agreement equal to 5% of the NAV. Post five years, the fee paid reduces by 1/60th for each calendar month post five years.

For example, the termination fee today based on current NAV of $1.60 is $191m times 5% = $9.6m or $0.08 per share.

Valuation

We have valued D2O using the following valuation methodologies:

- A five-year discounted cash flow valuation,
- A 12 month forward gross yield of 5.50%, and a
- "wind up" valuation.

Discounted cash flow valuation

Our "base case" year-end (December 2020) discounted cash flow valuation for D2O as at May 2021 is $1.69, based on a ten-year cash flow forecast model, equity beta of 0.75, target debt to enterprise value of 35%, risk free rate of 4.0%, weighted average cost of capital (WACC) of 7.8% and a nominal terminal growth rate of 2.5%. Our roll 12 month forward DCF valuation of $1.73 is a blend of year end 2020 and year end 2021.

We note here that the FactSet two-year equity beta is 0.44. We have used a beta of 0.75 as we believe the market may be underestimating the potential volatility associated with trading temporary water allocations. Until D2O has demonstrated a track record of delivering a relatively constant level of gross margin for that income stream we will veer on the side of conservatism.

Valuation sensitivity

We have tabled below the valuation sensitivity to different equity betas and terminal growth rates.

Figure 17 – Duxton Water spot DCF sensitivity analysis

	0.50	0.63	0.75	0.88	1.00
1.5%	1.88	1.61	1.38	1.20	1.04
2.0%	2.11	1.78	1.52	1.31	1.13
2.5%	2.41	2.00	**1.69**	1.44	1.23
3.0%	2.81	2.29	1.90	1.60	1.36
3.5%	3.37	2.67	2.17	1.80	1.51

Source: MST Access

12-month forward dividend yield

Given the potential lift in asset value (i.e. water entitlement prices) we believe a 12 month forward gross yield of 5.5% is the appropriate assumption. Noting that D2O traded on a gross yield of 4.6% and 5.5% in FY18 and FY19 respectively.

Figure 18 – Duxton Water 12-month forward valuation based on 5.5% gross yield

NTM Yield	Dec-20	Jul-21	Dec-21	Jul-22	Dec-22
Gross Distribution	$0.084	**$0.087**	$0.090	**$0.093**	$0.096
Target gross yield	5.5%	5.5%	5.5%	5.5%	5.5%
Value	$1.64	**$1.69**	$1.74	**$1.79**	$1.84

Source: MST Access

"Wind-up" Valuation

As noted above the company has the right to terminate the management contract in the first ten years at the cost of a termination fee. A termination fee is payable by the company to the investment manager if the contract is terminated in the first ten years (September 2026) of the agreement equal to 5% of the NAV. Post five years (September 2021), the fee paid reduces by 1/60th for each calendar month post five years.

On the basis that the realisable proceeds if all the existing entitlements were sold in 12 months is our forecast NAV of $1.65, then the "wind up" value would be $1.65 less 5% of the NAV equating to $0.08 per share or $1.57.

If it was done today (May NAV of $1.60), the wind-up price would be $1.52. We note that post five years from contract signing the quantum of termination fee will start to lower over time.

Figure 19 – Duxton Water wind up valuation

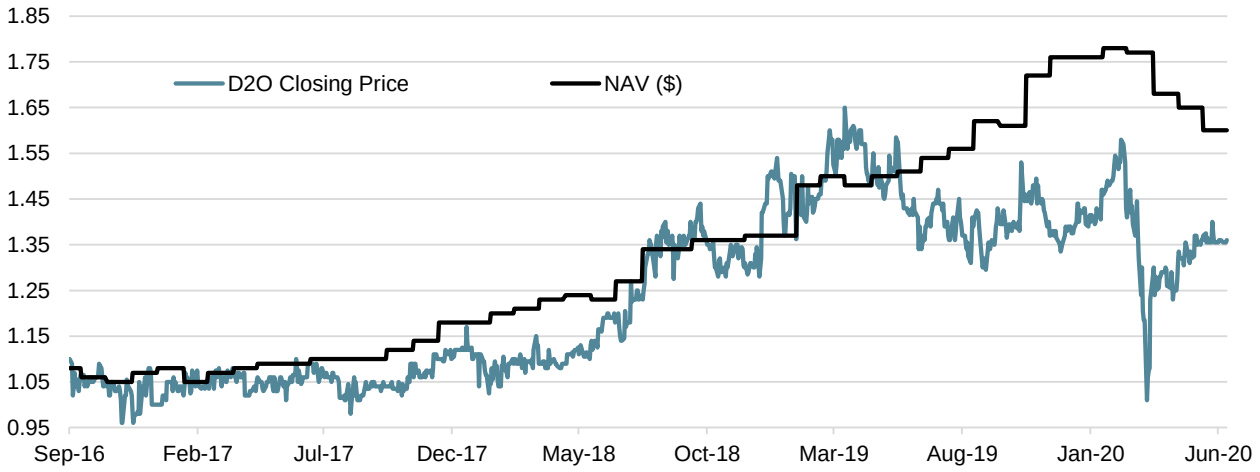
Wind up	Dec-20	Jul-21	Dec-21	Jul-22	Dec-22
Net Asset Value	$1.60	**$1.65**	$1.70	**$1.75**	$1.79
Less Termination Fee	($0.08)	($0.08)	($0.08)	($0.07)	($0.07)
Valuation	$1.52	**$1.57**	$1.62	**$1.68**	$1.72

Source: MST Access

Discount to NAV

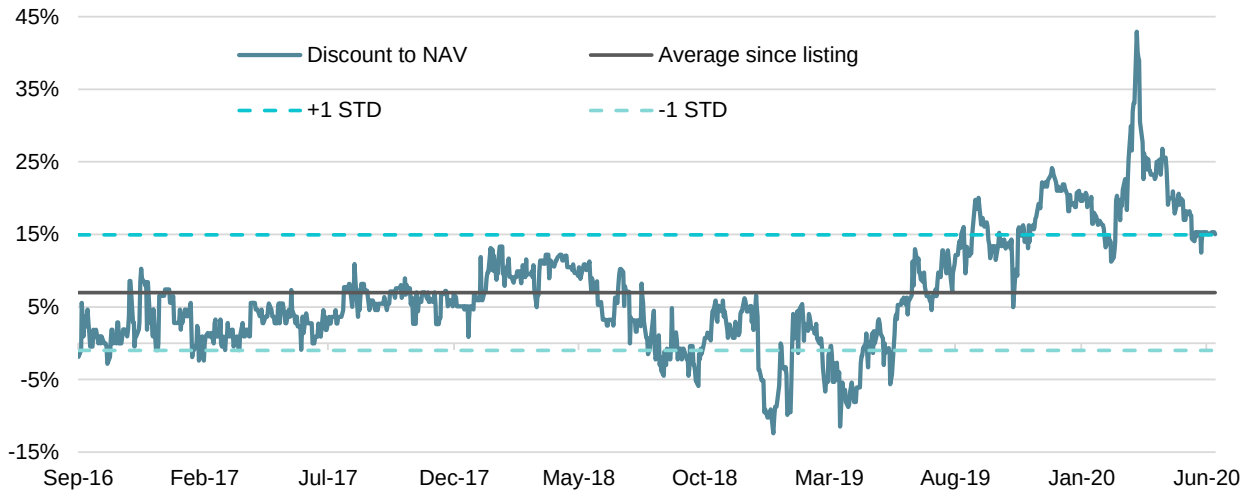
Rightfully or wrongfully, stocks that publish reported NAV typically trade at a discount to reported NAV. As can be noted below D2O's stock performance has moved out to a material discount to its published NAV.

Figure 20 - Duxton Water Price Discount to NAV



Source: Duxton Water, MST Access

Figure 21 - Duxton Water Price Discount to NAV



Source: Duxton Water, MST Access

Appendix 1 – Board and senior management

Edouard Peter - Chairman

Ed is the co-founder and Chairman of Duxton Asset Management. Prior to forming the Duxton Group in 2009, Ed was Head of Deutsche Asset Management Asia Pacific, Middle East and North Africa. He was also a member of the Deutsche Bank's Group Equity Operating Committee and Asset Management Operating Committee. Ed joined Deutsche Bank in 1999 as Head of Equities and Branch Manager of Deutsche Bank Switzerland. In March 2001, Ed moved to Hong Kong with Deutsche Bank and was appointed Head of Global Equities for Asia and Australia, becoming responsible for all of Global Emerging Markets Equities in the beginning of 2003. In November 2004, Ed became Head of Asian and Emerging Market Equities for the new Global Markets Division.

Stephen Duerden - Non-Executive Director

Stephen is currently the CEO of Duxton Asset Management Pte Ltd. Stephen has over 26 years of experience in investment management and joined the Duxton Group in May 2009. Prior to this, Stephen was the COO and Director for both the Complex Assets Investments Team and the Singapore operation of Deutsche Bank Asset Management Asia. Prior to this Stephen worked with Deutsche in Australia where he was a member of the Australian Executive Committee responsible for the management of the Australian business, with assets under management of approximately AUD $20 billion, and a member of the Private Equity Investment Committee overseeing the management of over AUD $2.5 billion in Private Equity and Infrastructure assets. Stephen has had exposure to a broad range of financial products and services during his career.

Dirk Wiedmann - Independent Non-Executive Director

Dirk has 28 years of experience in the finance industry. Over his career, Dirk has held senior global positions with several Banks, including UBS AG, Bank Julius Baer & Co Ltd and Rothschild Bank AG. Throughout his time in the industry, Mr Wiedmann has gained a vast range of experience covering international equities and derivatives, business sector market development, executive education and strategic marketing. Dirk has invested in Australian agriculture business, including wine and dairy operations, since 1999. Until August 2015, Dirk was the Global Head of Investments & Chief Investment Officer at Rothschild Wealth Management and Trust, a Member of the Divisional Board and a member of the Executive Committee of Rothschild Bank AG.

Peter Michell - Independent Non-Executive Director

Peter is Executive Director at Michell Wool Pty Ltd and was its Managing Director for the decade following 2004. Peter holds a Bachelor of Management BA (Man) from UniSA, is a fellow of the AICD (FAICD), is a fellow of the Governors Leadership Foundation (FGLF2000), and currently sits on the University of Adelaide's Agribusiness Advisory Board.

Dennis Mutton - Independent Non-Executive Director

Dennis is an independent consultant in the fields of natural resource management, primary industries, regional growth initiatives, leadership development and government-business relationships. He also holds a range of board directorships in government, business and not for profit organisations at State and National levels. His full time work career included executive management roles in both the private and public sectors culminating in 15 years as CEO of a number of South Australian State Government agencies including the Department of Environment, Water and Natural Resources and the Department of Primary Industries and Regions. Dennis also held roles as Commissioner and Deputy President of the Murray Darling Basin Commission and Chair of the SA Natural Resources Management Council.

Katelyn Adams - Company Secretary

Katelyn has over 10 years of accounting and company secretarial experience, servicing predominantly Australian listed companies.

Alister Walsh - Director of Water Assets

Alister has an extensive background in agriculture and water assets, business development and account management. He began working for Waterfind Australia – a leading water exchange - in 2008. Between 2011 and 2012, Alister worked in Commercial Banking before returning to Waterfind as Manager of Trade, Policy and New Product. In 2014 he was promoted to the role of Chief Executive Officer of Waterfind, which he held until April 2017, further developing his expertise in water markets and policy.

Appendix 2 – Key Investment Risks

Government Buy-back: Further buy-backs by the Commonwealth Government will result in less Water Entitlement on issue, increasing the scarcity of such assets and impacting their price. The participation of the Commonwealth Government in the market may also distort market fundamentals temporarily and reduce opportunities for the company to acquire Water Entitlements at appropriate values.

Commonwealth Environmental Water Holder: The Commonwealth Environment Water Holder (CEWH) is responsible for the control and management of the Government's water buy-back portfolio. The CEWH is the single largest holder of Water Entitlements in the MDB. CEWH is only permitted to sell water to the market in limited circumstance. In particular, CEWH may sell annual water allocations and water entitlements if they are not required to meet environmental objective and if the water cannot be carried over to the next water year. Annual Water Allocations and Water Entitlements may also be sold if the proceeds are used to acquire other water that will improve the capacity to protect and restore the environment. As a result of these legislative requirements, the company anticipates CEWH's role as a seller in the water market will be relatively limited, particularly in times of drought reduced water supply.

Allocation Risk: D2O is dependent on water allocations being made available by the relevant authorities in order to lease or sell the company's water assets for income purpose. A prolonged period of lower than average rainfall, resulting in low or zero water allocations may significantly impair the company's ability to sell/lease the water allocations for financial gain, and have a negative impact on financial performance. Water allocation may also be adversely affected by changes to water management or water sharing plans.

Water Allocation and Entitlement Price Fluctuation: D2O derives a portion of its income from the lease of water allocations to counterparties, which is subject to market fluctuations. Price movements may adversely impact the revenue generated from the company's portfolio and therefore the financial performance.

Extreme Weather Event Risk: The supply and demand of water is significantly influenced by extreme weather conditions. As such, extreme weather events may impact the value of the entitlements held in the company's portfolio. In the Federation Drought (1895-1902), the Darling, Murrumbidgee, Murray and Edward rivers all ran dry at various locations.

Australian Agriculture Competition Risk: The demand of water is significantly dependent on the water use of the agricultural industry which is in part impacted by the demand and supply dynamics of export markets. If the A$ was to significantly change in value, demand for Australian agriculture products may change. As a result, the demand for water would respond accordingly, impacting water prices and the value of the company's portfolio.

Settlement and Title Risk: Water Allocation or Water Entitlements transactions may not reach settlement for a number of reasons, including counterparty default due to adverse changes in economic conditions, water conditions, and the legal and regulatory environment or settlements may be delayed. This may impact returns. Advances in technology, such as desalination plants and water transfer infrastructure, may increase the supply of water. If this was to occur, downward pressure would be placed on water prices which would impact on the net asset.

Structural Risk: As irrigators become more water-sufficient, water demand may decrease, impacting the price of water in the market, which adversely impact on the financial performance.

Climate Change: There is a risk that climate change could mean the company is unable to benefit from rainfall and reliable water sources which could have an adverse effect on the future financial performance of the company. In some regions, Water Entitlements and Water Allocations are thinly-traded, increasing the difficulty in obtaining a fair and accurate valuation of the asset leading to the realisable value of the Water Entitlement being less than the apparent value or making it take long time before investment reaching the market value.

Water Market Competition Risk: An increase in water market participants may impact the price of Water Entitlements and Water Allocations impacting the value of the portfolio.

Loss of Carryover: The investment Manager may elect that Water Allocations which have not been leased, be carried over from one year to the next where permissible based on the jurisdiction and Water Entitlement class. This strategy may be implemented during times that Water Allocation prices are depressed.

Breach of Water Entitlement Conditions: Water Entitlements can be cancelled by a relevant water authority if there is a breach of conditions of a Water Entitlement.

Appendix 3 – Mark to market valuation

Although the trade in water entitlements is often fairly illiquid, it is possible to access publicly available information to verify the value of the D2O portfolio of entitlements.

We have marked to market the portfolio at 30 June 2019 and 31 December 2019 with market pricing (last traded activity closest to the relevant date) for the portfolio entitlements.

The exercise not surprisingly generated a calculated value very close to the reported number.

Figure 23 - Duxton Water Mark to Market Entitlement Value

	Ml			Price ($/Ml)		Value ($m)	
Entitlement Type Held	31-Dec-18	30-Jun-19	31-Dec-19	30-Jun-19	31-Dec-19	30-Jun-19	31-Dec-19
Vic 1A Greater Goulburn High reliability water share	3,935	7,887	9,979	4,065	4,200	32	42
Vic 1A Greater Goulburn Low reliability water share	75	94	94	449	425	0	0
Vic 1B Greater Goulburn Low reliability	129	353	358	475	400	0	0
Vic 3 Greater Goulburn Low reliability	120	371	371	408	545	0	0
Vic 5 Loddon High-reliability water share	239	0	0	4,000	3,000	0	0
Vic 6 Murray (Dart to Barmah) High reliability water share	5,741	5,941	7,258	4,650	5,400	28	39
Vic 6B Murray (Dart to Barmah) High reliability water share	97	106	268	5,000	6,400	1	2
Vic 7 Murray (Barmah to SA) High reliability water share	4,380	5,490	5,910	5,503	6,000	30	35
Vic 7 Murray Murray (Barmah to SA) Low reliability water share	19	19	31	675	625	0	0
NSW Murray 10 High Security	0	10	3,010	6,461	7,000	0	21
NSW Murray 10 General Security	13,612	14,008	14,491	1,600	1,818	22	26
NSW Murray 11 High Security	7,601	7,691	7,661	6,461	8,500	50	65
NSW Murray 11 General Security	6,219	6,219	7,140	1,791	1,850	11	13
NSW Murray 11 Supplementary	83	83	83	600	300	0	0
NSW Murrumbidgee 13 High Security	2,171	3,161	3,472	7,000	8,300	22	29
NSW Murrumbidgee 13 General Security	5,241	7,822	7,822	1,950	2,100	15	16
NSW Lachlan General Security - Jemalong Irrigation	2,660	2,660	2,660	3,000	3,800	8	10
NSW Lachlan General Security	5,110	6,010	6,510	1,100	1,200	7	8
NSW Lower Lachlan Ground Water	788	788	788	3,000	3,800	2	3
SA Murray High Security	2,388	3,436	3,808	7,700	7,000	26	27
SA Mallee Prescribed Wells Area - Parilla Red Zone	500	500	500	200	250	0	0
SA Mallee Prescribed Wells Area - Parilla Green Zone	0	0	832	200	250	0	0
Total	**61,109**	**72,649**	**83,045**			**255**	**338**
Reported entitlement value ($m)						**256**	**335**

Source: Ruralco Water Brokers, Water NSW, Water Connect SA

Appendix 4 – Information Sources

Registers

https://waterregister.vic.gov.au/

https://www.waternsw.com.au/ &

https://www.waterconnect.sa.gov.au/Pages/Home

https://waterregister.waternsw.com.au/water-register-frame

Exchanges:

https://www.waterflow.io

https://www.ruralcowater.com.au/

https://my.waterfind.com.au/user-home.html

https://h2ox.com/

https://www.waterpool.org.au/

https://www.murrayirrigation.com.au/

https://www.waterexchange.com.au/

Other Resources:

https://www.waterflow.io/

https://www.aither.com.au/

https://www.irrigators.org.au/

http://www.marsdenjacob.com.au/

http://www.water.nsw.gov.au/home

https://www.water.vic.gov.au/

https://www.mdba.gov.au/

https://waterregister.vic.gov.au/

Appendix 5 – Market players

The Australian water market has a number of trading platforms, water products and participants. The common participants in the Australian water market, include, but are not limited to, the following:

In NSW, Irrigation corporations are private companies holding bulk water entitlements on behalf of their shareholders. Together, the corporations represent thousands of individual water users who have contractual arrangements with their respective corporation of water delivery. Bulk access license issued to the corporations represent some 3,555 Gl of water entitlements, which is about 70% of the share of regulated river resources held in New South Wales.

Murrumbidgee Irrigation Limited

It services 3,260 landholdings and is owned by over 2,300 customers within an area of 378,991 hectares. The irrigation water and drainage services provided by Murrumbidgee Irrigation Ltd create the productive agricultural region known as the Murrumbidgee Irrigation Area (MIA).

Murray Irrigation Limited

It services over 2,200 landholdings which predominately support permanent horticultural plantings. It is licensed to operate by the NSW Government, and has 823,978 general security entitlements to the NSW Murray Regulated River resource (as at 30 June 2017). This represents more than 60 percent of all NSW Murray River general security entitlements.

Pomona Water

It is an irrigation settlement of approximately 750 hectares, 15 km north of Wentworth, NSW and sourced irrigation water from the Murray River. It is currently governed by the NSW Water Management Act 2000 No. 92 & Water Management (General) Regulation 2011, Private Irrigation Trusts and the Water Act 2007 Water Market Rules 2009.

Jemalong Irrigation Limited

The company diverts on average, more than 40 000 Ml of water from the Lachlan River each year to 119 shareholders within the district. The district comprises more than 96 000 hectares of farming land of varying soil types capable of supporting a wide range of cropping and livestock enterprises.

Blue Sky Water Fund – Now owned by Oaktree Investments

Ruralco Water

Ruralco Water is one of Australia's largest water brokers providing an independent and transparent trading platform for all classes of water in all areas, operating across Victoria, New South Wales, Queensland, South Australia and Tasmania. It services a regionally diverse customer base including local farmers, agricultural corporates and government.

Kilter Water Fund and the Murray Darling Basin Balanced Water Fund

Both owned by the Kilter Rural Fund owned 50% by Regal Funds Management

Waterfind Australia

Waterfind enables irrigators trade water through an online water exchange, or through water brokers. It has ~12,000 customers across the irrigation districts in SA, VIC, NSW, QLD, TAS and WA.

Wilks Water

Wilks Water brokers sales of temporary and permanent water transfers in the Murrumbidgee, Murray and Lachlan Valleys throughout NSW, Victoria and South Australia.

Websters water assets

Previously listed websters is now owned by Public Sector Pension Investment Board (PSP Investments).

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