

A photograph of a small, clear stream flowing through a dense forest. The stream is filled with numerous smooth, grey rocks of various sizes. The water is clear, reflecting the surrounding greenery. The banks are covered in thick vegetation, including many ferns and tall trees. Sunlight filters through the canopy, creating dappled light on the water and rocks.

Growing Midway's natural capital

Introducing
the opportunity
for Midway to benefit by
embracing natural capital thinking

Embracing the potential of natural capital thinking

Strategically, natural capital thinking can deliver:

- Sustained profitability
- Improved market access
- Access to finance
- Realise business level environmental and social objectives
- Social license to operate



Founded in 1980, Midway focuses on the production and export of high quality woodfibre. Midway's business is concerned with plantation and land ownership, the procurement of timber resources within Australia, processing, materials handling and exporting of woodfibre, and the international woodfibre market.

A secondary and unheralded component of the business is the management of large reserves of natural forest. Midway has many natural assets in their estate including tall wet eucalypt forests, riparian zones, natural water courses, areas of high biodiversity and important species ranging from insects to platypus. These natural assets provide ecosystem services including climate regulation, water supply and purification, and recreation and culture.

The active management of natural assets has established Midway as a steward of the land for both current and future generations. Indeed, Midway is a business that delivers stakeholder value by preserving the ecological integrity of natural assets, so they continue to provide both social and private benefits into the future.

The emphasis of stewardship as a key function within the business demands greater responsibility, but it also provides greater opportunity as social expectations change towards business. A new approach is required to manage and communicate the benefits of Midway's natural asset stewardship natural capital management to shareholders and stakeholders.

Natural capital thinking

Natural capital is the stock of renewable and non-renewable resources (including plants, animals, water, soils and minerals) that combine to yield a flow of benefits to people (Natural Capital Protocol).

Natural capital is managed and combined with produced, human and social capital to deliver goods and services. A natural capital approach recognises the dependencies that businesses and people have on natural capital, and the importance of natural capital in the delivery of value by the business.

Natural capital thinking can be used to assess:

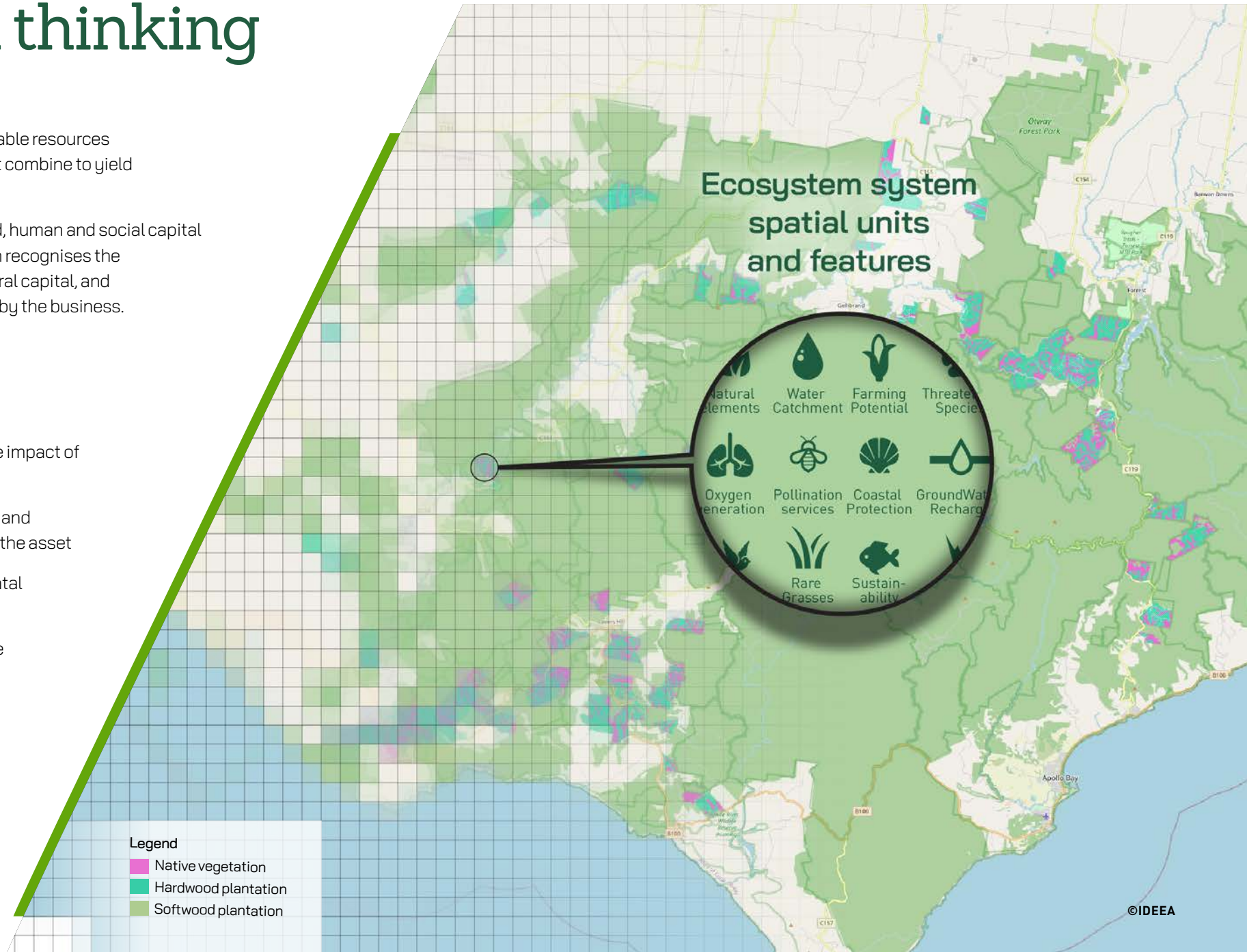
- **Productivity** (the output produced per unit of input) across private and public benefits
- The **sustainability** of current production including the impact of economic activity on natural capital
- The **impact** of environmental drivers (for example fire) and pressures (for example pests) from the perspective of the asset
- The ability of natural capital to respond to environmental shocks (**resilience**)

Businesses can have positive or negative impacts on the natural capital that other business and people depend on. These impacts underpin a series of relationships between stakeholders.

There are various approaches to minimising our impacts on natural capital. Innovative natural capital managers take advantage of these relationships to find new areas of business, for example payments for ecosystem services.

Legend

- Native vegetation
- Hardwood plantation
- Softwood plantation



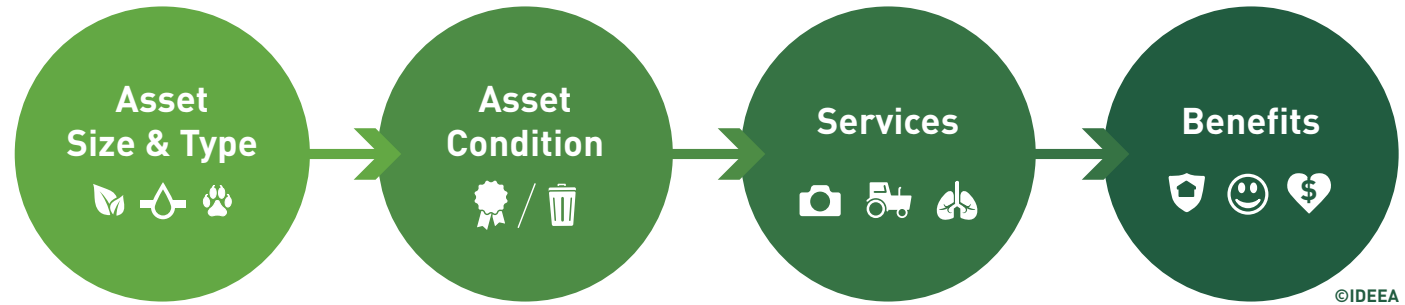
What is meant by natural capital

The diagram here provides a conceptual model for framing ecosystems as an asset that provide services that are of benefit to stakeholders. A key feature of this model is that each ecosystem across the Midway estate is recognised as an asset that provides a flow of services and benefits.

The model contains four key elements:

- / Ecosystem **Asset** capturing the size and type of ecosystem assets, akin to recognising productive assets such as machinery.
- / Ecosystem **Asset Condition** monitors the health and quality of ecosystem assets, akin to recognising the age of productive assets, which is a proxy for condition.
- / Ecosystem **Services** represent the flow of services from one ecosystem to another, and from ecosystems to economic units including individuals and society. These flows exist across provisioning, regulating and cultural services. This is akin to recognising the contribution of assets to economic benefits.
- / **Benefits** arise from the use of ecosystem services, which may be monetary or nonmonetary, for example, health benefits, economic benefits or social benefits.

A natural capital approach to ecosystem management requires information on natural capital. The conceptual model can be applied across the entire Midway estate. Embedding a natural capital framing across all elements of Midway's business requires a spatial information system to address the risks and opportunities.



Transforming natural capital data into knowledge

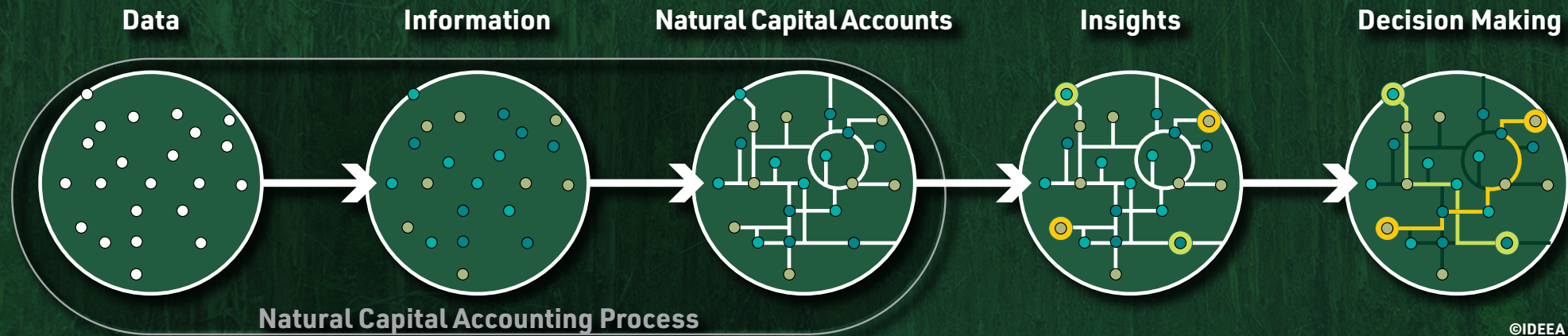
Natural Capital Accounting (otherwise known as environmental accounting, environmental-economic accounting) is an approach to organising information for many uses. The global statistical standard for natural capital accounting is the United Nations System of Environmental-Economic Accounting (SEEA).

The ecosystem asset-services model embedded in the approach to natural capital accounting is coherent with the financial and economic framing used across business.

Natural capital accounting is an extension to approaches like triple bottom line reporting and aims to systemise the way environmental and economic data is recorded and organised within the business.

Natural capital accounting provides benefits across three areas:

- 1 Data management** – the process of producing coherent data requires the refinement of data collection and management. The accounting process can find synergies between datasets, lower the costs of managing data by streamlining processes and reducing duplicate data collection, and also increase the return associated with investing in data.
- 2 Coherent data** – coherence is a quality attribute and refers to the capacity of a dataset to be joined with another dataset. Targeting and achieving coherence across data sets improves the applications quality of the applications that depend on data.
- 3 Insights and decision making** – a coherent set of environmental-economic data can be used to show how business decision-making is linked to the sustainable management of natural capital. Insights can be revealed to help understand sustainability thresholds, optimal investment pathways and quantify the links between natural capital and people.



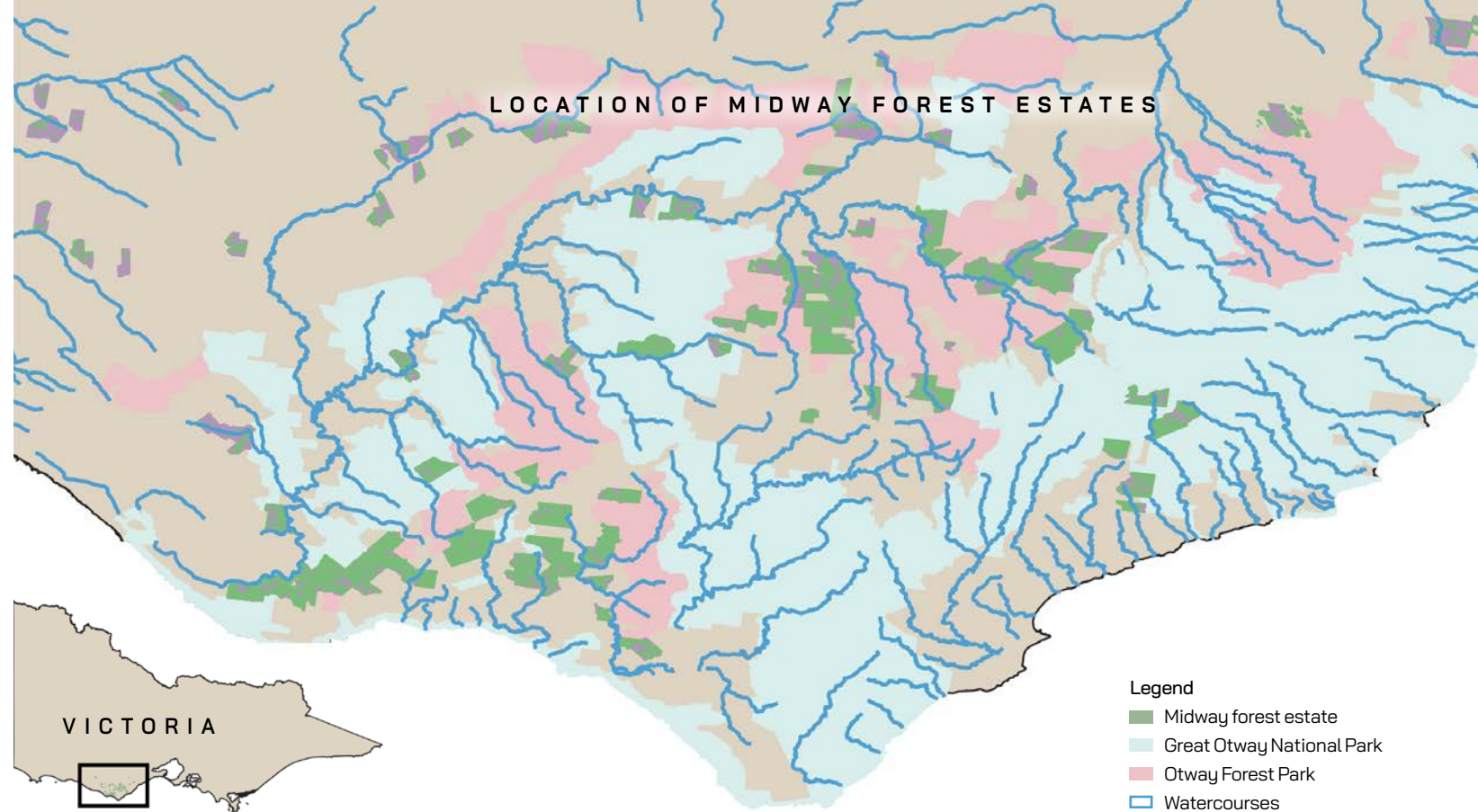
Midway natural capital assets

Midway owns or manages over 44,000 hectares of plantation estates in Australia which includes the plantation estate on the Tiwi Islands. Its owned and right of use plantation land estate includes 17,000 hectares of freehold and leased land in the Otway Ranges, Upper Goulburn and Ballarat regions in Victoria.

The assessment of natural capital in this report focusses on Midway's estate located in the Otways and Heytesbury. The Midway Otways and Heytesbury estate is located in the Otway Coast and the Barwon River Basin and both plantation and natural forest is adjacent to the Great Otway National Park and Great Otway forest.

The natural capital asset register can be used to classify and organise natural capital information. The register right shows examples of the individual ecosystem assets, their type, area, condition (0 is low, 1 is high) and other characteristics, and the services they provide. The asset register data provides a profile for each asset and can be used across a number of applications.

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NATURAL CAPITAL REGISTER *

Asset ID	Type	Subtype	Extent (hectares)	Mean condition (score)	Mean elevation (metres)	Carbon storage (tonnes)	Carbon sequestration (tonnes)	Soil retention (tonnes)	Koala sighting
090	Plantation	Eucalyptus nitens	469.00	0.28	285.25	118,731.93	7,087.11	31.75	Yes
033	Plantation	Pinus radiata	19.00	0.27	301.58	5,168.00	-	28.59	No
043	Natural	Wet or Damp Forests	1,263.00	0.75	316.25	4,595.19	-	418.71	Yes
1203	Natural	Dry Forests	38.00	0.76	120.79	4,838.84	-	2.86	No
032	Natural	Rainforests	34.00	0.77	169.41	9,831.46	-	1.83	No
078	Plantation	Riparian	10.00	0.23	95.00	-	-	0.00	No
483	Natural	Riparian Scrubs or Swampy Scrubs and Woodlands	16.00	0.52	60.00	2,300.42	-	0.07	No

* this is a subset of the full portfolio of Midways natural capital.

Profiling our natural capital assets

There are a range of ecosystem types within the Midway estate. Approximately 33 % is natural forest, with another 60% plantation forest and 7% other. The dominant type within the Natural Forest is the 'wet or damp forests' while the dominant type within the plantation forest is the Eucalypt globulus.

Condition of natural forest can be presented on a scale of 0 to 1, with 1 representing high condition and 0 representing low condition. The distribution of condition scores across the Midway natural forest estate is in relatively good condition.

The average condition score by ecosystem type ranges from .52 to .77, with rainforests exhibiting the highest area weighted mean condition score and heathlands exhibiting the lowest area weighted mean condition score (see Glossary for methods).

With consistent data collected across time periods, changes in extent and condition can be monitored and reported on for the Midway estate.

continued over

WET OR DAMP FORESTS



MEAN CONDITION
0.75
OUT OF 1

THOMAS PLANTATION

DRY FORESTS



MEAN CONDITION
0.76
OUT OF 1

OLD BEECHY PLANTATION

RAINFORESTS



MEAN CONDITION
0.77
OUT OF 1

BARRAMUNGA PLANTATION

**RIPARIAN SCRUBS OR
SWAMPY SCRUBS AND WOODLANDS**



MEAN CONDITION
0.52
OUT OF 1

GELLIBRAND RIVER, YUULONG PLANTATION

Profiling our natural capital assets

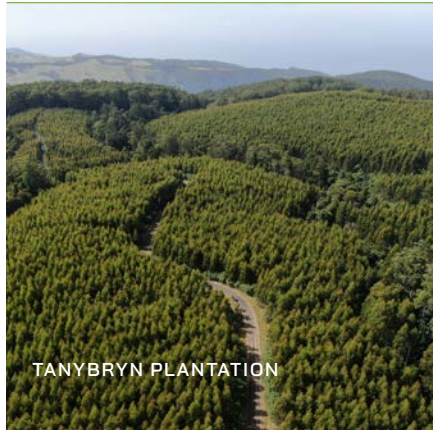
Midway's forests remove carbon dioxide from the atmosphere and store it as organic carbon in plant biomass and soil. This service regulates the climate, providing health benefits to people. In 2017, Midway's forests sequestered 92,000 tonnes of carbon. There are large quantities of carbon stored in some ecosystems within the Midway estate, as high as 400 tonnes per hectare based on estimates of above ground biomass.

Soil retention services are provided as vegetation cover helps prevent erosion. Households or businesses in areas adjacent to forests may benefit from the prevention of landslides. The water industry benefits from avoided sediment erosion into water supply systems. The Midway estate provides 1,300 tonnes of soil retention services, when compared to a scenario where there are no trees. Natural forests provide higher soil retention services when compared to plantation forests.

The Midway estate provides habitat for critical species such as the koala, which the International Union of Conservation of Nature (IUCN) Red List of Endangered Species lists as "vulnerable". The existence of species such as the koala are appreciated by people. Koalas are sighted across both plantation and natural forests and their habitat is managed according to best practice.

Midway's estates regulate the flow of water and mitigate the impact of flood events. Forest ecosystems store, transpire and redirect water from rainfall, reducing peak runoff events to river systems. Users of this ecosystem service benefit from reduced occurrence and/or severity of river flooding.

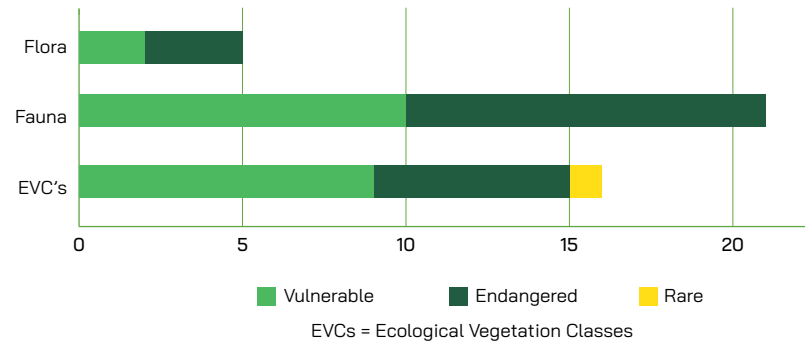
Carbon (tonne per hectares)	Natural (hectares)	Plantation (hectares)	Total (hectares)
0 to 50	1653	885	2538
50 to 100	43	838	881
100 to 150	775	1725	2500
150 to 200	218	947	1165
200 to 250	0	1074	1074
250 to 300	2102	3091	5193
Grand Total	4791	8560	13351



Soil retention services (tonne per hectares)	Natural (hectares)	Plantation (hectares)	Total (hectares)
NA	981	3670	4651
0.00 to 0.50	3387	4623	8010
1.00 to 0.50	254	174	428
1.00 to 1.50	111	70	181
1.50 to 2.00	38	17	55
2.00 to 2.50	14	4	18
2.50 to 3.00	3		3
3.00 to 3.50	2	2	4
3.50 to 4.00	1		1
Grand Total	4791	8560	13351



NATIVE SPECIES STATUS



ENDEMIC SPECIES STATUS

Endemic species	Scientific name	Common name	IUCN red list status
Flora	Eucalyptus kitsoniana	Bog Gum, Gippsland Mallee	Endangered
	Eucalyptus strzeleckii	Strzelecki Gum	Endangered
Fauna	Eulamprus tympanum subsp. marnieae	Corangamite Water Skink	Endangered
	Eusthenia nothofagi	Otway Stonefly	Vulnerable
	Victaphanta compacta	Otway Black Snail	Endangered

EVC THREATENED COMMUNITIES

EVC Threatened Communities	EVC Status	EVC area
Cool Temperate Rainforest	Endangered	37%
Lowland Forest	Vulnerable	36%
Herb-rich Foothill Forest	Vulnerable	12%
Heathy Woodland	Vulnerable	4%
Wet Sands Thicket	Rare	2%
Damp Heath Scrub	Vulnerable	2%
Riparian Scrub/Swampy Riparian Woodland Complex	Vulnerable	2%
Riparian Forest	Vulnerable	1%
Grassy Woodland	Endangered	1%
Sedgy Riparian Woodland	Endangered	1%
Swamp Scrub	Endangered	1%
Plains Grassy Woodland	Endangered	1%
Wet Heathland	Endangered	1%
Damp Sands Herb-rich Woodland	Vulnerable	0.2%
Herb-rich Foothill Forest/Shrubby Foothill Forest Complex	Vulnerable	0.2%
Sedgy Riparian Woodland	Vulnerable	0.1%

Natural capital performance reporting

Midway can communicate to those with an interest in Midway's asset management performance.



Connecting to environmental markets

Enabling participation in markets that provide financial incentives to manage ecosystems and the services they provide.



Operational performance

Providing a common language which supports coordination between business units to achieve core business objectives.



Meeting ESG and CSR requirements

Water performance
demonstrating the relative contribution of your site to water management to ensure catchment health is maintained

Biodiversity and species performance
demonstrating the relative contribution of your site to biodiversity management to ensure biodiversity thrives in catchment

PERFORMANCE DASHBOARD



Future opportunities – social

Natural capital thinking is a common entry point for businesses that are taking an asset approach to sustainable development. There are additional capitals, including produced, human and social capital, that are connected to natural capital.

A key focus of recent efforts in the multiple capitals space has been a place-based response to sustainable development, as relationships between the different capitals, and how they contribute to human wellbeing varies by location.

Natural capital The limited stocks of physical and biological resources found on earth, and of the limited capacity of ecosystems to provide ecosystem services



Human capital The knowledge, skills, competencies and attributes of individuals that facilitate the creation of personal, social and economic wellbeing



Social capital Encompasses networks, including institutions, together with shared norms, values and understandings that facilitate cooperation within or among groups



Produced capital All manufactured capital, such as buildings, factories, machinery, physical infrastructure (roads, water systems), as well as all financial capital and intellectual capital (technology, software, patents, brands etc)



Future opportunities – biodiversity

Biodiversity, the variety and variability of life, is a complex concept. It can be considered at a range of levels, from the genetic diversity within a species to the diversity between ecosystems across a region.

Biodiversity plays a fundamental role in maintaining the ability of ecosystem assets to supply ecosystem services. The presence of a diverse range of organisms performing a given function within an ecosystem can reduce the impact of environmental changes or shocks such as heatwaves or flooding.



Resilient ecosystems are more likely to supply a steady flow of ecosystem services into the future. Maintaining diversity promotes long-term resilience and provision of ecosystem functions and services under changing environmental conditions.

Natural capital accounting can assist with assessing the resilience and diversity of natural capital.

Midway can enhance the supply of ecosystem services and increase the resilience of ecosystems with policies focused on the management of natural assets for biodiversity outcomes. Enhancing and preventing the loss of biodiversity should be considered against use and extraction from ecosystems to ensure intergenerational equity.

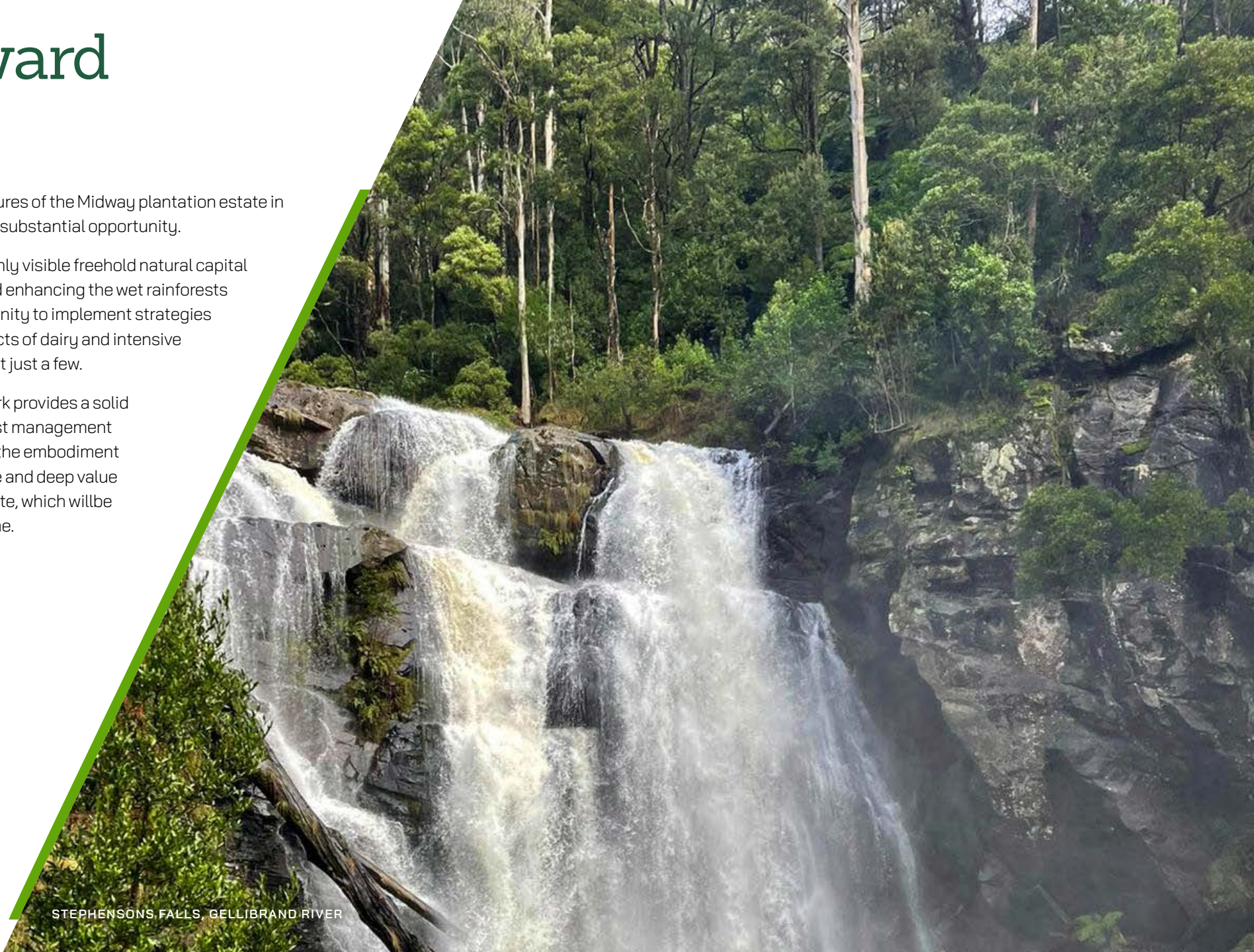
GELLIBRAND RIVER, BARRAMUNGA

Pathway forward

The untapped potential of the natural capital features of the Midway plantation estate in the Otway and Heytesbury regions of Victoria is a substantial opportunity.

The Midway estate represents one of the best highly visible freehold natural capital opportunities in Australia. Further quantifying and enhancing the wet rainforests or waterways of the Otway range, and the opportunity to implement strategies and measure the reversal of the detrimental impacts of dairy and intensive agriculture in the Heytesbury landscape represent just a few.

A robust and transparent natural capital framework provides a solid foundation to demonstrate truly sustainable forest management practices. Measurement and demonstration, and the embodiment of ESG principles and reporting, will reveal the true and deep value of the natural capital elements in the Midway estate, which will be cherished and appreciated for generations to come.



STEPHENSONS FALLS, GELLIBRAND RIVER

REFERENCES

Site Condition aims to reflect three components - composition, structure and function. Mean condition is calculated for the whole area. Source: land.vic.gov.au

Carbon estimates were calculated using [EULLCAM](#)

Soil retention estimates were calculated use [EnSym](#)

FERN GULLY

 **IDEEA Group**

www.ideeagroup.com

Midway

www.midwaylimited.com.au