



PetraDiamonds

Cullinan Site Visit

February 2019

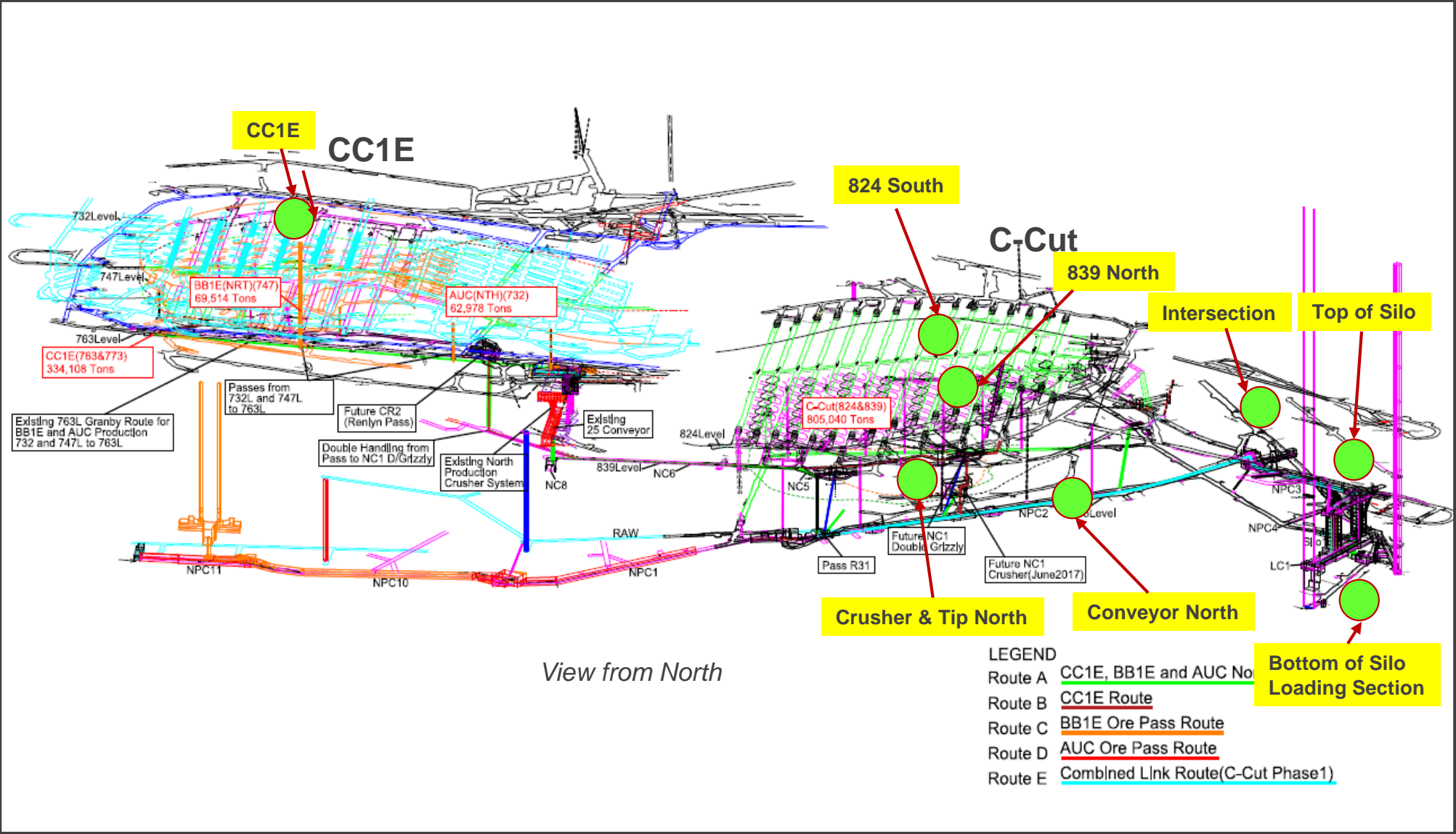
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Cullinan Site Visit Programme

Time	Activity
10:00	Arrive Cullinan Diamond Mine
10:15	Orientation and Safety Briefing
10:45	Underground visit
12:15	Plant and Surface Visit
13:15	Lunch
14:00	Overview briefing on Petra and Cullinan
15:00	Depart Cullinan

Plan View of Cullinan Mining Areas: Areas to Visit





Petra Overview



An Exceptional Growth Path

July 2007

Koffiefontein



70% Petra^{1,2}; 30% BEE

Sub Level & Block Cave

July 2008

Cullinan



74% Petra¹; 26% BEE

Block Cave

February 2009

Williamson

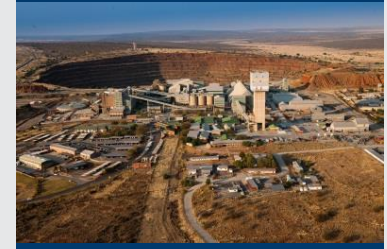


75% Petra; 25%
Government of Tanzania

Open Pit

September 2011

Finsch



76% Petra¹; 24% BEE

Sub Level & Block Cave

The Petra approach:

- Focus on efficiencies and simplification
- Utilise in-house capabilities and share services across mines
- Focus on 'value' as opposed to 'volume' production
- Maximise rough diamond prices through competitive tender sales system

Current Trading in H1 FY 2019

On track to meet guidance of 3.8 – 4.0 Mcts for FY 2019

- 2,019,147 carats produced in H1 FY 2019 (up 10% vs. H1 FY 2018)
- H1 revenue up 8% to US\$207.1 million
- Diamonds sold increased 15% to 1,736,357 carats
- Capex of US\$40.6 million in line with Petra's declining capex profile

Mixed rough diamond prices

- Rough diamond prices on a like-for-like basis reduced by ca. 4% compared to H2 FY 2018 due to usual seasonal weakness
- Product mix during H1, especially at Cullinan, yielded prices at the lower end of historical ranges

Diamond market expected to be stable in H2 FY 2019

- Start of H1 FY 2019 was in line with expectations, as seasonally the slowest time of the year in the rough diamond sales calendar
- During November and December demand for lower value small stones saw some recovery due to renewed seasonal demand and restocking in the cutting sector

Succession Planning

- Varda Shine and Bernard Pryor appointed as Independent Non-Executive Directors effective from January 2019. In addition, the Nomination Committee expects to make further changes to the composition of the Board in the calendar year
- The process to find a successor for the CEO position is progressing and the company expects to make an announcement during H2 FY 2019



H1 FY 2019 (six months to 31 December 2018)

		H1 FY 2019	H1 FY 2018	Variance	FY 2018 ¹
<u>Sales</u>					
Diamonds sold	Carats	1,736,357	1,510,361	+8%	3,793,799
Revenue	US\$m	207.1	191.7	+15%	495.3
<u>Production</u>					
ROM tonnes	Mt	6.4	6.0	+7%	12.1
Tailings & other ² tonnes	Mt	1.0	0.7	+43%	1.6
Total tonnes treated	Mt	7.4	6.8	+9%	13.7
ROM diamonds	Carats	1,946,717	1,728,626	+13%	3,649,337
Tailings & other ² diamonds	Carats	72,430	115,330	-37%	186,132
Total diamonds	Carats	2,019,147	1,843,956	+10%	3,835,467
<u>Capex</u>					
Expansion	US\$m	28.5	60.2	-53%	110.7
Sustaining	US\$m	12.1	9.2	+32%	19.6
Subtotal	US\$m	40.6	69.4	-41%	130.3
Borrowing costs capitalized	US\$m	3.7	16.2	-77%	15.2
Total	US\$m	44.3	85.6	-48%	145.5

1. 'Other' includes alluvial diamond mining at Williamson

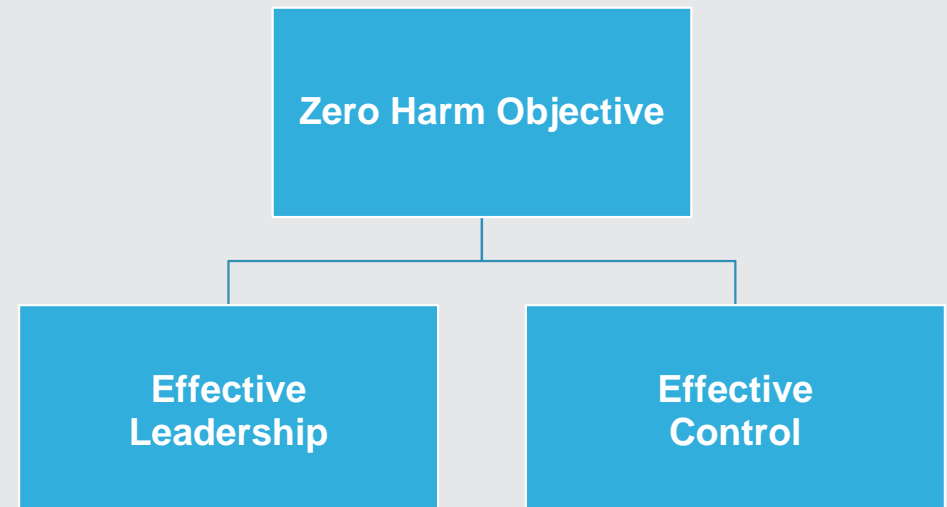
Safety is Our Number One Priority

Zero harm remains our goal

- The health and safety of our workforce is our top priority
- Our mines are certified OHSAS 18001:2007, the international safety management framework
- Continuous risk assessment and management; all staff are trained in safety
- LTIFR of 0.16 recorded for H1 FY 2019 (H1 FY 2018: 0.24), comparing favourably against industry peers

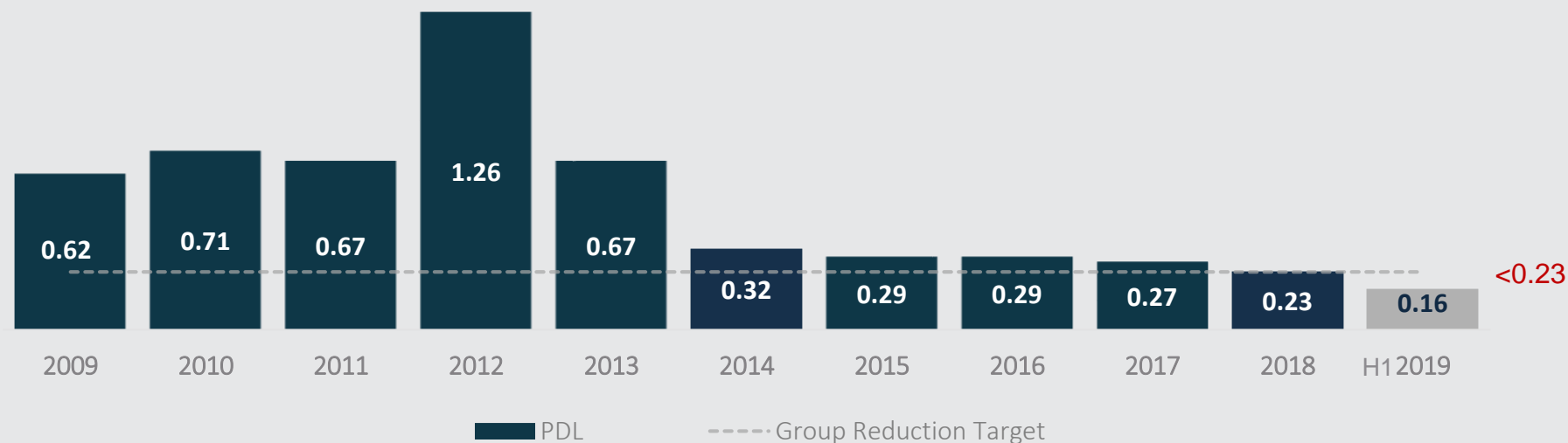


Safety is our most important personal and organisational value



Improving our Safety Performance

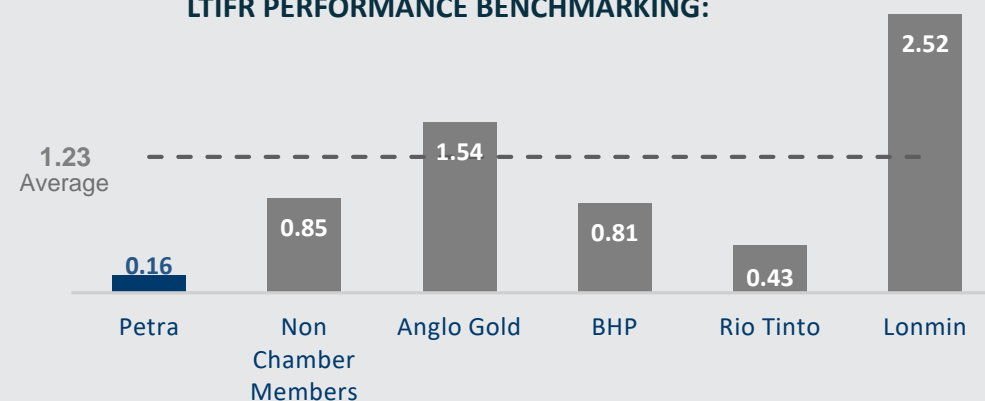
GROUP AGGREGATE LTIFR TREND FY 2009 – H1 FY 2019 (31 December 2018)



ROLLING LTIFR PERFORMANCE FY'12 - YEAR TO DATE FOR FY'19:

□ LTIFR 2012 -2019 continually improved by 92%

LTIFR PERFORMANCE BENCHMARKING:



Note: Industry statistics reflected as per 2017/2018 performance publications - ICMM



Cullinan Overview



Cullinan Overview



1902	1903	1905	1930	1932	1945	1997	2008	2009
Cullinan kimberlite pipe originally discovered by Sir Thomas Cullinan	Open pit mining commenced at 'Premier Mine' in 1903 - at time of WW1 14,000 employed at mine	Recovery of the 3,106 carat Cullinan diamond – the world's largest gem diamond	De Beers acquired controlling interest in Premier	Mine closed due to depression and lack of market for luxury goods	Mine reopened and pit dewatered for development of underground mine	Premier (Transvaal) Diamond Company amalgamated into DBCM	Mine acquired by Petra Consortium acquisition cost of R1bn – Petra had initial 37% interest	Petra increased its interest to 74% by buying out Al Rajhi's interest

- Source of the Cullinan, the largest gem diamond ever recovered (3,106 carats)
- Produced more than 800 stones of +100 ct, of which more than 140 stones are +200ct
- World's most important source of truly rare and highly prized blue diamonds
- One of the world's largest diamond resources – 190.3 Mcts
- H1 FY 2019 production +37% to 832,026 carats and revenue +8% to US\$66.2 million
- C-Cut Phase 1 expansion plan to contribute ca. 3 Mt for FY 2019. Steady state production of 4.0 Mtpa will be delivered from C-Cut Phase 1 and CC1E from FY 2020 onwards
- Cullinan plays a very important role in its local community and is dedicated to maintaining high ESG standards

Iconic Diamonds of Cullinan

- Cullinan has consistently produced world class white and coloured diamonds over its history

Historic Recoveries pre-Petra



The Cullinan
3,106 ct rough
Largest gem diamond
ever discovered
Source of the diamonds in
the British Crown Jewels
1905



The Golden Jubilee
755.5 ct rough
545.6 ct polished
The largest cut diamond in the
world
1986



The Centenary
599.1 ct rough
273.8 ct polished
Cut into a modified heart-
shaped design, "fit for the
turban of a Sultan or Maharaja"
1986



The Taylor Burton
240.8 ct rough
69.4 ct polished
Gifted to Elizabeth Taylor by
Richard Burton
1966

Recoveries by Petra



The Cullinan Heritage
507.55 ct rough
104 ct polished, plus 23
auxilliary stones
Sold for **\$35.3m**, word record
for rough stone
2009



The Cullinan Dream
122.5 ct rough
sold **\$23.5m**
Petra retains 15% share in
polished
2014



The Blue Moon of Josephine
29.6 ct rough
12.0ct polished
Rough sold for **\$25.5m**, and
polished for a record **\$48.5m**
2015



The Star of Josephine
26.6 ct rough,
7.0ct polished
sold for **\$9.5m**
2009

Cullinan's Diamond Profile

- Source of the Cullinan, the largest gem diamond ever recovered (3,106 carats)
- Record of producing Type II diamonds, including high value blue stones
- All -55mm material only exposed to autogenous milling (comminution via attrition, not crushing) and all further liberation through High Pressure Grinding Rolls; inter-particle crushing, thereby moving away from high impact cone crushing
- FY 2018 notable diamond recoveries included 8 +100 carat stones (including 3 +200 carat diamonds)

Iconic diamonds



The Cullinan, 3,106 carats,
1905



Cullinan Heritage, 507 carats,
2009



The Blue Moon of Josephine,
29.6 carats, 2015

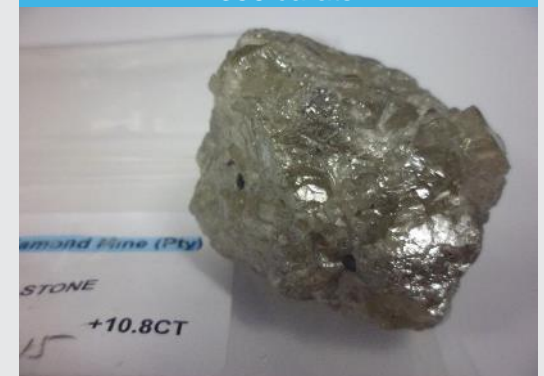
FY 2018



281 carats

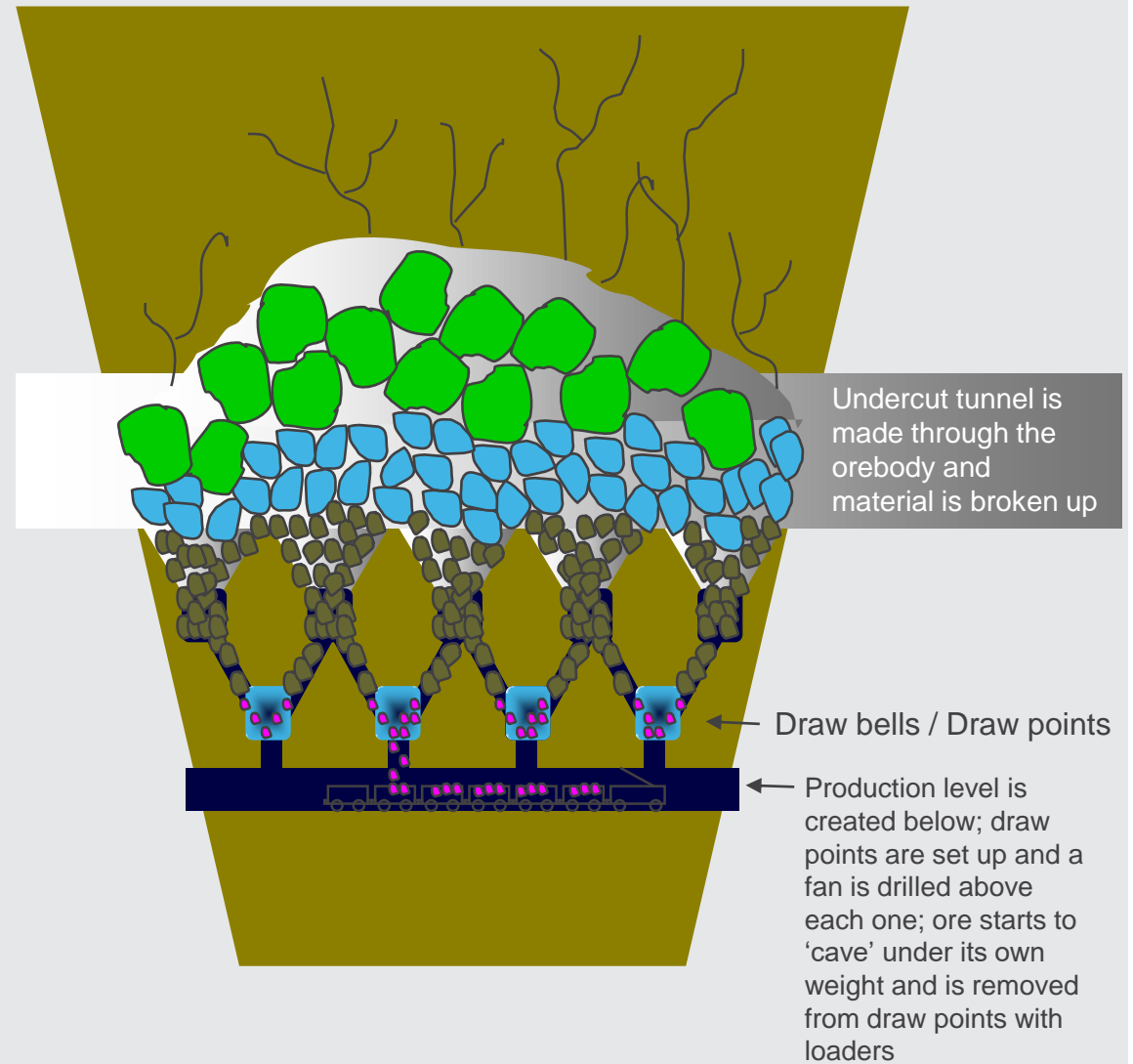
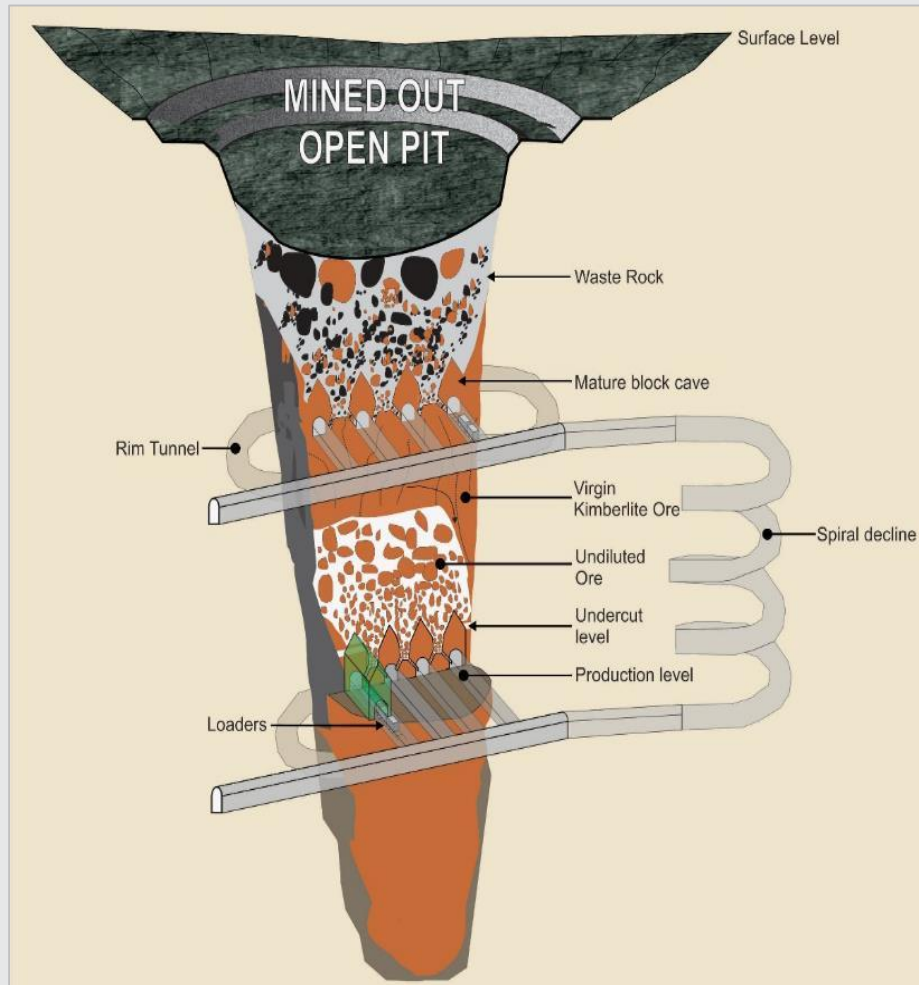


356 carats



574 carats

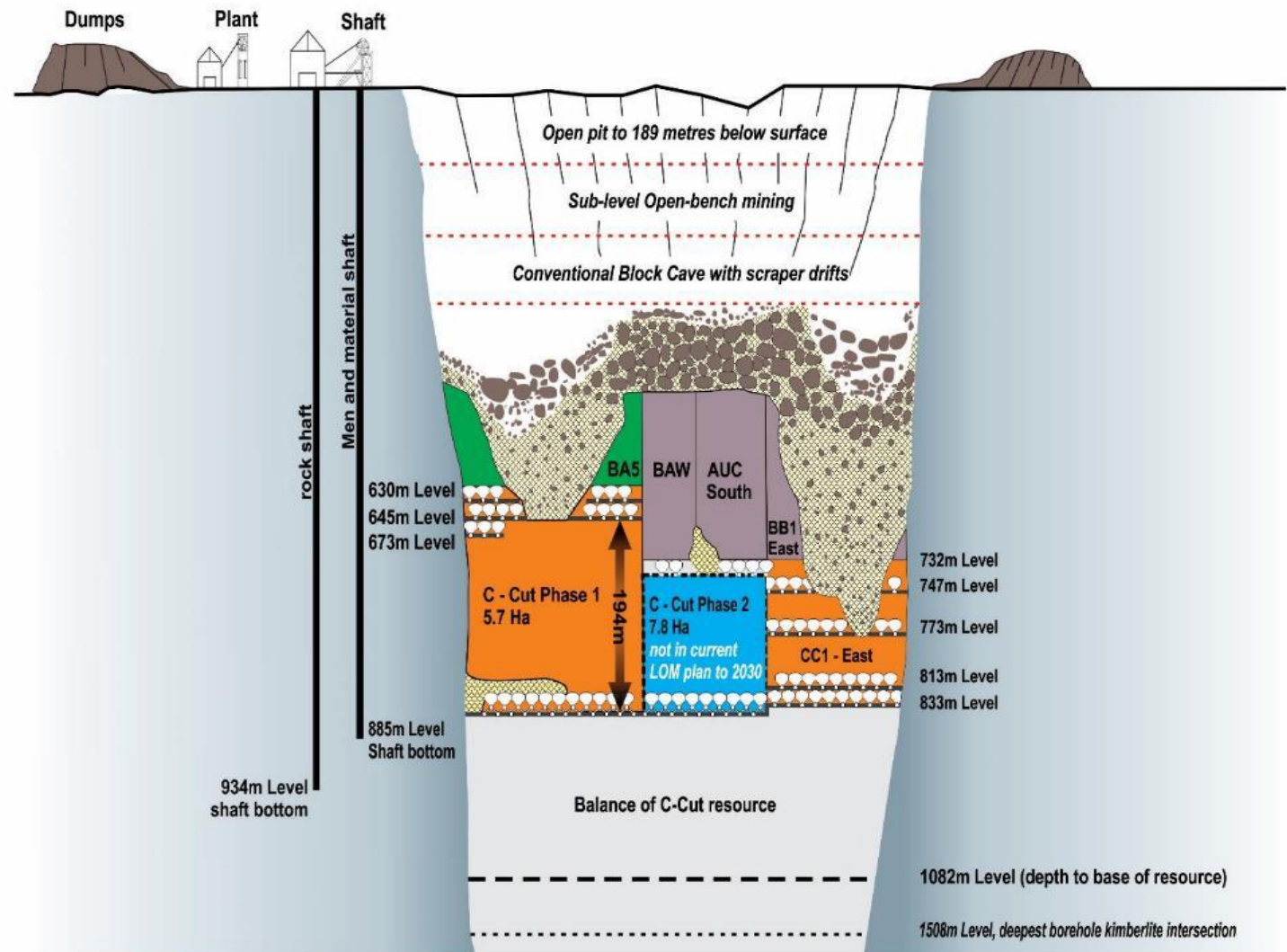
Moving to Undiluted Ore



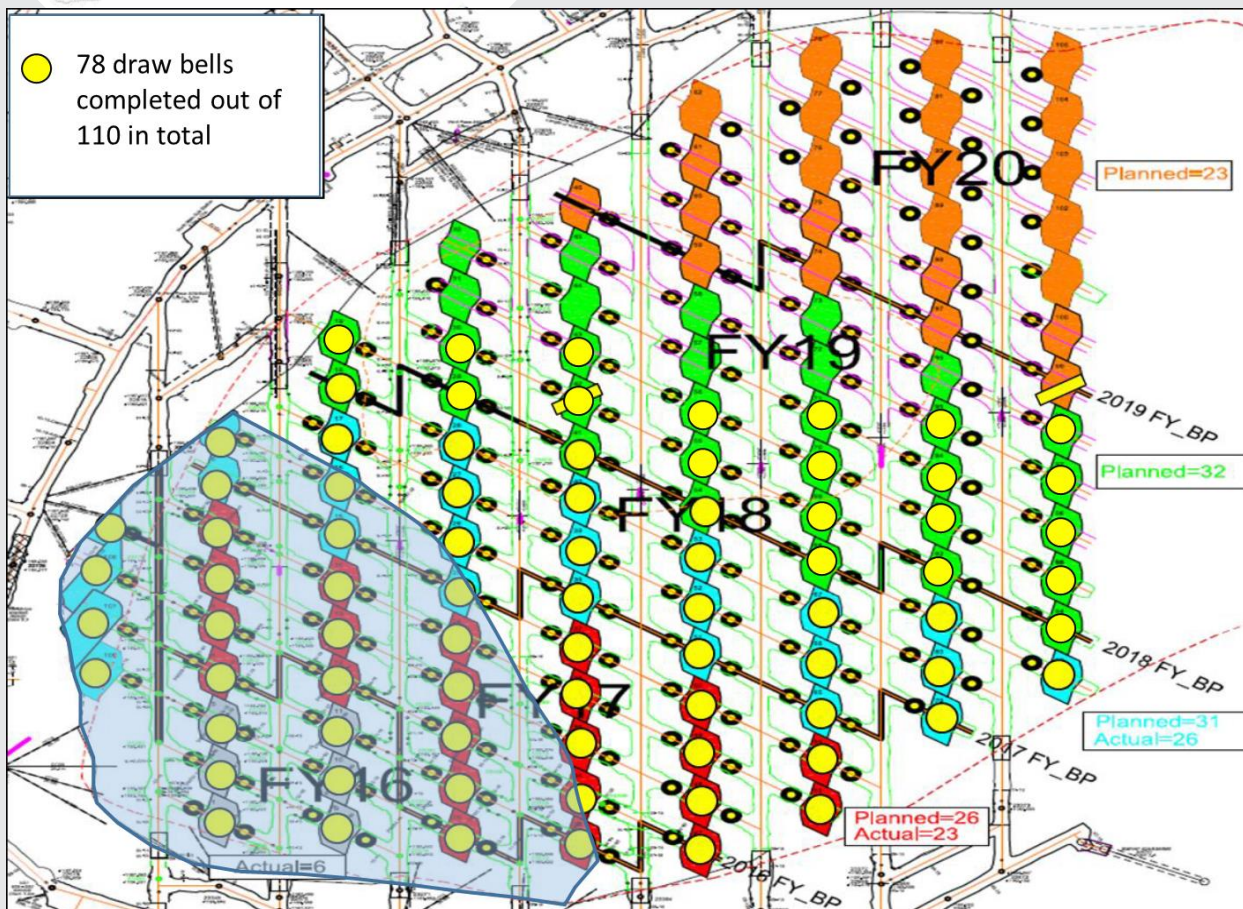
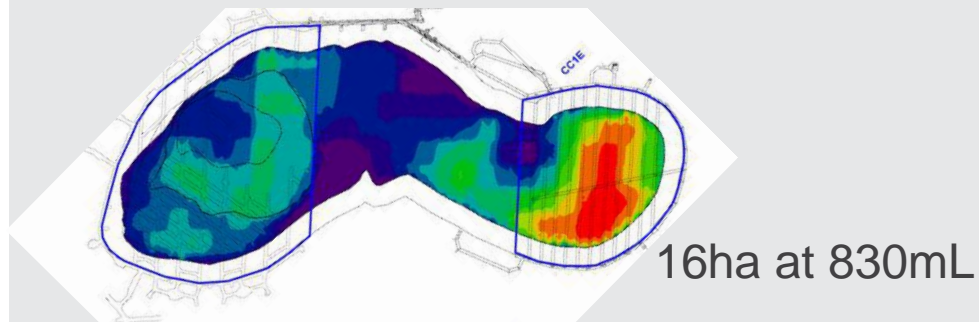
Cullinan – Development Programme

Highlights

- C-Cut phase 1 & CC1E ramp up:
 - **FY 2017** – 1.2 Mt
 - **FY 2018** – 2.46 Mt
 - **FY 2019** – 3.7 - 4 Mt
(including 0.7 – 1 Mt sourced from CC1E & B Block)
- Completion of shaft / plant interface – **H1 FY 2020**
- Steady state production of 4 Mtpa from C-Cut Phase 1 and CC1E – **FY 2020**



C-Cut Progression Over the Footprint



- Historical records and focused sampling compiled over the mine's +100 year history indicate that high-value Type II white & blue stones occur in the western part of the orebody (C-Cut phase1)
- Draw-bell installations are planned to be completed by September 2019; 6-9 months to maturity
- Cave was started in south-western area due to geotechnical considerations to ensure the integrity of the cave
- The south-western area, covering c. 25% of the C-Cut footprint, produced 75% of the ore to date
- Production across the full footprint should result in pricing being more reflective of historical averages, although volatility may still be observed

Cullinan Pricing and Cost Per Carat

Actual Sales Results:

US\$ per Carat	Half-Yearly Averages		Full Year Averages
	H1	H2	FY
FY 2010	87	193	139
FY 2011	120	177	148
FY 2012	128	128	128
FY 2013	134	151	163
FY 2014	150	215	185
FY 2015	247	115	174
FY 2016	110	134	126
FY 2017	127	114	120
FY 2018	140	118	125
FY 2019	96	?	?
9.5 Year average			\$140

- Price variability similar to other mines producing high value single stones
- Frequency of high value stones can not be predicted
- Only 2 out of 19 reported periods below \$110 per carat

• H1 FY 2019:

Total Tonnes Treated	2.7 Mt
Total Carats Recovered	832 Kcts
Overall grade	30.9 cpht

Cash on-mine cost (est.)	\$ 17 per tonne treated
R230 /t @ ZAR13.50/\$	\$ 55 per carat recovered

Cullinan Outlook

- Transformation in production profile
 - Expanding mining footprint from new mining areas
 - Improving product mix – due to production from undiluted areas and higher proportion of ROM vs tailings
 - Higher incidence of large and special diamonds associated with the Western side of the orebody
- Optimising recoveries
 - New plant designed to minimise risk of damage to large diamonds present in Cullinan orebody
 - Improved recovery of low luminescent Type II white and blue stones by the new XRL section expected
- Improving mining costs
 - Focus on increasing efficiencies and major simplification of ore-handling system and processing plant
- Robust economics
 - FY 2018 carat production increased 74%, mainly due to the increased input of undiluted ore from the C-Cut Block Cave and the new plant operating at planned throughput rates
- Longevity
 - Current 12 year mine plan will only exploit ca. 17% of the total indicated resource by volume

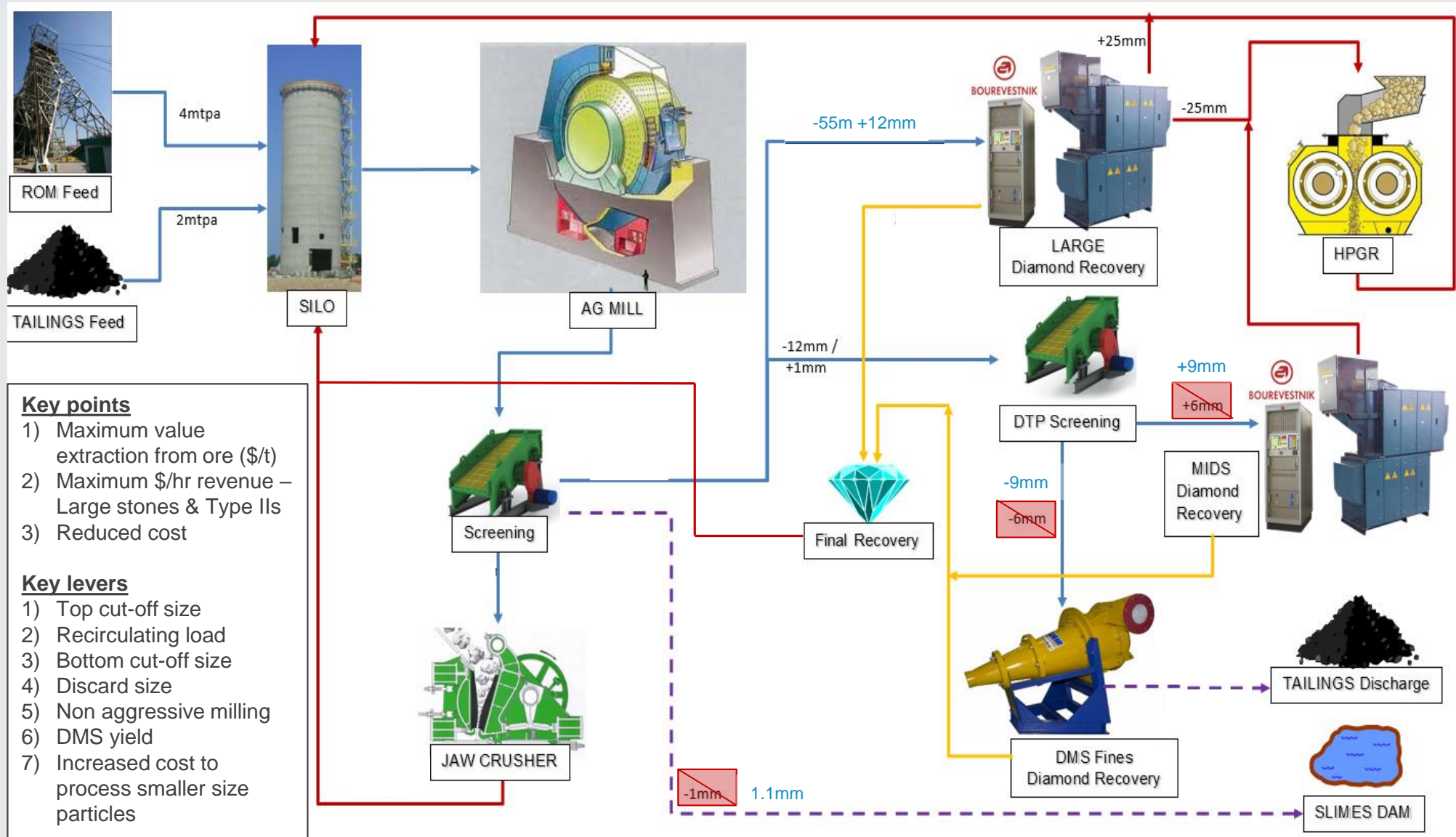
Putting in place a sustainable future for Cullinan and its local communities



Cullinan Plant

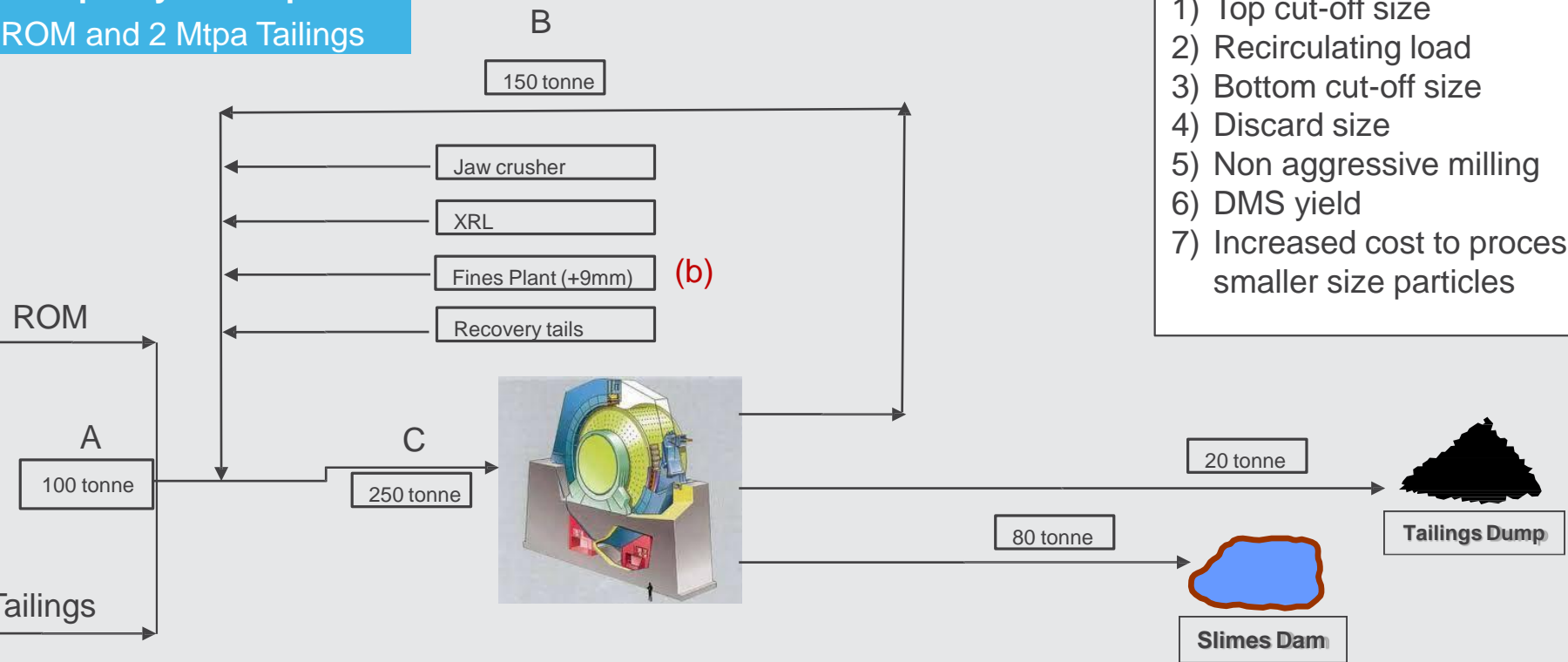
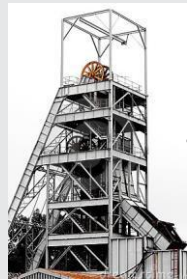


New Cullinan Plant – Process Flow Diagram



New Cullinan Plant – Simplified Process Flow Diagram

Annual capacity of 6 Mtpa:
4 Mtpa ROM and 2 Mtpa Tailings



Key levers

- 1) Top cut-off size
- 2) Recirculating load
- 3) Bottom cut-off size
- 4) Discard size
- 5) Non aggressive milling
- 6) DMS yield
- 7) Increased cost to process smaller size particles

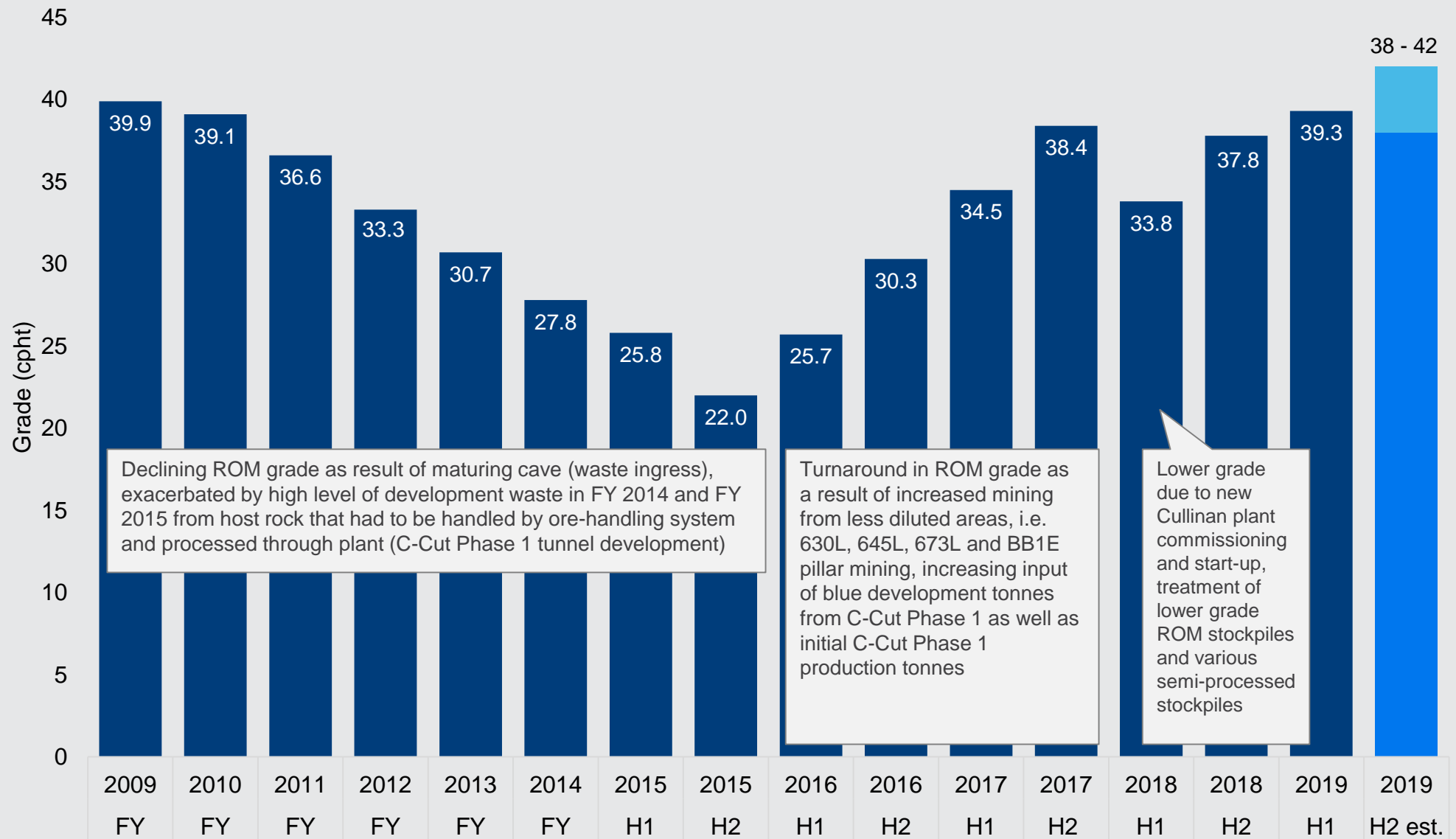
A = New feed (ROM revenue per tonne ca. US\$58; Tailings revenue per tonne ca. US\$4 - 5)

B = Recirculating load (estimated contained value of ca. US\$2 per tonne) (b)

C = Total mill feed design capacity (A+B = 250 tonne)

Increasing recirculating load (B) to recover additional finer diamonds, will displace new feed capacity (A)

ROM Grade Progression



New Plant – Significantly Reduced Footprint

COMPARISON – OLD vs NEW MILLING PLANT

	Old Plants (Main, DTP & OSP)	New Milling Plant
Throughput p.a.	2.8 Mt ROM 2.5 Mt Tailings	6.0Mt ROM capacity Initial feed: 4.0 Mt ROM 2.3 – 2.5 Mt Tailings
Total footprint	ca. 27 ha	ca. 4 ha

MAJOR EQUIPMENT INSTALLATIONS

Conveyors	151 belts (15 km)	22 belts (3 km)
Conveyor transfer points	179	32
Screens	88	22
Pumps	121	7
Crushers	18	4 (excl 2 mills)
Feeders	21	14
Substations	17	3
Electrical motors	589	84

IMPROVED ELECTRICITY EFFICIENCY

Power consumption	22.5 MW	25.0 MW
Power consumption per tonne	4.7	4.2 (12% improvement)



Google Earth image of old plant, commissioned in 1947

IMPROVED WATER CONSUMPTION

Consumption	Current Plants	New AG Milling Plant
m ³ per tonne	3.5	1.2 (66% improvement)

New Plant Designed to Match Cullinan's Unique Characteristics

- Each kimberlite orebody has its own unique fingerprint
- Characteristics specific to the Cullinan ore:
 - Prevalence of large diamonds
 - Historically C-Cut area produced low-luominescent Type II diamonds, including high value blue diamonds
- +25mm material only exposed to autogenous milling (comminution via attrition, not crushing)
- -25mm material liberated through High Pressure Grinding Rolls (HPGR); inter-particle crushing, thereby moving away from high impact cone crushing



574 carats



356 carats



281 carats

New Plant – Aerial Overview



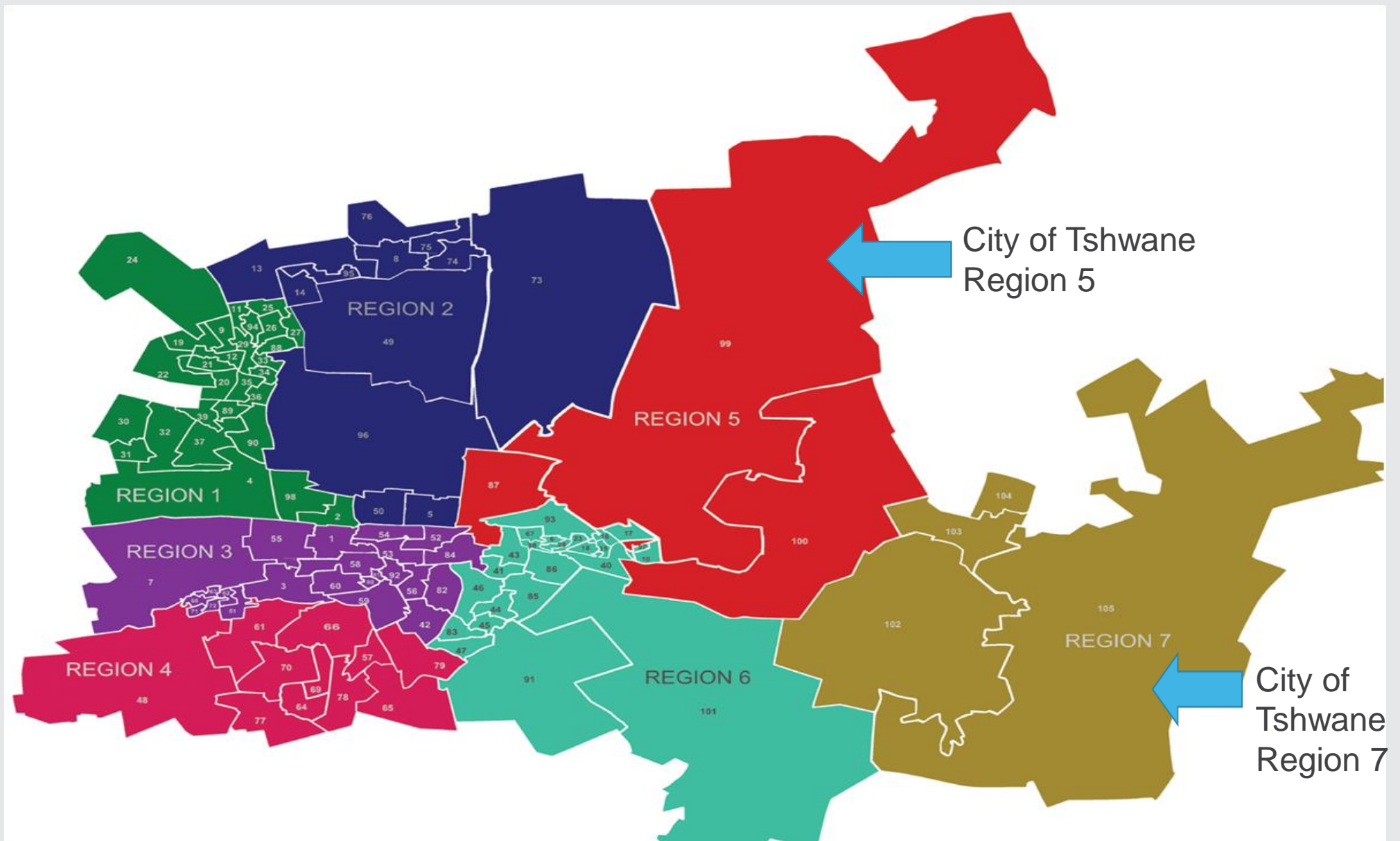
1. ROM Feed
2. ROM Silo and Return Silo
3. Mill Section
4. XRL Recovery
5. HPGR Crusher
6. DMS Plant
7. Final Recovery
8. Tailings Disposal
9. Slimes Disposal
10. New Eskom Substation
11. MV Substation
12. Re-mined Material
13. Pump Station
14. Jaw Crusher



CSR



CDM: Mine Community Investment Areas – City of Tshwane



Social and Labour Plan (“SLP”)



An SLP is a five-year plan submitted to the Regulator which is informed by the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), its Regulations and the Broad Based Socio Economic Empowerment Charter for the Mining Industry (2010)

SLP Objectives

- **Promote economic growth** and mineral and petroleum resources development in the Republic - **Section 2 (e)**
- **Promote employment** and **advance social and economic welfare** of all South Africans - **Section 2 (f)**
- Ensure that holders of mining and production rights **contribute towards the socio economic development** of areas in which they are operating as well as the areas from which the majority of the workforce is sourced - **Section 2 (i)**
- To utilize and **expand the existing skills base** for the empowerment of Historically Disadvantaged South Africans (HDSA) and to serve the community - **Section 2 (i)**

Mine Community Development Projects



- **Background** – Refilwe and Onverwacht areas are underprivileged and underdeveloped, with widespread drug abuse and unemployment. Therefore the local schools needed assistance to improve their facilities as they have the power to play a very important role in the lives of their students
- Previously, a total of 3,597 children had no access to sports facilities. Petra considers sports and extra-curricular activities to be vital to childhood development as they provide much needed motivation and positive stimulation – both mentally and physically
- **Multi Sports Facilities** – constructed at 3 local primary schools, using labourers from the local community; project launched on 3 February 2017
- **Expansion of Onverwacht Primary School** – expected to be completed by end March 2018; local SMMEs and labourers have been appointed for project execution, creating 30 temporal jobs and 3 local SMMEs
- The project entails 4 classrooms, a nutrition facility and extension of the Grade R Block



Expansion of Onverwacht Primary School



Multi Sports Facility

Corporate Social Investment



- **CSI Objective**
 - The main objective of CSI and Sponsorship is to build effective and enduring relationships with internal and external stakeholders through a process and outcomes approach that generates an everlasting positive reputation
- **Science Laboratory**
 - The Science Lab bridges the gap between theoretical and practical application; it immediately transforms any room into a fully interactive classroom and further increases educator efficiency and productivity
- **Mandela Day Initiatives**
 - Each year, CDM participates in charitable activities to commemorate Mandela Day. One such initiative provided new education resources for 24 Early Childhood Development Centres in Region 5 – City of Tshwane, in partnership with the Department of Mineral Resources and the City of Tshwane



Science Laboratory: Chipa Tabane Comprehensive School



Mandela Day Initiatives

Enterprise Development (ED)

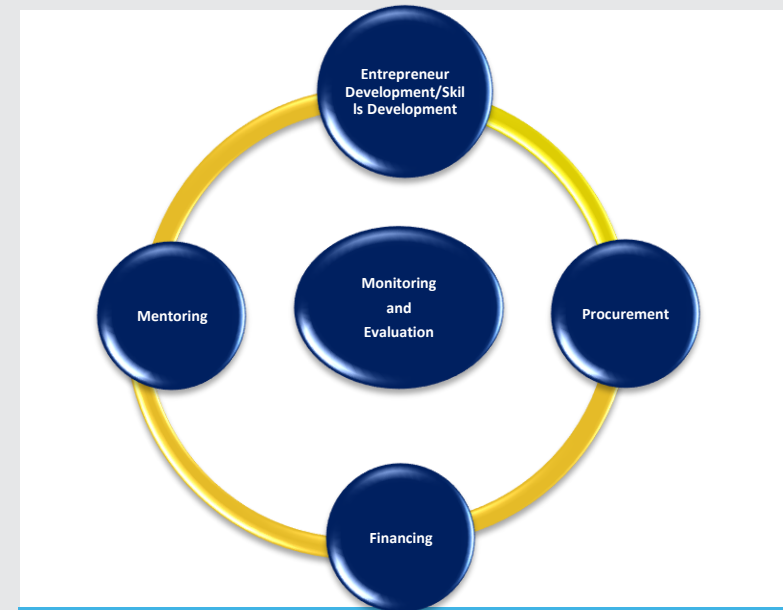
Assisting the development, sustainability and financial independence of Small Medium and Micro Enterprises and contributing to Broad Based Black Economic Empowerment

Services Offered in FY 2018 Include:

- Business advisory services;
- Readiness assessments – business and technical;
- Generic business training;
- Technical training;
- Access to market – information on possible tender opportunities at the mine;
- Access to funding through low-interest funding for qualifying SMMEs;
- Formal business mentoring;
- Computer and printing facilities; and
- Boardroom facilities.

Petra's ED program in FY 2018

- Loans approved: **78**
- Value of loans approved: **Ca. US\$0.7m**
- Employment opportunities created: **461**
- Local small businesses supported: **42**



Enterprise Development Framework



ESD Expo (Enterprise & Supplier Development), 2017

Education Initiatives



- **Technical skills** – long-term strategy to address scarcity of skills in the industry
- **Supporting early learning** – Cullinan transformed the Refilwe Early Learning Centre to ensure a conducive learning environment
- **Careers Day** – Cullinan hosted a careers days for 13 schools in May
 - 2,300 students attended the function, held over 3 days
 - 13 stalls present, including higher learning institutions
 - Cullinan explained varying career paths at the mine
- **Bursary programme** – bursaries awarded to 12 beneficiaries
- **Scholarships** – awarded to 11 learners from local schools



Encouraging grassroots learning in our communities



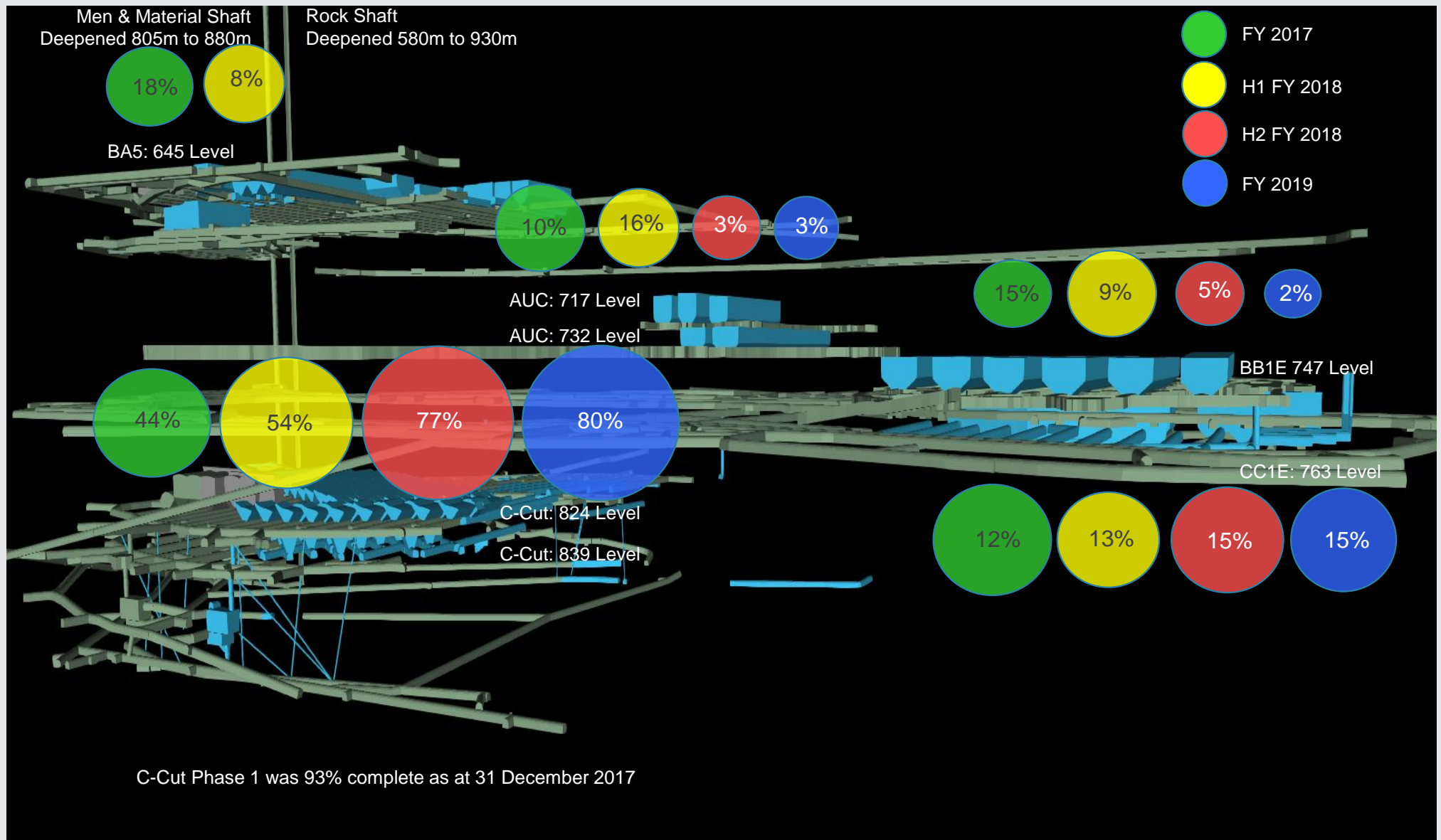
Cullinan hosts a careers day for local students



Appendix



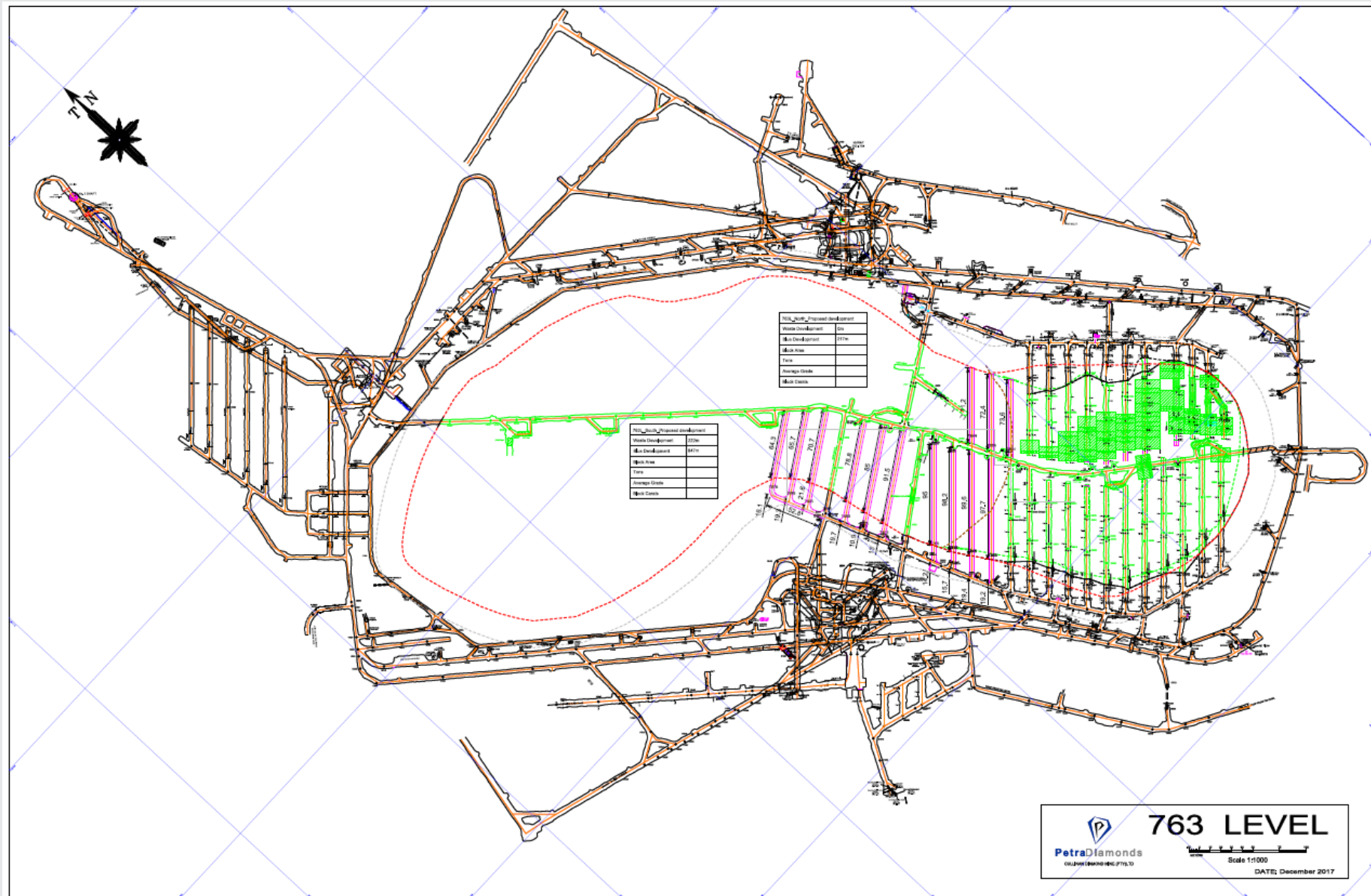
Transition Phase – ROM Tonnes per Area



CC1 East



PetraDiamonds





Thank You

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