

Great Victoria Desert Biodiversity Trust Annual Report



2020-2021

A report of the outputs, expenditure
and governance of the Trust

August 2021

Message from the Chair

On behalf of the Management Panel of the Great Victoria Desert Biodiversity Trust, I am pleased to present the eighth Annual Report on our activities. This report is a public documentation of the Trust's activities for the 2020-21 financial year, ensuring our accountability to the organisations that fund the Trust, to the key stakeholders in the Great Victoria Desert (GVD), and to the broader WA public.

The budget figures show that the Trust's spending on projects this financial year is greatly increased compared to the 2019-20 financial year, representing an almost three-fold increase in spending. This increase in spending is partly attributed to the low spending in 2019-20 due to covid restrictions, which delayed some projects and the commencement of the *Landscape Conservation Initiative (LCI)* and a large number of projects which fall over this initiative. The LCI will continue to develop over the coming years and principles of adaptive management will be employed throughout this project to ensure the on-ground conditions reflect the purpose of the initiative.

This year we welcomed Jaume Rusalleda Alvarez to the Trust as a Technical Biodiversity Officer. Jaume has supported the role of the Operations Manager, working one day a week, to manage the Trusts' data, increase the public accessibility of the Trusts' data, provide GIS support and manage technical projects. Jaume's skills have been invaluable to the Trust and I would like to thank him for his work.

I would also like to personally thank the members of the Management Panel for their continued commitment to the Trust's objectives and the Technical Advisory Panel (TAP) for their high level and invaluable technical advice, all of whom have provided their time without being remunerated.

Finally, I would like to formally acknowledge the strong and effective working relationship the Trust has with AngloGold Ashanti Australia, the DBCA, and with the WA Public Trustees who manage the funds for the Trust.



Dr Garry Middle



Executive Summary

In the 2020-2021 Financial year a large number of projects were completed. The first project completed was the ground-truthing of Malleefowl mounds detected from LiDAR project that the Trust had obtained in 2019. The ground-truthing offered valuable insights into both the accuracy of LiDAR and the activity of Malleefowl in the Great Victoria Desert (GVD).

The Trust's *Landscape Conservation Initiative* commenced on-ground activities. This project is a unique initiative designed to monitor the impacts of cool, culturally-sensitive, management burns (and in the second phase, feral predator control) on the biodiversity of a Management area compared to a similar Reference area, where no managed fire activity will take place. The projects completed or commenced under this initiative on 2020/21 include:

- Roadside Buffer burns (DBCA)
- Baseline Fauna survey and Malleefowl mound detection (GHD)
- Weather station investigation (GVDBT – EnviroPaul)
- Vegetation and Soil Survey (Uni of Adelaide)

In 2020/21 the Trust also employed a Technical Biodiversity Officer to support the work of the Operations Manager. This role has been essential for the provision of data management, GIS support, technical project management and creating an interactive map tool on the Trust's website to visually demonstrate the Trust's projects.

The annual contribution from the Tropicana Joint Venture to the Trust in 2020-21 was \$379,803 based on an annual fee of \$100,000 plus \$80 per hectare of cleared footprint for the Tropicana mine. The Trust also received \$11,582.27 interest from the funds held on its behalf by the Public Trustee. A total of \$396,304.44 was spent directly on projects in the 2020-21 financial year, this represents as almost three-fold increase on project expenditure compared with 2019-20.

The Management Panel and Chair continue to provide oversight and direction on Trust matters, working with the Trust's Operations Manager, including during four Management Panel meetings, and four out-of-session decisions including advice. The Technical Advisory Panel met three times during the financial year, and have played an important role in shaping the projects of the Trust and helping to ensure projects are consistently building knowledge on threatened species and shaping future projects.

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1. Introduction

The Trust represents a unique model for an environmental offset in Western Australia, and Australia in general. It was established in 2014 by the Tropicana Joint Venture (AngloGold Ashanti Australia (AGAA) Ltd (manager and 70% owner) and Independence Group NL (30% owner) as the central part of an offset package for the Tropicana Gold Mine (TGM) in Western Australia under the Commonwealth *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*. As of 31st May 2021 Regis Resources has taken ownership of the Independence Group NL portion of the Tropicana Gold Mine.

The Trust's main purpose is to deliver conservation benefits to nationally-listed threatened species, at a landscape-scale, and facilitate indigenous involvement in land management and conservation activities in the region. The projects supported in the 2020-2021 financial year have focused on planning towards a large-scale land management trial to understand the benefits or otherwise of patch burning to threatened species in the region.

The Trust's purposes, region of focus ('Trust Area') and governance structure are outlined in more detail below for context.

1.1 Trust Purposes

The purpose of the Trust is to achieve the following objectives:

1. Develop a Bioregional Management Plan (also referred to as a 'Biodiversity Conservation Plan') for the Western Great Victoria Desert bioregions 1 and 2 (i.e. the 'Trust Area');
2. Facilitate and/or undertake priority research in the Bioregional Management Plan at the landscape level and into species considered to be of Matters of National Environmental Significance (MNES) under the *Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*, including the Sandhill Dunnart and Malleefowl;
3. Fund on-ground environmental and conservation management at the landscape level, with emphasis on net conservation benefits to threatened species, including those considered MNES;
4. Facilitate indigenous involvement in land management and conservation activities in support of the above objectives.

These objectives reflect those specified in Condition 6 of the *EPBC Act* approval 2008/4270 for the Tropicana Gold Mine.

1.2 Trust Area

The Interim Biogeographic Regionalisation for Australia (IBRA) classifies Australia's landscapes into 89 large geographically distinct bioregions. These are based on common climate, geology, landform, native vegetation and species information (DoE, 2015). The 89 bioregions are further refined to form 419 subregions. These are more localised and homogenous geomorphological units in each bioregion.

The GVD is one of the 89 IBRA bioregions. It is comprised of 6 subregions which extend from approximately 200km east of Kalgoorlie in Western Australia to cover large areas of South Australia. The entire GVD IBRA region covers 42,375,084 ha.

The Trust's area of focus ('Trust Area') is comprised of the two most western subregions of the GVD, known as Shield and Central, which are entirely located within Western Australia (Figure 1). These two sub-regions cover an area of 17,332,721 ha.

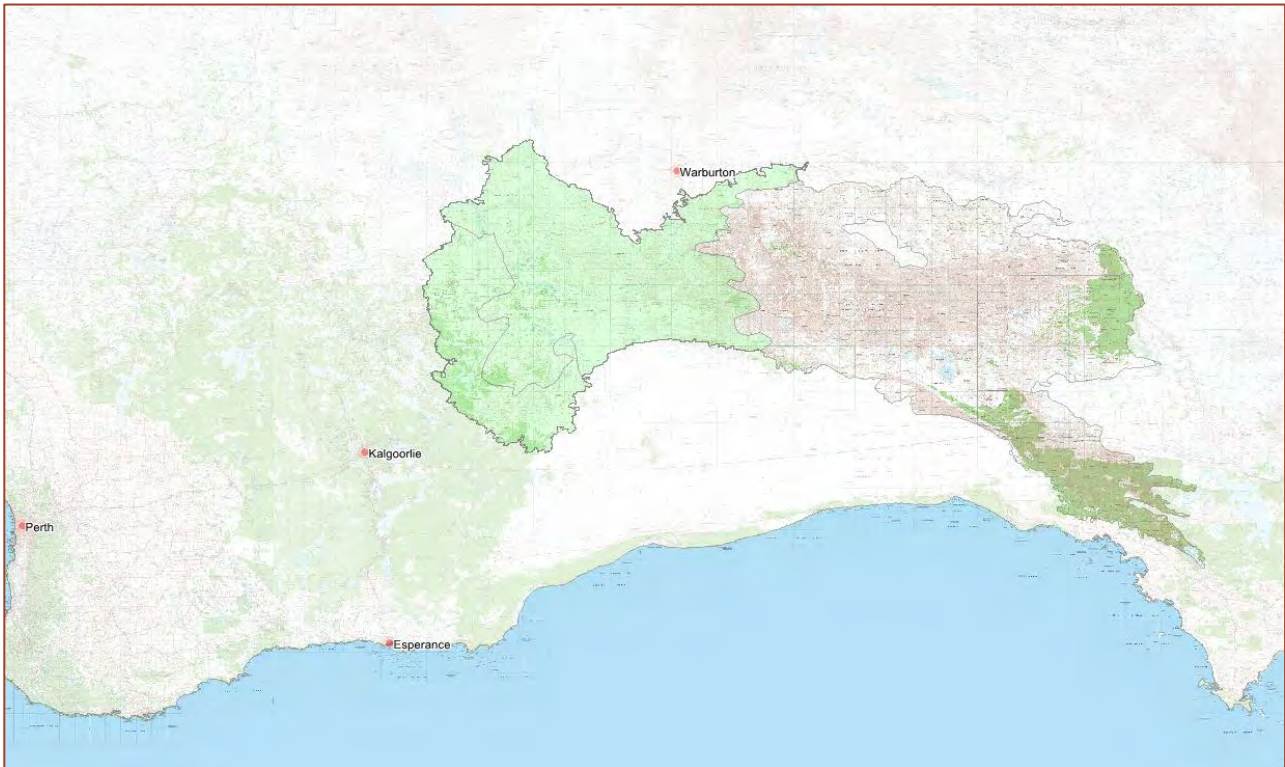


Figure 1. The location and extent of the GVD (outlined) and the Trust Area (bright green)

Whilst the Trust's activities are predominantly focussed on research and on-ground activities within the Shield and Central subregions of the GVD, they can occur outside this region if they meet the Trust's overall objectives. That is, they must be relevant and beneficial to species and biodiversity within the Trust Area, especially species and communities that are MNES as listed by the *EPBC Act*.

2. Governance

The governance structure of the Trust is a key component of ensuring stakeholder support and the delivery of activities that align with the Project Plan approved by the former DoE as part of the TGM *EPBC Act* approval (2008/4270). The governance structure of the Trust is outlined in Figure 2.

The activities and expenditure of the Trust are the overall responsibility of the Trust's Management Panel, which consists of representatives from the Department of Biodiversity,

Conservation and Attractions (DBCA) and AngloGold Ashanti Australia (AGAA), as well as an independent Chair.

The day-to-day management and operation of the Trust is the responsibility of the Operations Manager. The Operations Manager reports to the Trust's Management Panel via the Chair. The Operations Manager is supported through the provision of technical advice from the Trust's Technical Advisory Panel (TAP). The TAP consists of six members with experience and technical expertise of the GVD and its landscape. The Trust's Operations Manager works as Chair

The Public Trustee of Western Australia maintains the financial accountability of the Trust, ensuring that all the spending of the Trust account aligns with the Trust Deed. The Public Trustee maintains a role on the Management Panel, having a standing invitation to attend meetings.

The Trust's funds, held by the Public Trustee, are allocated to various organisations and individuals according to anticipated benefit, value for money, and alignment with the Trust's objectives and priorities. The recipients may include Traditional Owner groups, researchers, not-for-profit environmental groups and expert consultants.

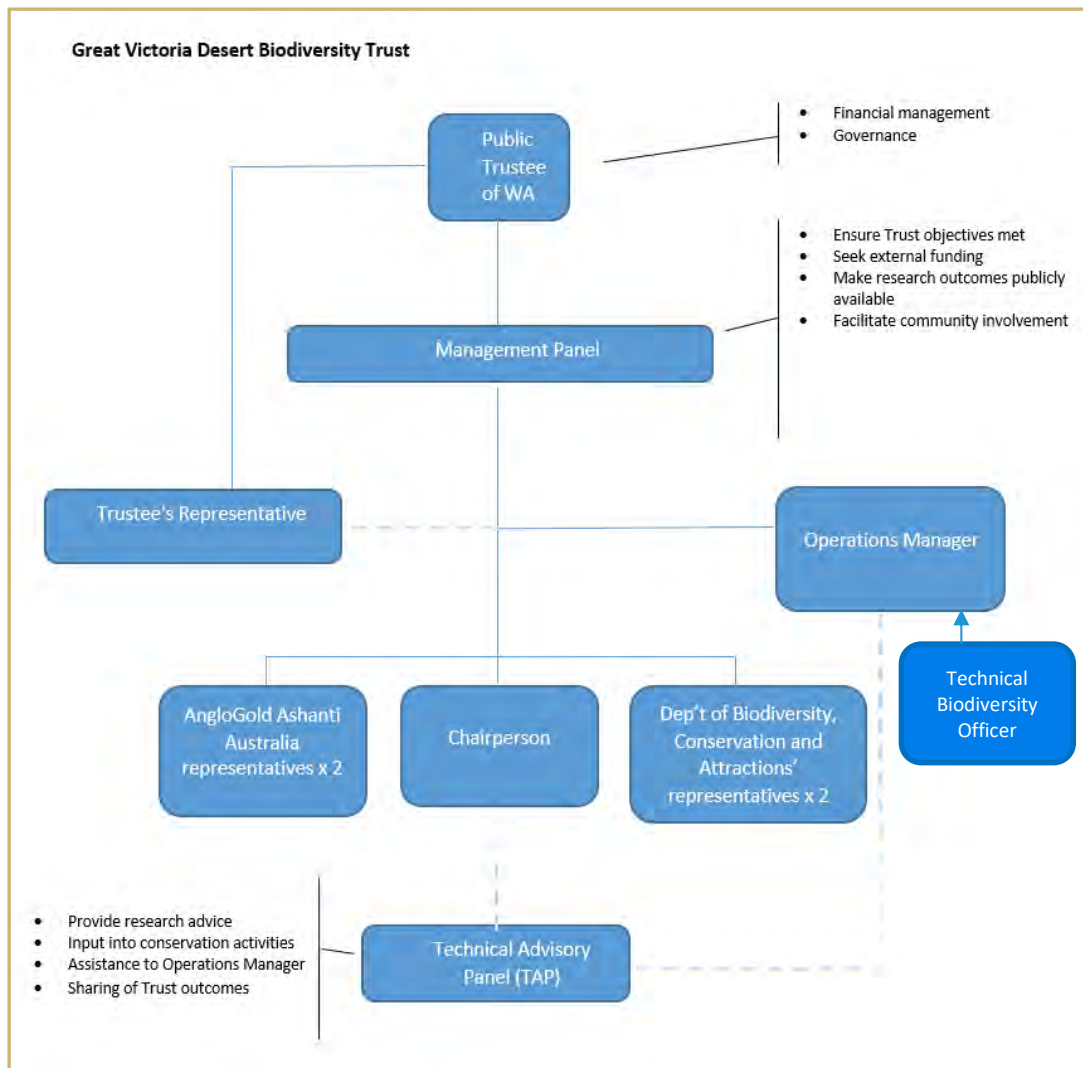


Figure 2. The Structure of the Great Victoria Desert Biodiversity Trust

The Trust, and all of its activities and expenditure, is governed by an overarching Trust Deed. This document details the relationship between:

- The Trust’s Management Panel;
- AngloGold Ashanti Australia, as the founder; and
- The Public Trustee of Western Australia, as the financial manager.

The Trust Deed also outlines the roles and responsibilities of the Management Panel, Chair, Trustee, Operations Manager and the TAP, and the purposes and scope of the Trust. Additional background information is located at www.gvdbiodiversitytrust.org.au/about-us and in the Trust Deed (<http://www.gvdbiodiversitytrust.org.au/wp-content/uploads/2014/11/GVDBT-Trust-Deed.pdf>).

2.1 The Management Panel

The Management Panel met three times during the 2020-21 financial year (Table 1) to ensure progress was maintained on key priorities. Membership of the Management Panel remained constant throughout the 2020-21 year.

Table 1: Management Panel Meetings and Attendance 2020-21

| Attendee | Meeting 1 10/7/2020 | Meeting 2 30/11/2020 | Meeting 3 10/3/2021 |
|---|--------------------------------|---------------------------------|--------------------------------|
| Garry Middle (Chair) | √ | √ | √ |
| Norm Galli (AGAA) | √ | √ | √ |
| Nerilee Rockman (AGAA) | Apologies | √ | √ |
| Mark Cowan (DBCA) | √ | √ | √ |
| Nigel Wessels (DBCA) | √ | √ | √ |
| Kathryn Sinclair (OM) | Not recommenced yet | √ | √ |
| Dorian Moro (OM-Acting) | √ | No longer at GVDBT | No longer at GVDBT |
| Jaume Rusalleda Alvarez (Biodiversity Technical Officer) | Not commenced yet | √ | √ |
| Sue Wormald (Public Trustee) | Apologies | Apologies | Apologies |

To expedite the timely turnover of project decisions, the Management Panel also had two out-of-session meetings (Table 2) which were conducted via email and utilised consensus-based agreement regarding project decisions and variations to projects.

Table 2. Out of session meeting proposals (email consensus)

| | |
|---------------|--|
| Business Case | Ernst and Young to conduct the audit of the Trust |
| Date | 13 November 2020 |
| Email sent to | All MP members except Mark Cowan (no response provided), Chair, Operations Manager |

| | |
|---------------|--|
| Business Case | Attendance of Neil Burrows at On-country fire planning event |
| Date | 14 June 2021 |
| Email sent to | All MP members except Mark Cowan (no response provided), Chair, Operations Manager |

2.2 The Operations Manager

The Operations Manager maintained communication and meeting with the Chair of the Trust, the Technical Advisory Panel, and Management Panel, throughout the year to ensure the Trust maintained steady progress on key activities and maintained a strategic vision of the objectives of the Trust.

In the 2020-21 Financial year Dr Dorian Moro acted in the Operations Manager role, full-time, whilst the substantive Operations Manager, Kathryn Sinclair, was on maternity leave until the 20th July 2020. Kathryn and Dorian had a 2 week (6 day) handover between 20th July and 31st July. Kathryn Sinclair, worked in the role 3 days a week for the duration of the year.

2.2.1 The Technical Biodiversity Officer

In September 2020 the Trust recruited for a Technical Biodiversity Officer. This was a new position in the Trust and required the successful applicant to manage the Trust's data, spatial layers, GIS information and the management of other technical projects as directed by the Operations Manager. Jaume Rusalleda Alvarez was appointed to the role. Jaume Rusalleda Alvarez works in the role one day per week and commenced on the 14th of September 2020.

2.3 The Public Trustee

The Public Trustee's representative provided assistance with financial documents to the Trust and project invoice payments. The Trustee has provided quarterly and annual financial statements.

As in previous years, the Public Trustee's representative worked closely with Ernst and Young, the nominated financial auditors, to ensure that all of the Trust's spending, accounting and financial reporting had been conducted appropriately. The Trustee continues to give strong oversight and guidance (as required) to the Trust to ensure it meets both financial and legal obligations.

2.4 The Technical Advisory Panel

The Technical Advisory Panel (TAP) was established in April 2015 to provide expert advice and support to the Trust, such as providing feedback on the scope of research proposals, on-ground environmental or conservation activities, and research reports. The membership of the TAP has increased, with Mark Cowan joining the TAP as a representative from the Management Panel and Dr Stephen van Leeuwen remaining on the TAP despite leaving the Management Panel.

The TAP formally met three times during the 2020-21 financial year (Table 3) to discuss issues including:

- Updating the scope requirements for the Landscape Conservation Initiative- Baseline Fauna survey;
- Discuss an appropriate fauna and vegetation baseline and monitoring program as part of the Landscape Conservation Initiative;
- Review and assess Expression of Interests related to the Baseline Fauna survey;
- Review contract progress and results on the Baseline Fauna Survey and discuss future projects

In addition, members on the TAP were individually approached to guide development of Trust project work scopes related to their areas of expertise.

Table 3: Technical Advisory Panel Meetings and Attendance 2020-21

| Attendee | Meeting 1: 07/07/2020 | Meeting 2: 27/11/2020 | Meeting 3: 13/05/2021 |
|----------------------------|--------------------------|-------------------------------------|--------------------------|
| Belinda Bastow | √ | √ | √ |
| Ryan Ellis | Apology | Apology | √ |
| Katherine Moseby | Apology | √ | Apology |
| Blair Parsons | Apology | √ | √ |
| Stephen van Leeuwen | √ | √ | √ |
| Garry Middle (GVDBT Chair) | x | Attended initial section of meeting | x |
| Kathryn Sinclair | Maternity leave | √ | √ |
| Jaume Rusalleda Alvarez | Not commenced yet | √ | √ |
| Dorian Moro | √ | No longer with the GVDBT | No longer with GVDBT |
| Mark Cowan (MP member) | √ | √ | √ |

3. Trust Activities

Projects and Activities

In the 2020-21 Financial Year (FY) the Trust commenced and completed several projects, summarised briefly below. Full reports have been made available to the public on the Trust website (<http://gvdbiodiversitytrust.org.au/>).

3.1 GVD Landscape Conservation Initiative (LCI)

The LCI, which commenced in 2020, is an integrated landscape management project in the south-west of the GVD (Figure 3) focusing on prescribed, small-scale, cool, culturally sensitive burns and introduced predator control. In addition, the Trust will monitor the effectiveness of management by investigating the response of biodiversity communities (small mammals, including Sandhill Dunnarts, reptiles, Malleefowl activity), and introduced predators including other feral species observed, before and after land management activities (fire/baiting) over an initial 10-year period. Monitoring will be compared between paired landscapes (one managed and one unmanaged/reference) in the GVD.

3.1.1 LCI – Baseline Fauna Survey (scheduled for completion in August 2021).

Context: A key part of the LCI project is understanding the fauna assemblages in the Management area (MA) and Reference area (RA) and seeing how they change in response to small-scale, cool, culturally sensitive burns. GHD was commissioned to undertake a Spring (2020) and Autumn (2021) fauna survey using pitfall traps and camera traps. Pitfall traps were established in equal numbers in the MA and RA, in areas of different fire ages. Camera trapping occurred concurrently with pitfall trapping however the cameras were also left in the field for the period between field trips, approximately six months.

Purpose: To understand the species and the community assemblages present in the MA and RA.

Key findings: The draft report was provided to the Trust in June 2021. A list of the species detected in each area is provided in Table 4. The final report is expected in August 2021.

Management implications: A further baseline survey will be conducted in 2022, this is expected to be followed by annual fauna monitoring.

Status: Ongoing – near completion

Table 4. Species detected in pitfall trapping

| Species detected (X=presence, recorded via evidence) | | |
|--|-----------------|----------------|
| Mammal Species Numbers | Management area | Reference area |
| <i>Macropus fuliginosus</i> | X | X |
| <i>Osphranter robustus</i> | Not detected | X |

| | | |
|---------------------------------------|------------------------|-----------------------|
| <i>Cercartetus concinnus</i> | 1 | 2 |
| <i>Mus musculus</i> | 2 | 7 |
| <i>Ningauai ridei</i> | 113 | 38 |
| <i>Notomys alexis</i> | 2 | 23 |
| <i>Sminthopsis dolichura</i> | 34 | 14 |
| <i>Sminthopsis hirtipes</i> | 13 | 7 |
| <i>Sminthopsis ooldea</i> | 3 | Not detected |
| <i>Dasycercus blythi</i> | Not detected | X |
| <i>Pseudomys hermannsburgensis</i> | 15 | 4 |
| <i>Vulpes vulpes</i> | X | X |
| <i>Felis catus</i> | X | X |
| <i>Camelus dromedarius</i> | X | X |
| <i>Canus dingo</i> | X | X |
| Total mammals detected | 183 | 91 |
| | Management area | Reference area |
| Reptile Species Numbers | | |
| <i>Diplodactylus laevis</i> | 13 | 2 |
| <i>Diplodactylus wiru</i> | 15 | 9 |
| <i>Gehyra purpurascens</i> | 9 | 11 |
| <i>Gehyra variegata</i> | 2 | 1 |
| <i>Heteronotia binoei</i> | 4 | Not detected |
| <i>Lucasium bungabinna</i> | 17 | 2 |
| <i>Lucasium damaeum</i> | 80 | 100 |
| <i>Nephrurus laevissimus</i> | 21 | 135 |
| <i>Nephrurus levis levis</i> | 25 | 7 |
| <i>Rhynchoedura ornata</i> | 40 | 35 |
| <i>Strophurus assimilis</i> | 2 | Not detected |
| <i>Strophurus elderi</i> | 5 | 5 |
| <i>Delma australis</i> | 3 | 2 |
| <i>Delma butleri</i> | 7 | Not detected |
| <i>Delma nasuta</i> | 2 | Not detected |
| <i>Delma petersoni</i> | 8 | Not detected |
| <i>Lialis burtonis</i> | 3 | Not detected |
| <i>Pygopus nigriceps</i> | 15 | 7 |
| <i>Ctenophorus clayi</i> | 3 | 35 |
| <i>Ctenophorus cristatus</i> | 31 | 18 |
| <i>Ctenophorus isolepis gularis</i> | 57 | 63 |
| <i>Ctenophorus nuchalis</i> | 1 | 37 |
| <i>Diporiphora reginae</i> | 1 | 3 |
| <i>Moloch horridus</i> | 59 | 18 |
| <i>Pogona minor minor</i> | 21 | 7 |
| <i>Ctenotus atlas</i> | 52 | 17 |
| <i>Ctenotus brooksi</i> 41 60 | Not detected | 101 |
| <i>Ctenotus calurus</i> | 23 | 7 |
| <i>Ctenotus dux</i> | 1 | Not detected |
| <i>Ctenotus helenae</i> | 8 | 1 |
| <i>Ctenotus pantherinus ocellifer</i> | 25 | 1 |
| <i>Ctenotus quattuordecimlineatus</i> | 48 | 16 |
| <i>Ctenotus schomburgkii</i> | 172 | 35 |

| | | |
|---|--------------|--------------|
| <i>Cyclodomorphus melanops elongatus</i> | 4 | 1 |
| <i>Eremiascincus aff. richardsonii</i> | 3 | 22 |
| <i>Lerista bipes</i> | 164 | 140 |
| <i>Lerista desertorum</i> | 11 | 2 |
| <i>Lerista taeniata</i> | 1 | 1 |
| <i>Lerista timida</i> | 1 | Not detected |
| <i>Liopholis inornata</i> | 27 | 14 |
| <i>Liopholis striata</i> | 2 | 3 |
| <i>Menetia greyii</i> | 17 | 1 |
| <i>Morethia butleri</i> | 12 | 7 |
| <i>Morethia obscura</i> | 1 | Not detected |
| <i>Proablepharus reginae</i> | 8 | Not detected |
| <i>Tiliqua occipitalis</i> | 4 | Not detected |
| <i>Varanus eremius</i> | 10 | 9 |
| <i>Varanus gouldii</i> | 9 | 4 |
| <i>Varanus tristis</i> | 5 | 4 |
| <i>Aniliios bicolor</i> | 4 | 2 |
| <i>Aniliios bituberculatus</i> | 7 | 15 |
| <i>Aniliios margaretae</i> | Not detected | 1 |
| <i>Brachyuropis fasciolatus fasciatus</i> | 1 | 7 |
| <i>Brachyuropis semifasciatus</i> | 12 | Not detected |
| <i>Demansia aff. Psammophis</i> | 6 | Not detected |
| <i>Furina ornate</i> | 1 | Not detected |
| <i>Pseudechis australis</i> | 2 | Not detected |
| <i>Pseudonaja mengdeni</i> | 3 | Not detected |
| <i>Pseudonaja modesta</i> | 7 | Not detected |
| <i>Simoselaps bertholdi</i> | 26 | 4 |
| <i>Suta monarchus</i> | 2 | 1 |
| <i>Aspidites ramsayi</i> | 3 | Not detected |
| Total number of species | 122 | 71 |

3.1.2 LCI - Weather stations installation in the GVD

Context: The LCI was launched in 2020 in order to monitor changes in biodiversity in the context of fire management activities. Environmental factors, such as rainfall and temperature, that are also fundamental to understand changes in biodiversity. This is particularly important as rainfall is one of the main drivers of fire in desert environments. There are currently no weather stations in close proximity to LCI project areas.

Purpose: The main goal of this project was to deploy two automatic, satellite-connected weather stations in the LCI's management and reference areas. These would provide highly accurate information on weather – providing daily data on rainfall, minimum and maximum temperatures and humidity.

Management implications: This will help understand changes in biodiversity survey data as well as complement fire management planning activities.

Deployment is expected to take place in late July or early August 2021.

Status: Ongoing – near completion

3.1.3 LCI – Management burns (DBCA)

Context: In July 2020 the Fire team of DBCA were commissioned to undertake management burns alongside nominated roadside areas of the Management area.

Purpose: The aim of the burns was to reduce the threat of wildfire in the Management area and protect areas of long unburnt vegetation.

Key findings: The fuels were different to what was expected. It was expected that the LCI areas would be mostly spinifex, with areas of marble gum, however it is assessed as mostly mallee over spinifex. This added complexity to the burn as spinifex is usually a broken fuel that doesn't backburn, while the mallee over spinifex contained dropped bark and leaves resulting in a more continuous fuel layer which can maintain a back burn. As a result DBCA raked around the back of the burnt/ burning ground which slowed down the burning process.

Management implications: The DBCA Fire management team were able to assess fuel along major tracks and determine a burn program for 2021. These roadside burns will help to reduce the threat of wildfire. Valuable lessons were learnt for future management burns.

Status: Completed

3.1.4 LCI – Vegetation and Soil survey (University of Adelaide - TERN)

Context:

As part of understanding the biodiversity of the MA and RA, a full understanding of the vegetation and soils of the areas are required. TERN will design a vegetation and soil survey based around the designated MA and RA. The survey design will also incorporate fire age information and align with existing fauna survey plot locations as much as possible. The design will use the standard TERN Ecosystem monitoring methodology.

The Consultant team will be in the field for two weeks to conduct the survey. During the field survey the Consultants will conduct a three day vegetation and soil sample training course with representatives from the Trust.

Purpose:

The purpose of the project is two-fold:

- 1) To provide a comprehensive baseline analysis for the LCI for vegetation and soil in the MA and RA
- 2) To provide training in vegetation and soil sampling techniques to representatives of the Trust to enable those representatives to undertake customised vegetation and soil surveys.

Outcomes: Groundwork for project has not commenced due to covid restrictions between WA and SA.

Status: Ongoing

3.1.5 Vegetation cover and fire attributes baseline for the GVD (DBCA – remote sensing)

Context:

The project will consist of five project activities.

- 1) Characterisation of the LCI MA and at least three reference site selection areas (fire and vegetation attributes) as baseline data
- 2) 2020 fire mapping and analysis update, using Landsat, including updates to Fire Plan statistics for future fire operations management.
- 3) Calibration of satellite imagery to on ground cover of dominant vegetation, including bare ground.
- 4) Development of ongoing vegetation monitoring measures
- 5) 2021 fire mapping and analysis update, using Landsat Fire mapping for the LCI MA and RA after summer (March/April) including fire statistics for both areas

Findings:

DBCA has met the majority of the project activities, as described above, providing several reference sites for the LCI project, aiding the selection of the reference area.

Vegetation mapping and monitoring is ongoing. The aim of this element of the project is to gain a good understanding of vegetation through remote sensing.

Management Implications:

The project has helped shape the LCI. By understanding vegetation cover remotely, it is hoped that projects can be initiated using this information.

Status: Ongoing – the project is expected to be completed in September 2021.

3.2 Ground truthing Malleefowl mounds (The National Malleefowl Group)

Context: With the LiDAR survey detecting a reasonable number of ‘targets’ which represented Malleefowl mounds the Trust contracted the National Malleefowl Group to survey each of the for categories of mounds-points to determine whether or not they were mounds.

Purpose:

- 1) Determine the accuracy of LIDAR
- 2) Determine the number of active mounds in the region based on data points

- 3) Increase knowledge of vegetation communities in which the Malleefowl mounds are detected.

Key findings:

In total, 165 LiDAR points were ground-truthed. 82 (50%) of these points were confirmed as Malleefowl mounds. Ground truthed points comprised: 71 Rating 1 points (99% confirmed); 10 Rating 2 points (80% confirmed); 24 Rating 3 (4% confirmed); and 60 rating 4 (2% confirmed).

The most common cause for the false positive was found to be naturally occurring elevations in substrate caused by tree roots or shrubs

Two additional mounds that were incidentally detected, which had been not detected by LiDAR analysis.

None of the 82 Malleefowl mounds that we inspected were 'active' in the sense of likely to contain eggs (mounds are not expected to contain eggs before September). However, 10 mounds (12%) showed fresh or recent (within the past year or two) evidence of Malleefowl. An additional 14 mounds were regarded as having been used by Malleefowl within the past 2-5 years.

Management implications:

This project provides useful information on the accuracy of LIDAR for detecting Malleefowl mounds in remote, arid regions. It also allows known mounds to be revisited to determine whether Malleefowl are active in the region and do reuse these mounds. Mounds, which have been ground-truthed, in the Management and Reference areas can be incorporated into the LCI fauna monitoring projects.

Reference:

The National Malleefowl Group (2020) Ground-truth of potential Malleefowl mounds detected by Lidar in the Western Australian Great Victoria Desert. Prepared for Great Victoria Desert Biodiversity Trust. Editor Graeme Tonkin, August 2020.

Status: Completed.

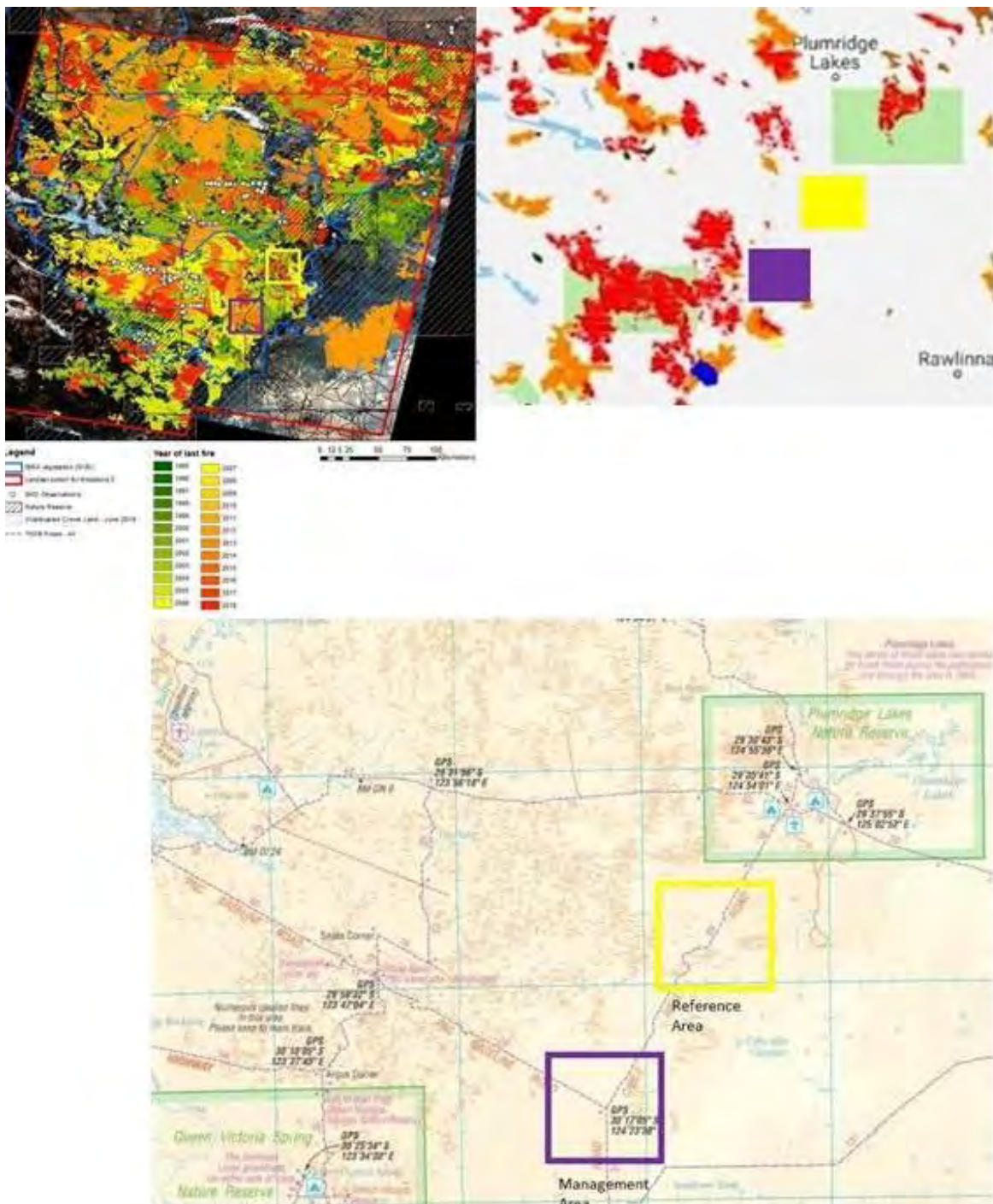


Figure 3. Location of the management (purple square) and reference (yellow square) areas comprising the GVD Landscape Conservation Initiative.

3.3 Optimization of the Trust’s Data storing and sharing solutions

Context:

Since its inception in 2014, the GVDBT has generated large amounts of data in many different formats (images, text documents, tables and spatial files, among other). During

the last two years, the fire mapping initiative and, in particular, the Malleefowl mound LiDAR mapping project have largely increased the amount of data held by the Trust.

Purpose:

This project had two main objectives, i) to analyse the content and nature of the Trust's data and develop an improved storage solution and ii) to improve accessibility of our data and facilitate its sharing with all stakeholders and the public.

Findings:

Analysis of the data revealed that out of the 2.7TB of data held by the Trust, 87% corresponds to raw and derived data from the LiDAR flights. Since this amount of data is too large to be stored on AngloGold Ashanti drives, it was initially considered to find a cloud-based solution to store and share this data. After careful consideration and the advice of the TAP and Management Panel, it was decided that the cost-benefit of this option was not appropriate. A cloud-based solution would cost approximately 12,000/year. Since most of the data consists of very high-resolution images of the GVD associated with the LiDAR, it was not deemed of general interest to justify a cloud-based storing and sharing solution. Instead, it was decided that this data in particular will be copied in three different external hard drives and kept at three different locations.

The review process also highlighted the possibility of storing and sharing two other types of data in a more efficient way. Firstly, spatial data related to fire history (annual fire scars and fuel age maps), as well as other relevant spatial data (roads, protected areas, native title, the trust's areas of work in the GVD) have been uploaded to the ArcGIS online platform. This allows the data to be displayed in the form of an interactive map on the Trust's website, from where it can be also downloaded. This platform acts as a back-up and as a sharing solution simultaneously. Secondly, the camera trap data generated by the Trust since its inception was also reviewed. This has allowed the identification of the images that still need to be analysed. In order to do so, a new online based platform will be used to both store, share and analyse (in an inception stage) the camera trap photos. This is currently being developed in collaboration with the Wildlife Insights online platform. The remaining of the Trust's data (mostly in the form of text files and reports), and also a copy of all spatial data and camera trap photos, will continue to be securely stored in AGA's Perth K: drive.

Management Implications: The Trust is now able to store and share its data in a more efficient way. Spatial data is shared publicly on the website through the interactive website tool. Data management is an ongoing process that will be revised periodically to ensure we meet our needs and those of our stakeholders.

Status: Data management will be ongoing.

4. Trust Promotion

4.1 Attendance and presentation at the Goldfields Environment Management Group conference (2021)

The Technical Biodiversity Officer attended and presented at the Goldfields Environment Management Group conference. He delivered a presentation titled: Mapping the Fire History of the Great Victoria Desert for Conservation Purposes. The presentation was well received and the Officer made many valuable contact.

4.2 Presentation and attendance at the Yilka Land Management Forum

The Chair and the Operations Manager attended and presented at the Yilka Land Management Forum on the 23rd of May. The Operations Manager presented on the Trust and its activities and the intercepts with Yilka and potential opportunities to work together in the future. The presentation was positively received. The Trust hopes to further build relationships with Yilka and develop future projects together.

4.3 Paper on the Fire Scar Mapping

The Technical Biodiversity Officer, together with Dorian Moro (former Acting Operations Manager) and Ricky van Dongen have written a paper on fire scar mapping and the accuracy of Landsat and Sentinel. The paper has been submitted and accepted by the International Journal of Wildland fire. The Trust will provide funding to support publication if required, as long the journal is open source.

5. Finances, Administration and Allocation of Funds

5.1 Finances

The annual contribution from the Tropicana Joint Venture (TJV) to the Trust in 2020-21 FY was \$379,803 based on an annual fee of \$100,000 plus \$80 per hectare of cleared footprint for the TGM. The Trust also received \$11,582.27 interest from the funds held on its behalf by the Public Trustee (Table 5). An additional \$15,216 was received as a GST refund.

A total of \$395,203.99 was spent directly on projects in the 2020-21 financial year. This figure does not include the time spent by the Operations Manager or Technical Biodiversity Officer managing these projects, or costs associated with asset management fees, or administration-related expenses (detailed in Table 5).

AGAA maintains an oversight of the Trust's day-to-day expenditure as part of its administrative support function, and all Trust expenditure is presented to the Management Panel in quarterly and annual statements provided by the Public Trustee.

The Public Trustee has continued to provide strong support and guidance in 2020-21 to the Trust to ensure it meets its financial and legal obligations. Financial statements are provided to the Trust by the Public Trustee on a quarterly and annual basis (Appendix 1), which are subsequently tabled at Management Panel meetings.

Ernst and Young audited the Trust in November 2020 and in December 2020 confirmed that the Trust's spending, accounting and financial reporting have been conducted appropriately.

Table 5: Summary of income and expenditure for the Trust during the 2020-21 financial year

| Item | Income | Expenditure |
|--|---------------------|---------------------|
| Income | | |
| Annual contribution (AGAA) | \$379,803 | |
| Interest | \$11,582.27 | |
| Expenditure: management and administration | | |
| Salary (Operations Manager and Technical Biodiversity Officer - project management and administration*) | | \$81,848.51 |
| Public Trustee asset management and transaction fees | | \$13,349.93 |
| Financial audit fees (Ernst and Young) | | \$6,406.40 |
| Memberships | | \$110 |
| Conference attendance and presentation delivery | | \$971.64 |
| Expenditure: Projects | | |
| Landscape Conservation Initiative – Baseline fauna survey – <i>refer to section 3.1.1</i> | | \$320,986.79 |
| Landscape Conservation Initiative - Fire management burns (DBCA) - <i>refer to section 3.1.3</i> | | \$16,517 |
| Landscape Conservation Initiative – vegetation and soil survey (TERN) – <i>refer to section 3.1.4</i> | | \$8,222.20 |
| Fire and vegetation mapping (DBCA) - <i>refer to section 3.1.5</i> | | \$29,920 |
| Malleefowl Mound – Ground truthing LiDAR results (National Malleefowl Recovery Team) - <i>refer to section 3.2</i> | | \$19,558 |
| Database upgrades, website maintenance and upgrades – <i>refer to section 3.3</i> | | \$1,100.45 |
| Refund | | |
| Refund of GST on expenditure | \$15,216 | |
| TOTAL | \$406,601.27 | \$498,990.92 |

Key: * = approximately 80% of time spent on project and contract management and 20% on Trust operations and administration. Includes a 6 day handover period for maternity leave cover.

5.2 Administration

AGAA continues to provide essential administrative support to the Operations Manager and Trust, including:

- Human resource services, such as payroll management, employment contract;
- General office administration and equipment, such as IT, mobile phone, office/meeting space;
- Flights, accommodation and access to vehicles at TGM, as appropriate; and
- Legal services for contracts.

This substantial in-kind support represents a considerable reduction in the administration expenses that would otherwise be incurred by the Trust and ensures that the Trust maintains its administration cost below the 20% maximum outlined in the Trust Deed.

5.3 Funding

The TGM continues to be the Trust's sole financial contributor.

6. Future Direction

6.1 Planned projects for 2021-2022 FY

6.1.1 LCI – Fauna monitoring

The Trust will undertake another baseline fauna monitoring project in 2021/22 as part of the LCI project. This will utilise existing pitfall trap locations and is expected to take place in Autumn and Spring 2022.

6.1.2 LCI – Fire management

Fire management by the Management Panel to take place in July 2021 however due to weather conditions and DBCA fire management protocols this fire management was not able to take place. The aim is that fire management activities occur across the MA in June or July 2022.

6.1.3 Presentation and attendance at the Malleefowl and Threatened Species Forum

The Operations Manager is scheduled to attend and present at the Malleefowl and Threatened Species Forum in Geraldton, September 8 – 10 2021.

6.1.4 Possible collaboration with the Indigenous Desert Alliance

The Operations Manager has been speaking with Ten Deserts / the Indigenous Desert on developing a project to directly assist Traditional Owner Ranger groups, especially in the fire management space. This project has not been fully developed but is in a development stage.

6.2 Stakeholder Engagement

6.2.1 Ten Deserts – Buffel Free GVD

The Trust has continued to participate in meetings with the Buffel Free GVD working group. The Trust continues to work with this project to develop future Buffel grass management projects including Ranger education packages.

Appendix 1: Statement of Transactions 2020-21 FY

Statement of Transactions



MR . GREAT VICTORIA DESERT BIODIVERSITY TRUST FUND

Client Reference: 33111845 Contact: TM39

Public Trustee Activity TRST / 1

Statement of Transactions Number 11

Statement Period from 30/06/20 to 30/06/21

| Date | Transaction Details | Payments | Receipts | |
|-----------|--|-----------------------|-----------------------|------------------------|
| | Opening Balance as per Statement of Account Dated 30/06/2020 | | 1,806,886.19 | |
| | OTHER PAYMENTS AND RECEIPTS | | | |
| 07-SEP-20 | MALLEEFOWL MILESTONE 2 - NATIONAL MALLEEFOWL RECOVERY GROUP INC | 19,558.00 | | |
| 09-SEP-20 | RANGELANDS NRM MEMBERSHIP - RANGELANDS NRM WA | 110.00 | | |
| 30-SEP-20 | CR INTEREST 30/09/2020 | | 6,789.76 | |
| 07-OCT-20 | MONITOR LANDSCAPE M/S 1 - DEPT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS | 7,480.00 | | |
| 03-NOV-20 | MONITOR LANDSCAPE M/S 2 - DEPT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS | 7,480.00 | | |
| 14-DEC-20 | TRUST AUDIT 2020 - ERNST & YOUNG | 6,406.40 | | |
| 09-FEB-21 | MONITOR LANDSCAPE M/S 3 - DEPT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS | 7,480.00 | | |
| 15-MAR-21 | GST REFUND | | 15,216.00 | |
| 31-MAR-21 | CR INTEREST 31/03/2021 | | 4,792.51 | |
| 01-APR-21 | AGA ANNUAL CONTRIBUTION | | 379,803.00 | |
| 17-MAY-21 | GVD BURN JULY 2020 - DEPT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS | 16,517.00 | | |
| 27-MAY-21 | MONITOR LANDSCAPE M/S 4 - DEPT OF BIODIVERSITY, CONSERVATION AND ATTRACTIONS | 7,480.00 | | |
| 27-MAY-21 | DELIVERY PHASE - GHD PTY LTD | 320,986.79 | | |
| 03-JUN-21 | TRUST EXPENSES - ANGLOGOLD ASHANTI | 83,920.60 | | |
| 30-JUN-21 | VEGETATION & SOIL SURVEY - THE UNIVERSITY OF ADELAIDE | 8,222.20 | | |
| 30-JUN-21 | ASSET MANAGEMENT FEE | 10,799.99 | | |
| 30-JUN-21 | TRANSACTIONAL FEE | 2,550.00 | | |
| | Closing Balance | | 1,714,496.48 | |
| | Opening Balance | Total Payments | Total Receipts | Closing Balance |
| | 1,806,886.19 | 498,990.98 | 406,601.27 | 1,714,496.48 |

Statement of Assets & Liabilities



MR . GREAT VICTORIA DESERT BIODIVERSITY TRUST FUND

Client Reference: 33111845 Contact: TM39

Public Trustee Activity TRST / 1

Statement of Assets & Liabilities Number 11

Statement Period from 30/06/20 to 30/06/21

| Description | Recorded Value | Valuation Date |
|---------------------|--------------------------|---------------------------|
| ASSETS | | |
| PT CASH ACCOUNT | 1,714,496.48 | 30-JUN-21 |
| Totals | 1,714,496.48 | |
| | | |
| Total Assets | Total Liabilities | Net Recorded Value |
| 1,714,496.48 | 0.00 | 1,714,496.48 |