



**GREAT DIRT**  
RESOURCES LTD.

**INDUSTRY-LEADING MANGANESE GRADE**

**Building a Portfolio of Critical Metal Projects in Australia**

**AGM Presentation**

October 2024



**ASX:GR8**  
greatdirt.com.au

# DISCLAIMER

## Competent Person's Statement

Information in this presentation that relates to exploration results is based on and fairly represents information and supporting documentation prepared and compiled by Mr Michael Leu, who is a Member of the Australian Institute of Geoscientists and a Member of the Australasian Institute of Mining and Metallurgy. Mr Leu is the geological consultant for Great Dirt Resources Ltd. Mr Michael Leu has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves. Mr Michael Leu consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

## Forward Looking Statement

This presentation contains forward looking statements concerning the projects owned by Great Dirt Resources Ltd. If applicable, statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward looking statements are based on management's beliefs, opinions and estimates as of the dates the forward looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

## No New Information

Except where explicitly stated, this presentation contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

# CORPORATE OVERVIEW

Shares on Issue <sup>1</sup>  
**37.4M**

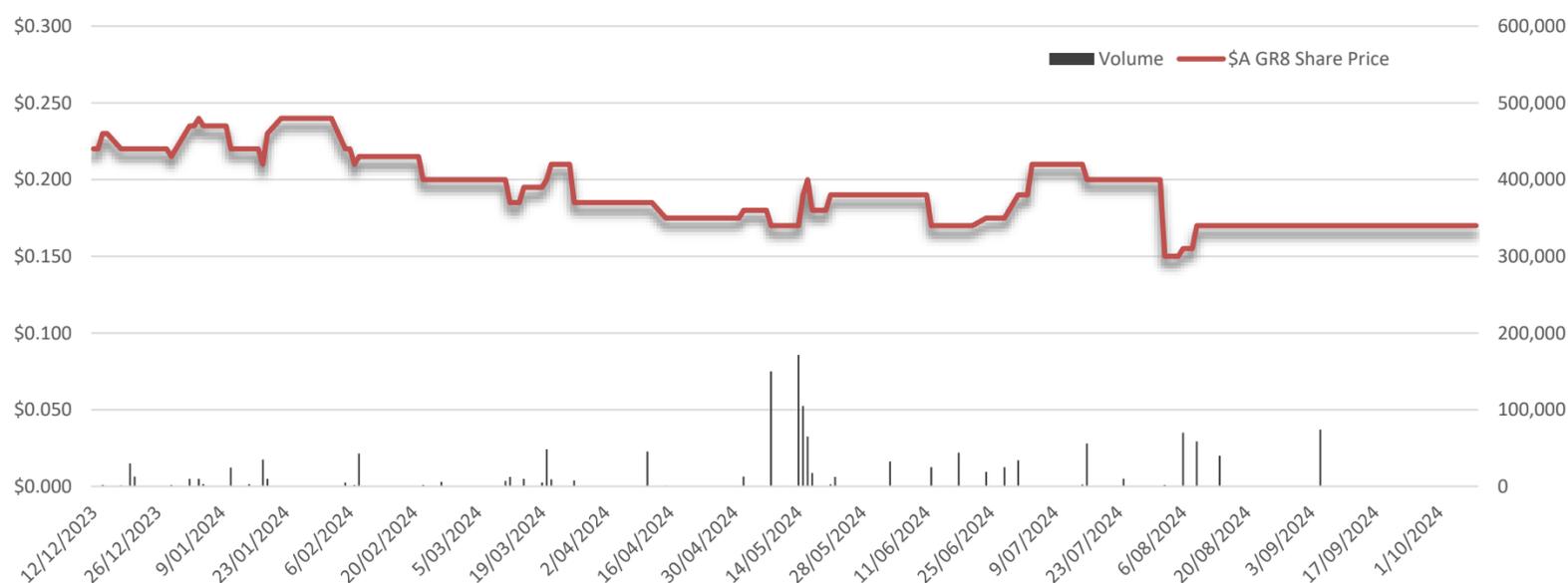
Cash & Receivables<sup>1</sup>  
**\$3.4M**

Market Cap<sup>1</sup>  
**\$7.1M**

Enterprise Value<sup>1</sup>  
**\$3.7M**

<sup>1</sup>at 30 June 2024

## Share Trading (November 2023 – October 2024)



## Shareholder Composition as of 10 October 2024

Top 20 Shareholders Excluding Management and Directors	31.22%
Directors and Management	8.25%
Other Shareholders	60.53%
<b>Total</b>	<b>100.00%</b>

## Board



**Martin Helean**  
Managing Director & CEO



**Jeremy Whybrow**  
Executive Chairman



**Sam Wright**  
Non Executive Director



**Chris Achurch**  
Company Secretary

# VALUE PROPOSITION



## TIER-1 MINING TENURE

Proximity to significant infrastructure and world-renowned mines with high-grade Manganese in NSW<sup>(1)</sup> and strategic locations in the Pilbara, known for world-class discoveries



## COMPELLING GEOLOGY

Fertile areas for high-grade lodes and district-scale manganese oxide deposits, manganese mineralisation similar to Woodie Woodie style<sup>(2)</sup> and proximity to Wildcat Resources' world-class Tabba Tabba Lithium Project<sup>(3)</sup>



## PROSPECTIVE EXPLORATION

Great Dirt's projects show significant discovery potential with expanding geophysical and geochemical Mn targets in NSW<sup>(4)</sup>, manganese-rich outcrops and geophysical anomalies in WA<sup>(2)</sup>, and high exploration potential near world-class lithium discoveries in Pilbara<sup>(3)</sup>.



## GROWING CRITICAL METAL PORTFOLIO

Delivering shareholder value and maximising portfolio potential through strategic acquisition of 100%-owned licenses for key critical metals, including Manganese and Lithium.

(1) ASX Announcement 8 November 2023 – Great Dirt Resources Ltd Prospectus. (2) ASX Announcement 18 June 2024 – Historic data review confirms 45.7% Mn at Nullagine Project. (3) ASX Announcement 12 July 2024 - New Tenure Granted directly adjacent to Wildcat and Sayona. (4) ASX Announcement 10 April 2024 – Soil Sampling Defines Multiple 3km Manganese Soil Trends.

# PORTFOLIO OF BATTERY-GRADE MANGANESE & LITHIUM PROSPECTS

- Granted tenure in developed Tier-1 Mining Regions
- Established infrastructure with rail and road links to bulk commodity ports
- Prospective exploration targets, in prominent manganese and lithium producing regions/areas

## Doherty & Basin Manganese Projects Australia - NSW



### PRIORITY 1 & 2

- **Doherty Mine, Junior Mines and Daily's Deposit**
- Plus numerous other showings along strike, north and south
- **Girraween and Basin farm targets<sup>(1)</sup>.**
- Drilling imminent at **Junior**

## Nullagine Project Australia – Pilbara



Two tenements ~50km north-east of ConsMin, Woodie Woodie Mn mine, located in the Pilbara, Western Australia covering 68 and 29 blocks respectively, totaling ~311km<sup>2</sup>.

## E45/6863 Lithium Prospect Australia – Pilbara



E45/6863 is located in one of the most prominent lithium regions in Western Australia, and worldwide, being ~43km from Pilbara Minerals (ASX:PLS) Pilgangoora Lithium Project.

# EL9527 | DOHERTY PROJECT

## EXPLORING A RICH MANGANESE MINING JURISDICTION

### Location

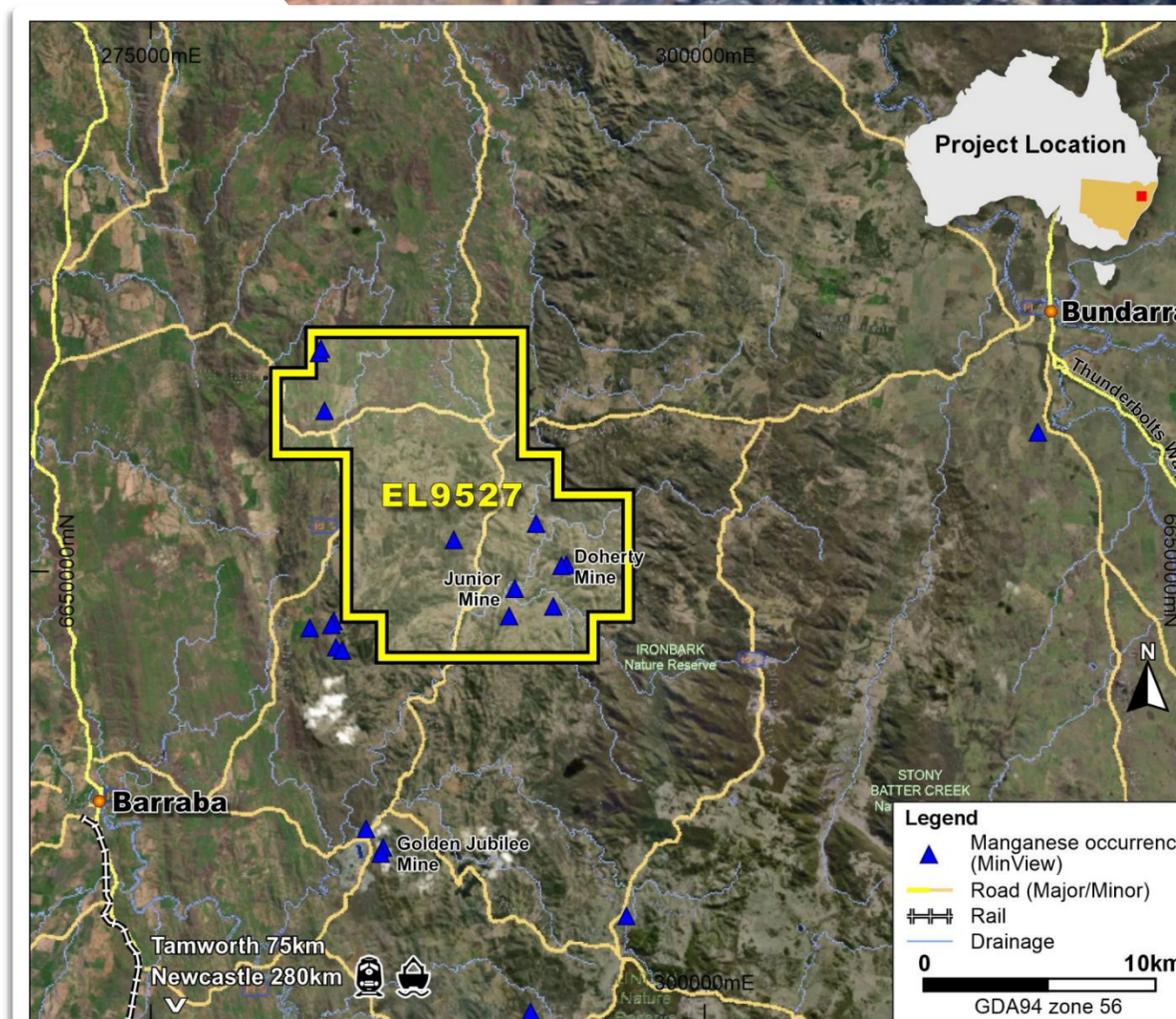
EL9527 comprises 168km<sup>2</sup> and is located 100km north of Tamworth, in northern New South Wales, close to the town of Barraba, with significant infrastructure and a population 1,400 people.

### Historical Producer

This licence is prospective for manganese having produced both battery and metallurgical grade manganese from the 1940's into the 1960's.

### Advanced Projects

EL9527 contains the **Doherty Project**, comprising the old Doherty and Junior Mines, and **The Basin Project**, which contains numerous manganese workings. Proven producing region very prospective for high grade manganese, in particular battery grade manganese<sup>(1)</sup>.



Battery grade manganese is a market few producers can address due to strict grade and chemical suitability criteria. It was produced as run of mine ore from both the Doherty and Junior Mines.

(1) ASX Announcement 8 November 2023 – Great Dirt Resources Ltd Prospectus.

# EL9527 | DOHERTY PROJECT

## THE LOW HANGING FRUIT PRIMED FOR IMMEDIATE SUCCESS

- Multiple known surface Manganese Oxide Deposits are present across two large projects areas<sup>(1)</sup>, **Doherty Project** and **Basin Project**.
- **Substantial Potential Never Tested by Modern Exploration Technology**
  - Significant potential for important new discoveries.
  - Recent exploration has discovered high-grade Mn in both outcrops and floaters<sup>(1)</sup>.
  - Potential for undiscovered blind deposits with no surface expression
  - The known deposits, new discoveries, and potential deposits represent a large exploration target due to the expansive size of the prospective geological units.
  - The Doherty Project has over 10km and the Basin Project has over 8km of prospective strike<sup>(1)</sup>.
- **Exploration Concept**
  - GR8's concept suggests high-grade surficial deposits<sup>(1)</sup> are primary exhalative stratiform manganese oxide, not supergene expressions of underlying deposits.
  - This concept expands potential targets from discrete to district-scale deposits.

(1) ASX Announcement 24 June 2024 – New High-Grade 50.3% Manganese at Doherty Project, NSW

(2) ASX Announcement 8 December 2023 – High Grade Manganese Assays up to 59.29% at Doherty Project

### Doherty Mine

Open cut and underground operations extend for >300m, majority of 6000t production was battery grade manganese ore supplied to Eveready, shipment grades reported in mines inspection report battery grade (74.3%) and metallurgical grade (46%) manganese<sup>(2)</sup>.

### Junior Mine

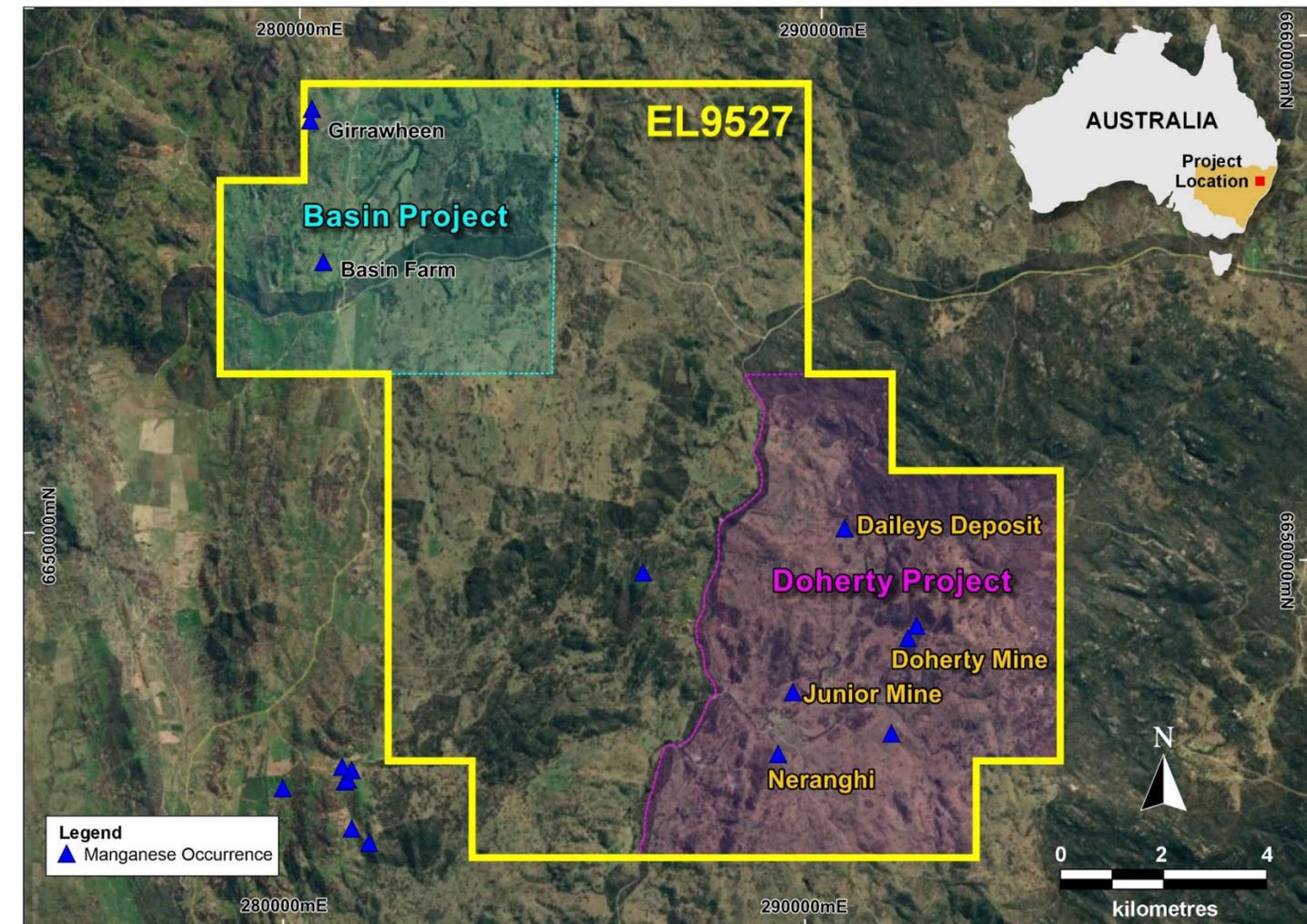
Produced 3,000 tonnes of mostly metallurgical grade manganese ore, supplied to BHP for steel production, saddle shaped lenses worked for more than 60m, abundant ore remains, lowering grade and failing market force closure, ore assayed 29% Mn<sup>(2)</sup>.

### Neranghi

Shallow workings on parallel lenses of massive ore, multiple pits 25m wide, ore assayed at 50% Mn<sup>(1)</sup>, numerous deposits to the south with potential for further progression.

### Daileys Deposit

Shallow workings on several ore lenses with clay, abundant ore remains insitu, ore assayed 31% Mn<sup>(2)</sup>.



# DOHERTY PROJECT | EXPLORATION SUMMARY

## NEW HIGH-GRADE MANGANESE DISCOVERED UP TO 50.3% Mn

- Soil and Rock Chip Sampling Extend Junior Manganese Targets**  
 Latest results show the extension of the **Junior** targets to both the north with the south mineralisation consistent to the southern boundary of EL9527<sup>(1)</sup>.
- Drilling Targets Defined**  
 Ground based GAIP and Gravity geophysical surveys define significant, large scale, linear features, coincident to Mn in soil anomalism<sup>(2)</sup>.
  - Several geophysical anomalies associated with historic manganese mines and high-grade rock chip trends.
- Discovery of Massive Manganese Mineralisation up to 50.3%**  
 Field investigation of geophysical targets led to the discovery of massive manganese mineralisation south of **Neranghi** with samples assaying up to **50.3% Mn**<sup>(1)</sup>.
- Confirmation of several manganese anomalies extending over 3.5km.



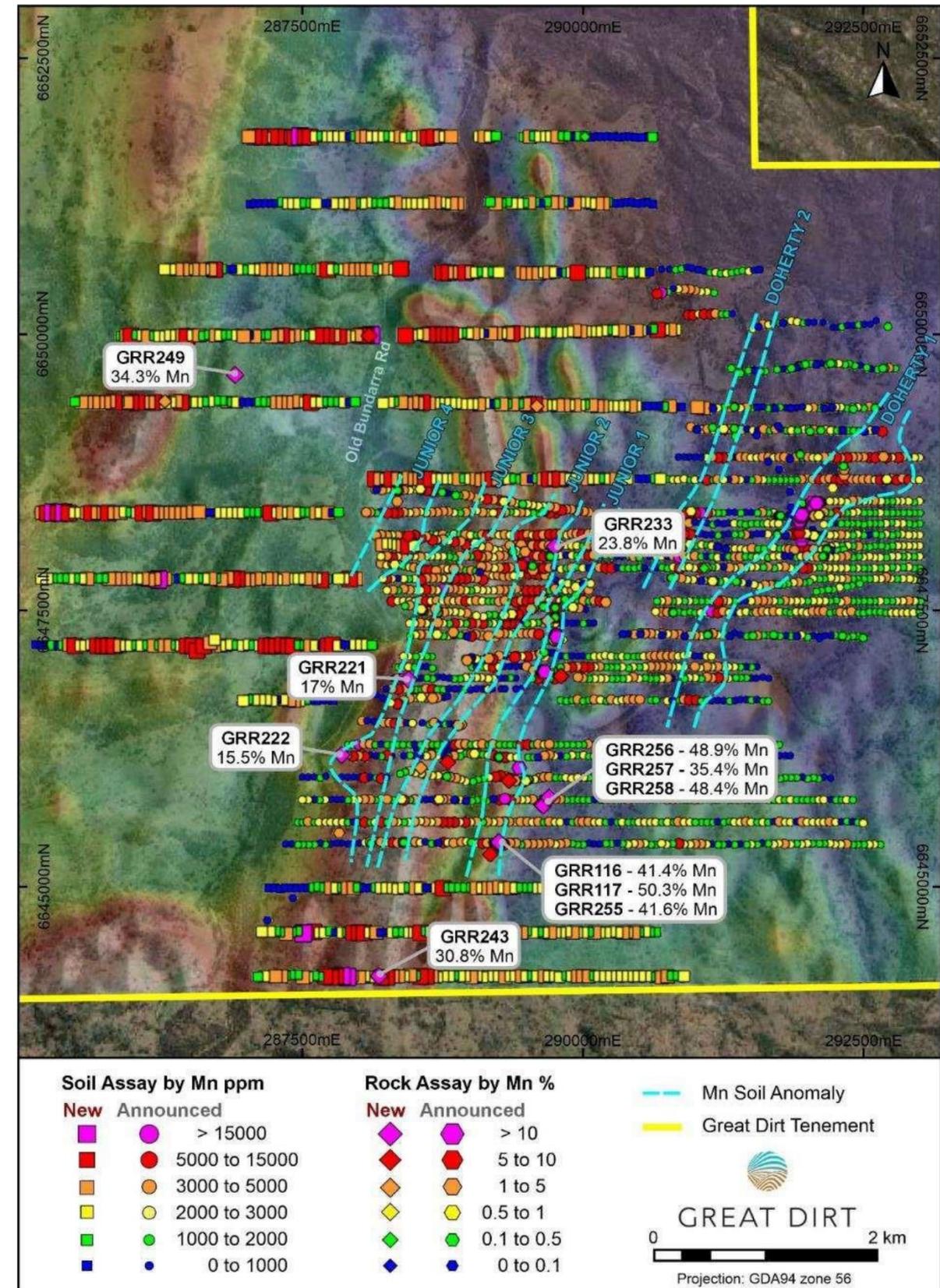
Sample GRR258, 48.4% Mn



Sample GRR255, 41.6% Mn



Outcrop location of sample GRR255 41.6% Mn<sup>(1)</sup>.  
 Outcrop on bulldozed track, exposed lode with abundant massive MnO<sub>2</sub>. Location of planned drill hole



(1) ASX Announcement 24 June 2024 – New High-Grade 50.3% Manganese at Doherty Project, NSW  
 (2) ASX Announcement 1 August 2024 – Geophysical, Soil and Rock Chip Anomalies Define Targets

# EL9527 | DOHERTY PROJECT

## AGGRESSIVE DRILLING PROGRAM DESIGNED

### Multiple Drill Targets Defined<sup>(1)</sup>

GR8 has systematically conducted comprehensive geochemical sampling and airborne and ground geophysical surveys that have defined multiple drill targets over a wide area.

### Potential for Significant New Discoveries

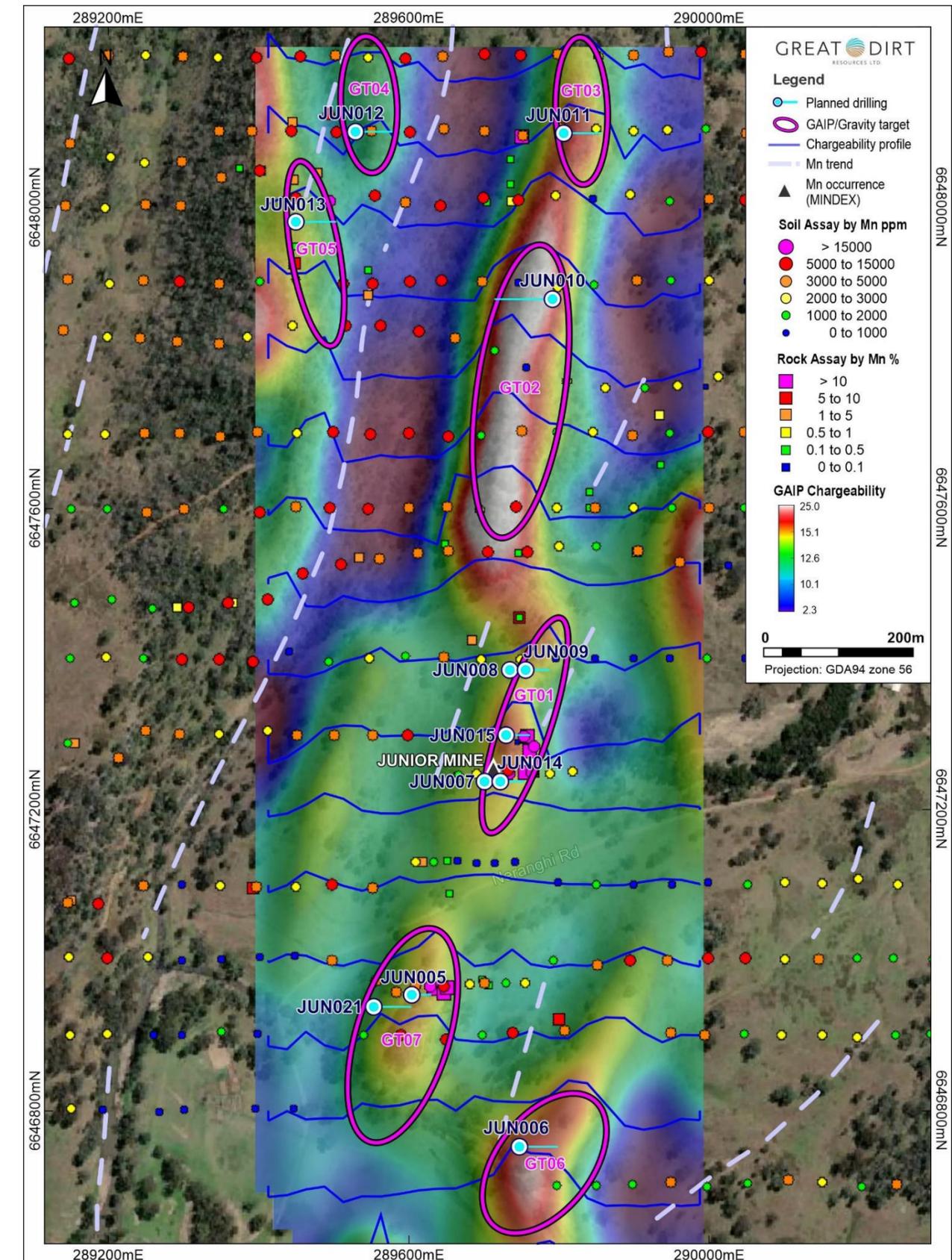
The selected targets are based on coinciding geochemical and geophysical anomalies often supported by geological mapping. Robust targets provide potential for significant new discoveries.

### Drilling Approvals Granted<sup>(2)</sup>

New South Wales Resource Regulator has officially granted approval, for the proposed drill program at the Company's Junior Prospect.

### Drilling Company Scheduled

Chief Drilling has been notified and will commence drilling in late October and early November.

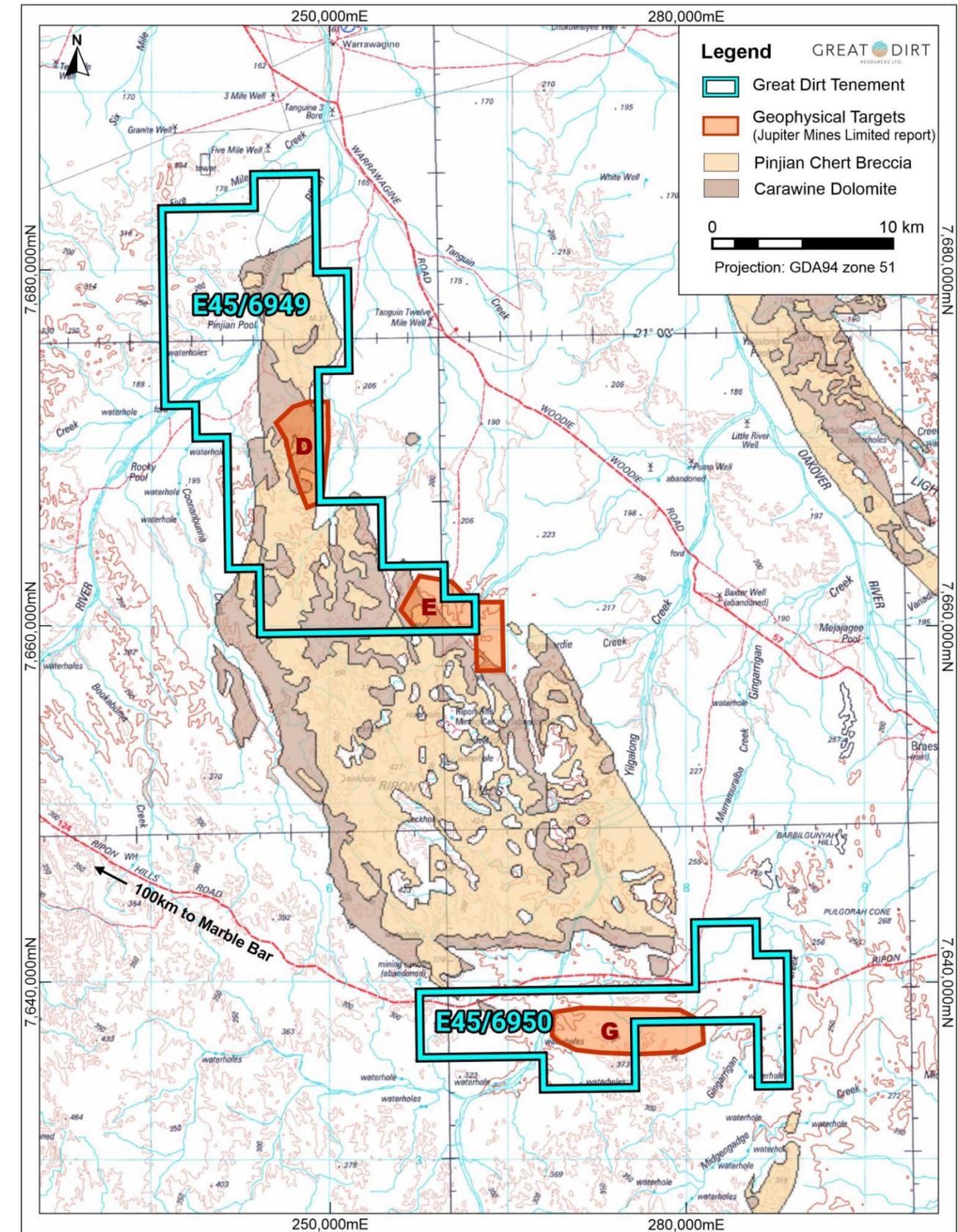


(1) ASX Announcement 1 August 2024 – Geophysical, Soil & Rock Chip Anomalies Define Targets

(2) ASX Announcement 2 October 2024 – Approval Granted for Drilling at Junior

# E45/6949 AND E45/6950 | NULLAGINE PROJECT LICENCE APPLICATIONS EXPAND Mn PORTFOLIO CLOSE TO EXISTING MINE

- E45/6949 and E45/6950 are located ~50km northeast of Consolidated Minerals, Woodie Woodie manganese mine, located in East Pilbara, Western Australia.
- The tenements cover 68 and 29 blocks respectively across ~311km<sup>2</sup>, in the Pilbara mineral field.
- The Project includes the stratigraphically significant Pinjian Chert and Carawine Dolomite, which are considered to be the main host rocks of the Woodie Woodie style of mineralization<sup>(1)</sup>.
- The tenements are highly prospective for manganese, with historical rock chip samples returning assays of up to **45.7% Mn<sup>(1)</sup>** on E45/6949.
- Limited historical exploration has been completed which provides GR8 with potential for significant exploration upside.



Map of Tenement Boundaries and historical targets

(1) ASX Announcement 18 June 2024 – Historic data review confirms 45.7% Mn at Nullagine Project.

# E45/6949 AND E45/6950 | NULLAGINE PROJECT LICENCE APPLICATIONS EXPAND Mn PORTFOLIO CLOSE TO EXISTING MINE

## Substantial Potential Never Followed-up

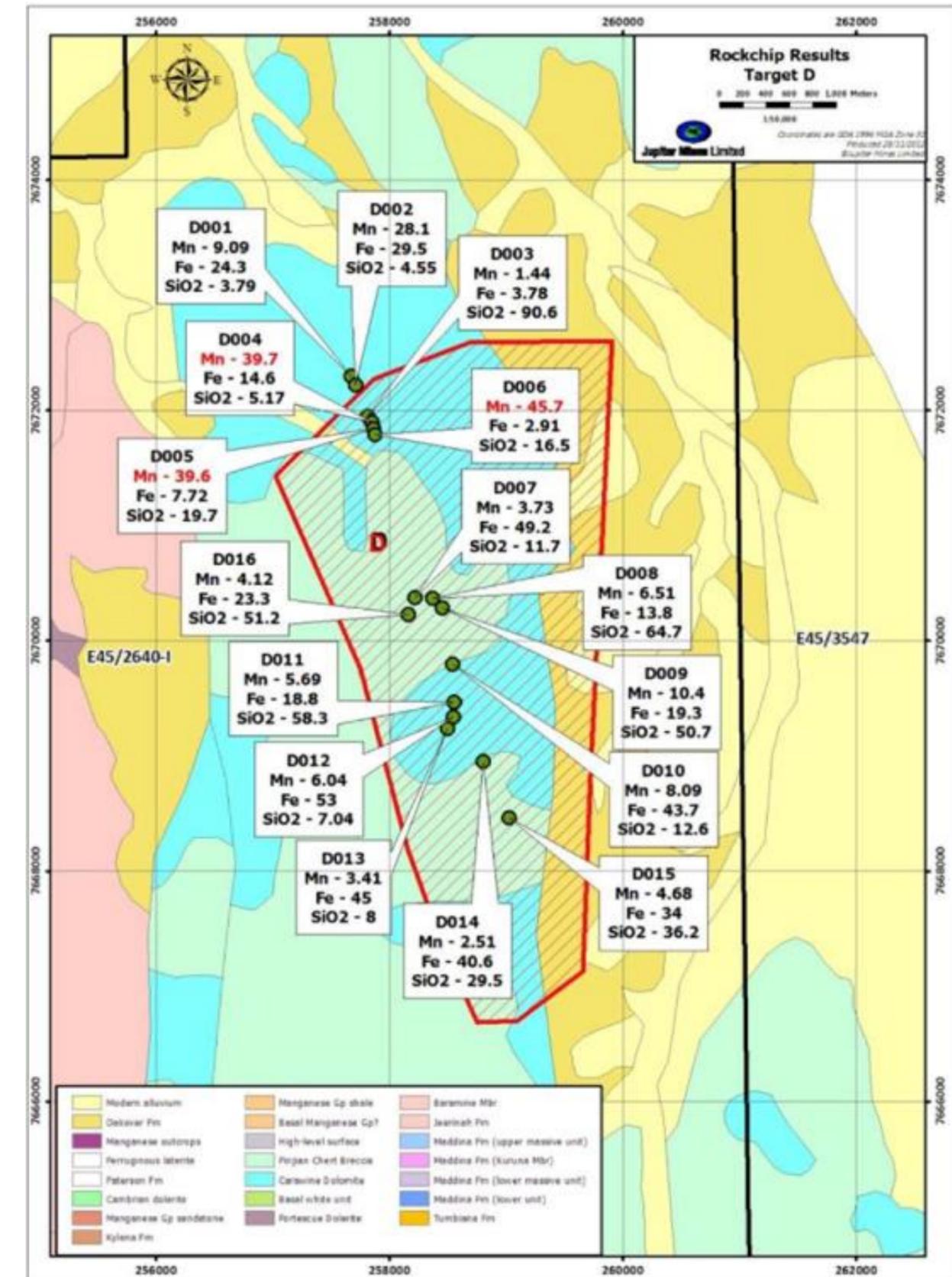
The discovery by 2012 exploration<sup>(1)</sup> of manganese rich out-crops and coincident geophysical anomalies indicates the potential for significant manganese deposits in the area.

## Several targets Mn Targets Defined

Past exploration defined several targets for manganese mineralisation based on geophysical data, especially coinciding magnetic and VTEM anomalies<sup>(1)</sup>.

## Planned Comprehensive Exploration to Define Drill Targets

VTEM Target D<sup>(1)</sup> is easily accessible and previous exploration discovered and sampled a total of sixteen outcrops of manganese-rich chert-breccia/conglomerate and manganese-stained laterite. Target D returned high-grade Mn rock chip samples with low iron and moderate to high silica. It represents a compelling drill target.



(1) ASX Announcement 18 June 2024 – Historic data review confirms 45.7% Mn at Nullagine Project.

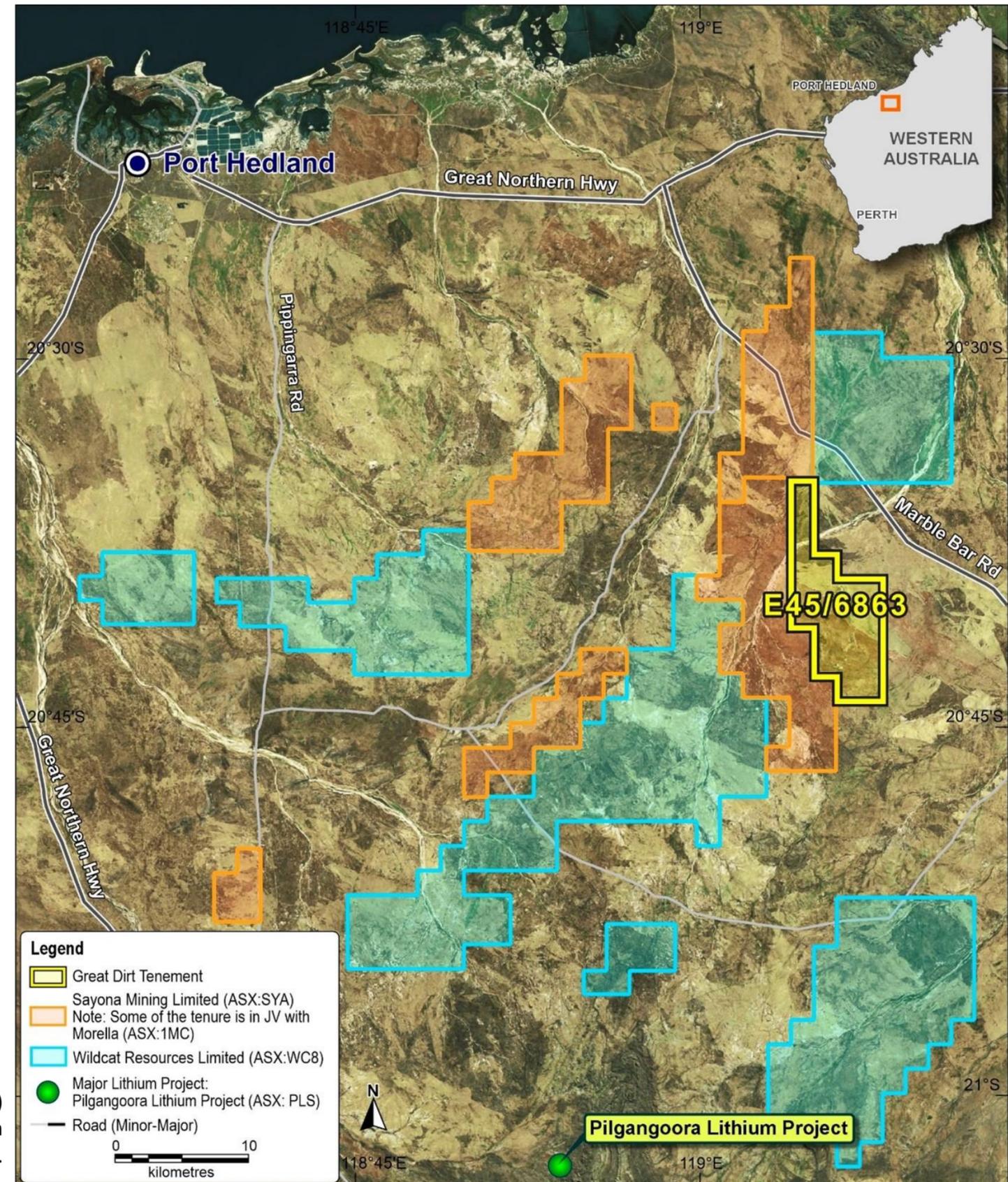
Target D Sample Locations and Results<sup>(1)</sup>

# E45/6863 | PILBARA, WESTERN AUSTRALIA

## NEW TENURE GRANTED ADJACENT TO WILDCAT RESOURCES & SAYONA MINING

- New tenure granted after winning ballot application.
- E45/6863 covers ~67.5km<sup>2</sup> and is directly adjacent to tenure held by Wildcat Resources (ASX: WC8) and Sayona Mining (ASX: SYA), in the Pilbara region of Western Australia.
- E45/6863 is in one of the most prominent lithium regions in Western Australia, and worldwide, being approximately 43km from Pilbara Minerals (ASX: PLS), Pilgangoora Lithium Project<sup>(1)</sup>.

Location of E45/6863 adjoining Wildcat Resources (ASX: WC8) and Sayona Mining (ASX: SYA), and approximately 43km from Pilbara Minerals (ASX: PLS), Pilgangoora Lithium Project.



(1) ASX Announcement 12 July 2024 – New Tenure Granted directly adjacent to Wildcat Sayona



# GREAT DIRT

-  [info@greatdirt.com](mailto:info@greatdirt.com)
-  [greatdirt.com.au](http://greatdirt.com.au)
-  Level 4, 216 St Georges Tce  
Perth WA 6000  
T: +61 8 0429 8842

# MANGANESE MARKET

MATURE MINERS LOSING GRIP ON THE MARKET; JUNIORS THRIVE AS EV ADOPTION CAUSES GROWTH IN DEMAND

- Manganese is primarily used in the steel industry as an alloying agent to improve hardness, strength, and resistance to corrosion. As the global steel production continues to rise, so does the demand for manganese.
- Additionally, the growing popularity of electric vehicles and renewable energy sources is expected to further drive demand for manganese, as it is a key component in the production of lithium-ion batteries.
- Some analysts predict that the demand for manganese in the battery sector could surpass that of the steel industry in the coming years.

## MANGANESE USES

STEEL MAKING

BATTERIES

NON-FERROUS ALLOYS

EV

CHEMICALS



# MANGANESE MARKET

## MANGANESE DEMAND IN FOCUS

### Breakthrough EV battery pack could last 2 million kms, or 130 years of average driving

Chinese manufacturer Gotion High-Tech has announced a new battery pack will go into mass production in 2024 that it says will deliver range of up to 1,000kms for a single charge and could last two million kms.

These incredibly high cycle numbers mean the battery could essentially last 2 million km before it starts to deteriorate. To put that into context, the average Australian car travels around 15,000 km per year so it would take 130 years' worth of average driving to reach 2 million km mark.



Source: [Breakthrough EV battery pack could last 2 million kms, or 130 years of average driving – The Driven](#)  
[Manganese batteries market may face deficit in 2024 - MINING.COM](#)

### Manganese batteries market may face deficit in 2024

[Bruno Venditti](#) | January 3, 2023 | 9:01 am [Battery Metals](#) [News](#) [Asia](#) [Canada](#) [China](#) [Europe](#) [USA](#) [Manganese](#)



An essential component of the steel-making process, manganese has played an increasing role in the battery market. (Stock Image)

#### **Matt James, Euro Manganese CEO:**

“Volkswagen, Mercedes, Tesla, and GM are among the companies that have announced intentions to use high-purity manganese in their cars. A Chevy Bolt, for example, can contain over 24kg of manganese.”

Source: [Manganese batteries market may face deficit in 2024 – MINING.COM](#)