7th March 2018

Horizonte Minerals

District consolidated, Nickel rising…

Horizonte continues to de-risk Araguaia against a backdrop of rising nickel demand. The Vermelho acquisition brings an additional tier-1 nickel asset into the fold and adds exposure to cobalt, another critical battery metal. Araguaia should be construction ready by the end of 2018, with production in 2021. This is the second acquisition from a Major that HZM has made at a low-point in the nickel market, and with a low up-front acquisition cost has potential to become a compelling value accretive transaction and mine No.2 for HZM.

- **Vermelho Acquisition.** Vale progressed Vermelho through feasibility to a positive construction decision. As such, the project has seen a significant historical spend and HZM acquired a database of over 150,000m of drilling, test work and full engineering data. The acquisition adds 2.3Mt of contained nickel to HZM's inventory. The project is within trucking distance of Araguaia North providing an opportunity to recognise considerable infrastructure and development synergies. Vermelho stacks up well against peers in terms of tonnage, nickel resource grade, contained nickel and cobalt, and resource confidence. The acquisition of also brings a potential cobalt (an EV battery metal) revenue stream into the mix.

- **Nickel is $13,875/t**. After a shaky start to 2017, nickel prices have been steadily rising to the current level of $13,875 ($6.29lb). Nevertheless, prices remain at half the level of the last decade peak of $29,000/t ($13.1/lb) in 2011. Nickel remains well under the 10-year average of c.$17,000/t ($7.71/t). The key drivers remain strong stainless-steel demand, the EV build-out, weaker US dollar and supply disruptions.

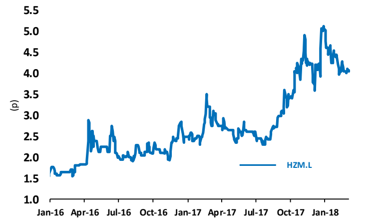
- **Nickel tailwinds here to stay.** Demand for stainless steel continues to look robust. Glencore estimates that 2017 primary Ni demand in stainless will increase by almost 9%. Sentiment remains positive and in conjunction with critical alloys and chemicals, the base-line demand trend is encouraging even before factoring in the potential exponential growth of the electric vehicle market. Under almost any EV penetration scenario, the case for a significant increase in nickel demand looks compelling. Glencore and CRU estimate that to meet the Electric Vehicle Initiative target of 30% EV market share by 2030, an extra 1.1Mtpa of nickel would be required, equating to 55% of 2017 supply.

- **Araguaia de-risking**. HZM has made solid progress de-risking Araguaia as part of the feasibility process. A 27kt trial excavation has been successfully completed, the data from which will help to confirm mining and grade profile parameters. The mine plan has been submitted to Brazil's National Mining Agency, and the Mine Construction Licence application has been filed with SEMAS. Approval of these two items will grant HZM the principal mining and environmental permits to commence construction of Araguaia. With a relatively low capex, and PFS cash cost providing a 50% margin to the current nickel price, we maintain our view that Araguaia is likely to be the next major nickel mine developed globally.

- **Araguaia down to the short strokes.** The Araguaia feasibility study is due mid-2018. The recent fundraise (total £9.2m) ensures the company is full funded, as well as funding the initial acquisition and PEA for Vermelho, allows HZM to commence early works engineering and advance permitting at Araguaia. This means that if all goes to plan, Araguaia should be construction ready by the end of 2018 with first production in 2021. The increase in the nickel price is also presenting an opportunity to optimise the mining schedule and maximise the project economics.

- **Valuation updated.** We have updated our valuation on the back of recent developments. We have rolled over our NPV for Araguaia to 2018, adjusted for 1st production in 2021 and given the structural changes in the nickel market, increased our flat-forward nickel price assumption to spot at $13,750/t from $12,000/t (PFS assumption). We increase our NAV multiple to 0.65x from 0.60x to reflect Araguaia's de-risking and update the fully-diluted share capital post fund-raise. Pending the PEA, we include nominal value for Vermelho at the acquisition price but recognise this provides considerable upside that is not yet baked into our valuation. Our base-case NAV for Araguaia increases to $433m, and our risked sum-of-the-parts valuation increases to $281m, **driving a target price of 15p/sh**, up from 10p/sh previously. HZM provides significant leverage to nickel, at flat $15,000/t Ni, our target price would be 21p/sh.

Sector: Mining



Source: LSE

Market data

EPIC	HZM
Price (p)	4.07
12m High (p)	5.20
12m Low (p)	2.25
Target price (p)	15.0
Shares (m)	1.43bn
Mkt Cap (£m)	58.2m
Market	AIM & TSX

Description

Horizonte Minerals plc is a dual-listed resource development company quoted on AIM and the TSX. Horizonte's flagship project is the 100%-owned Araguaia nickel saprolite project in Brazil. Araguaia is one of the highest grade, and lowest cost nickel development assets globally. HZM recently acquired the advanced Vermelho nickel-cobalt project from Vale.

Company information

CEO	Jeremy Martin
Chairman	David Hall
Non-Exec	Owen Bavinton
Non-Exec	Allan Walker
Non-Exec	Alexander Christopher
Non-Exec	William Fisher

www.horizonteminerals.com

Top shareholders

Teck Resources	14.7%
Canaccord Genuity	9.6%
Richard Griffiths	8.9%
Lombard Odier AM	8.6%
JP Morgan	8.3%
City Financial	7.6%
Glencore	5.2%

Analyst

scsb@shardcapital.com
020 7186 9952
Phil Swinfen

Vermelho Acquisition consolidates district

In December 2017, Horizonte Minerals plc (AIM/TSX: HZM) announced the acquisition of 100% of the Vermelho nickel-cobalt project in Brazil from Vale, in conjunction with a total placing of £9.2m (£7m UK placing, C$3.6m Canadian placing) at 3.5p/sh.

Acquisition terms

The total cost of the acquisition is $8m which we believe represents a cheap entry point into a potentially world-class nickel project that has had an estimated U$200m spent. We also see the acquisition terms as favourable given the low up-front cash requirement.

- Initial cash payment of US$150,000
- US$1.85m cash payable on the second anniversary of the signing of the asset purchase agreement.
- Final payment of US$6m in cash is payable by Horizonte within 30 days of first commercial sale of product from Vermelho
- 1% NSR to Vale on any nickel produced during the first 10 years of commercial production up to a maximum of 15,000t/a, which then reduces to a 0.5% NSR thereafter.

Vermelho highlights

Vermelho is located in the Carajás Mining District, approximately 85km from HZM's Araguaia North. The project is situated in an active mineral exploration and mining region with advanced infrastructure and services to support mining developments. HZM acquired Vale's rights under a mining licence application in respect of the project comprising an area covering 2,000 hectares.

Vermelho was explored in various stages by CVRD (now Vale) from 1974 to 2004, and the mineralisation is well understood, and several mineral resource estimates have been completed. The deposit consists of two hills (V1 and V2) overlying ultramafic bodies, with the mineralisation contained within intensely weathered serpentinites, weathered to a nickel and cobalt enriched lateritic saprolite.

A high grade historical resource

A Historical Mineral Resources estimated was reported using a cut-off of 0.4% Ni which resulted in M&I 258Mt at 0.88% Ni containing 2.2Mt of nickel and 121kt cobalt. Horizonte believes there is potential to outline a high-grade saprolite resource of 18.1Mt at 3.31% Ni. It is worth noting that 95% of the historical resource is contained within the M&I categories, or 91% contained within the measured category only.

*Figure 1 - Vermelho Historical Mineral resource estimate – at 0.40% Ni cut-off**

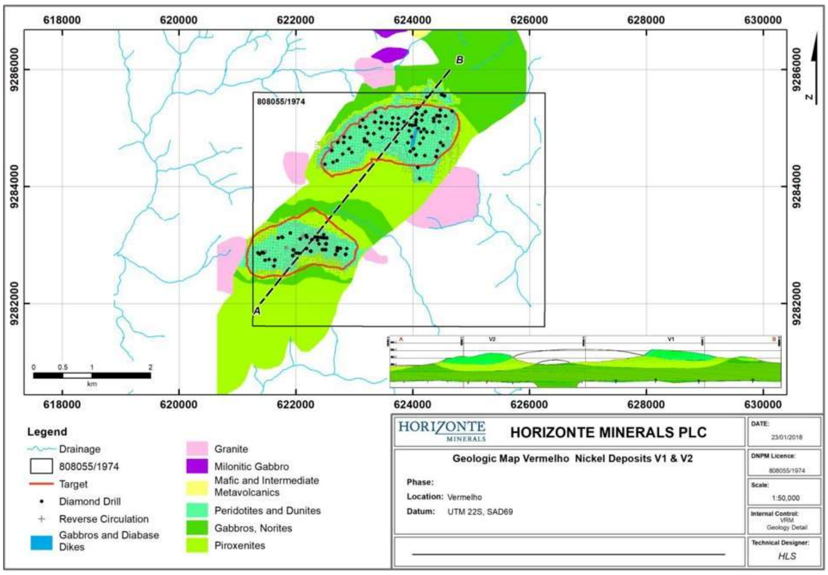
Category	Tonnage (Mt)	Contained Ni metal (kt)	Contained Co metal (kt)	Ni (%)	Co (%)
Measured	246.8	2171	116.7	**0.88**	0.05
Indicated	11.3	95	4.8	**0.84**	0.04
M&I	258.1	2,266	121.5	**0.88**	0.05
Inferred	14.03	113	4.5	**0.80**	0.03

**CVRD-SRK (2007, 0.4% Ni cut-off)* *Source: Horizonte Minerals*

Vale's plans for Vermelho

Vermelho was developed by Vale with the objective of becoming its principal nickel-cobalt operation. Horizonte has acquired a substantial body of historical work undertaken on the project by a major mining company. This includes the data from multiple drilling programmes totalling 152,000m of drilling plus full-scale pilot test work, detailed engineering studies and geotechnical investigations.

Figure 2 - Vermelho deposits



Source: Horizonte Minerals

Vale took the project through the full scope of development studies from PEA, PFS and finally Feasibility with Vale announcing a positive development decision in 2005. The Project was designed around the construction of a HPAL plant to process the nickel/cobalt laterite ore.

The feasibility study included a five-year metallurgical testwork and pilot plant program which delivered 96% average leaching extraction rates of nickel and cobalt, in addition LME grade nickel cathode was produced. The feasibility showed production capacity of **46,000 t/a of metallic nickel, and 2,500 t/a of metallic cobalt**, with an expected commercial life of 40 years. The estimated capex at the time was $1.2bn. Vermelho was subsequently placed on hold after delivery of the FS upon an internal review. Vale was focused on the development of the Goro Project after the Inco takeover in 2006.

Rationale for Horizonte

The acquisition of Vermelho adds another Tier 1 asset into HZM's portfolio, consolidating and giving HZM control of a major nickel district in Northern Brazil.

- **Synergies.** The project is within trucking distance of Araguaia North, providing a potential opportunity to recognise considerable infrastructure and development synergies, especially if HZM pursues an option to truck high-grade saprolite ore to the proposed Araguaia plant.

- **Cyclical timing.** The timing of the acquisition is significant given that we believe nickel is only just emerging from a deep cyclical low, with current prices still well below the long-run average.

- **Dollars in the ground and de-risked.** HZM benefits from acquiring a project that has seen a considerable spend (estimated at >$200m) and been significantly de-risked by a major mining company, skipping the high-risk exploration, resource definition and early development phase, and providing an opportunity to optimise and fast-track the project into production.

- **Cobalt.** The acquisition also gives HZM exposure to cobalt, another revenue stream and an important battery metal with encouraging fundamentals. This increase's HZM's leverage to global build-out of electric vehicle capacity.

- **Resource boost**. Araguaia has an M&I resource of 120Mt at 1.28% Ni for 1,533kt contained nickel, and so the combination of the project with Vermelho boosts HZM's M&I inventory to 378Mt of ore, and 3,799kt of contained nickel.

- **Processing optionality**. Vale undertook a considerable body of metallurgical and process testwork. Although Vale's plan was to produce nickel and cobalt via a High-pressure Acid Leach method (HPAL), Horizonte believes that there may be an opportunity to truck the high-grade saprolite portion of the deposit to be processed the proposed RKEF plant at Araguaia.

  However, Vermelho is a large deposit and initial indications support the view that it could also support a standalone parallel operation. This would likely be a leach plant in order to extract both the nickel and the cobalt as hydroxide from the remaining portions of the resource, which is typically the product form required by the electric vehicle battery market. Note that HZM's RKEF process would not be suitable for cobalt extraction, this process produces Ferronickel, one of the main component's in stainless steel.

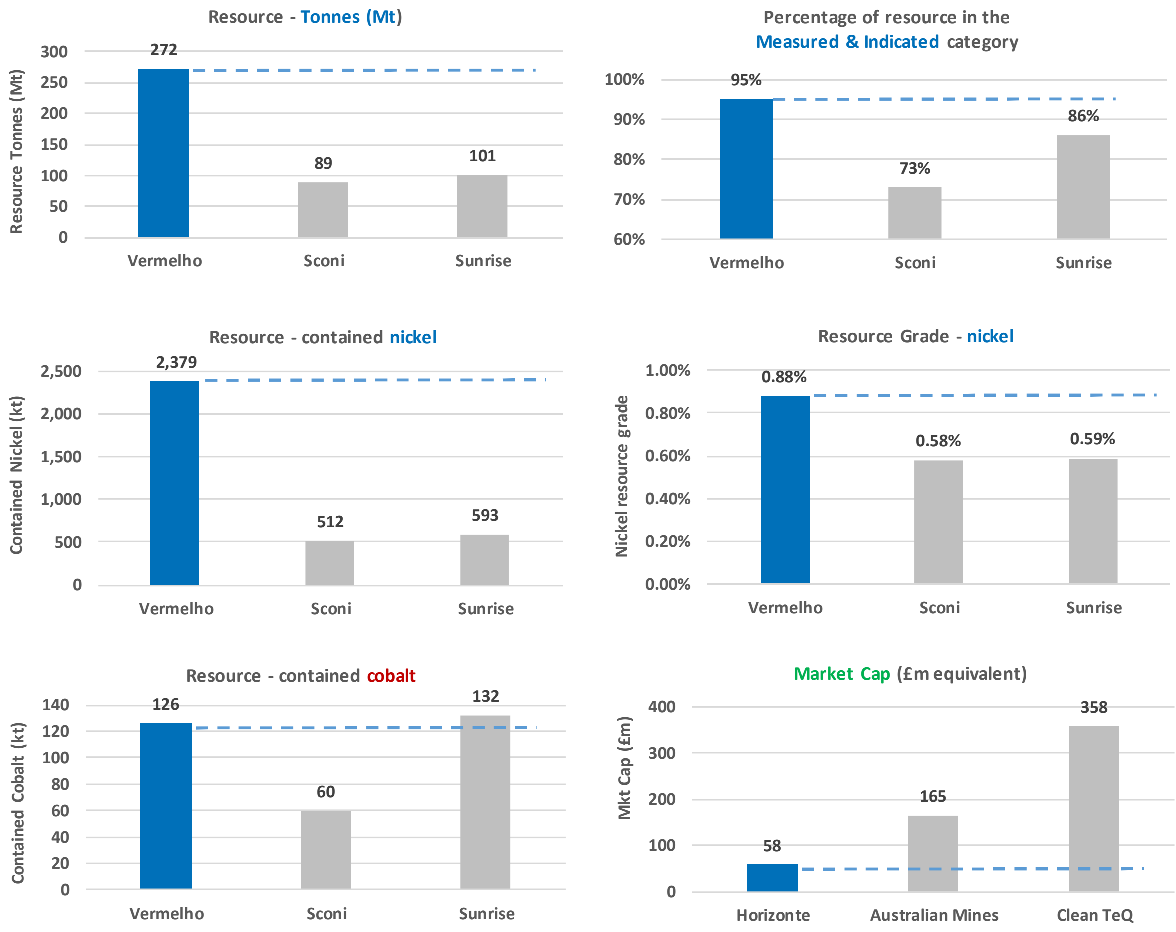
Putting Vermelho into perspective.

HZM will put Vermelho through a PEA type study in relatively short order (funded from the recent placing) to set the scope and scale of the project. Until then, the project metrics are not yet defined in the public arena. Nevertheless, HZM has stated that it believes that Vermelho has the potential to produce 20Ktpa nickel.

It worth noting that the Vermelho deposit stacks up well against peer projects in terms of tonnage, nickel resource grade, contained nickel. The closest analogues to Vermelho are Sconi and Sunrise – see below. It's worth noting that autoclaves that Clean TeQ has just acquired from Vale from Goro, were originally acquired for the Vermelho project. At present, HZM is not being assigned any value for Vermelho in the company's share price, leaving potential scope for a considerable re-rating, in our view. **Given that HZM has both Araguaia and Vermelho, we see a significant market cap disconnect with peers.**

Figure 3 - Putting Vermelho into context

Project	Company	Ticker	Mkt Cap	Total resource	Processing efficiency	% M&I	Contained Ni/Co production	Stage
Vermelho	Horizonte	HZM	£58m	272Mt @ 0.87% Ni, 0.05% Co Contained: 2,379kt Ni, 126kt Co	96% Ni & 95% Co	95%	20ktpa Ni	Feasibilty ✓
Sconi	Australian Mines	AUZ	A$295m (£165m)	89Mt @ 0.58% Ni, 0.07% Co Contained: 512kt Ni, 59.9kt Co	93% Ni & 93% Co	73%	24kt Ni sulphate	BFS April 2018
Sunrise	Clean TeQ	CLQ	A$637m (£358m)	101Mt @ 0.59% Ni, 0.13% Co Contained: 593kt Ni, 132kt Co	94% Ni, 93% Co	86%	18.7ktpa Ni 3.2ktpa Co	DFS Q1 2018

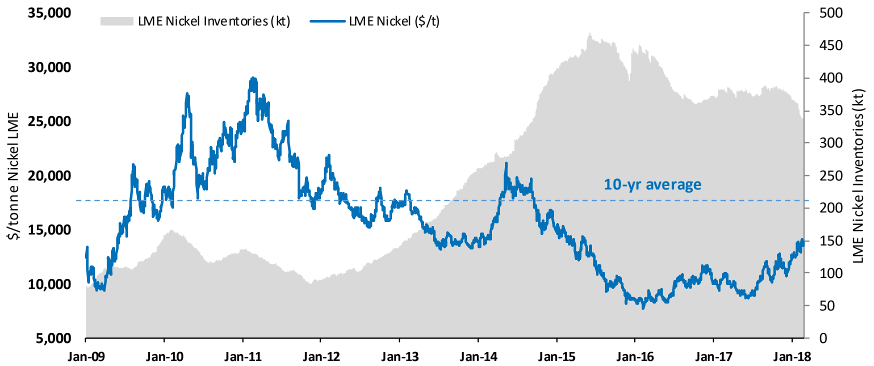


Source: Shard Capital

Recent nickel market developments:

- **Nickel gaining traction but scope for more.** After being the recovery laggard (copper price recovery started in late 2016), the nickel price has finally started to gain traction. After a shaky start to 2017, prices began to increase in mid-2017 and have been steadily rising to the current level of $13,875 ($6.29lb). Nevertheless, prices remain at half the level of the last decade peak of $29,000/t ($13.1/lb) in 2011, and the $21,000/t ($9.52/lb) peak in 2014. Nickel remains well under the 10-year average of c.$17,000/t ($7.71/t). The key drivers remain strong stainless-steel demand, the EV build-out, weaker US dollar and supply disruptions.

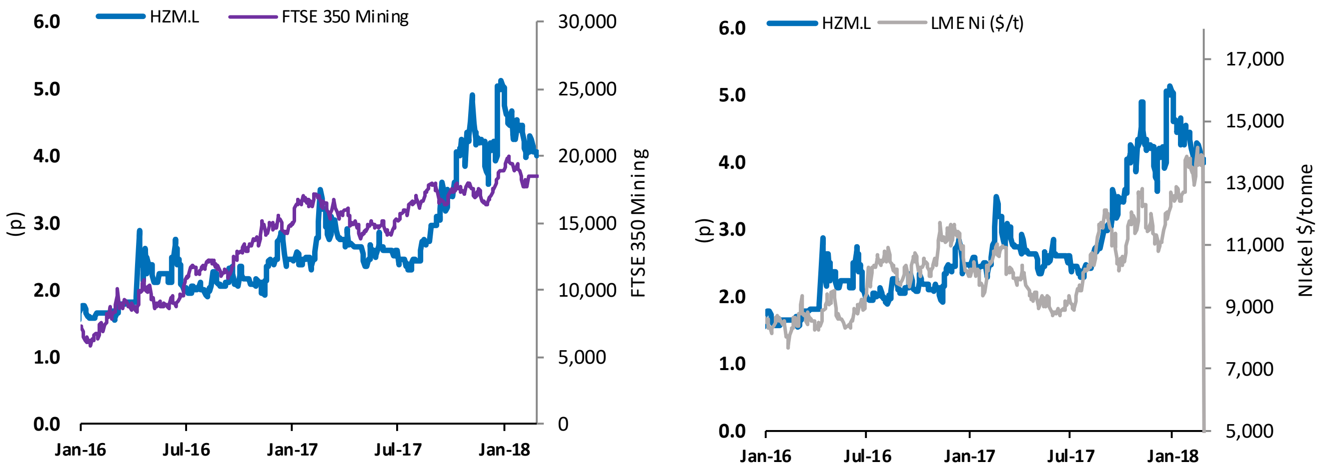
Figure 4 10-year Nickel price $/t) and LME stocks



Source: LME, LSE, Shard Capital

- **Correlation.** We still see a strong correlation between the nickel price and HZM shares. Given the important milestones approaching for Araguaia this year we believe that HZM could break out and outperform the relative nickel price if the company successful achieves a development re-rating.

Figure 5 - LME nickel / HZM.L / FTSE 350 Mining



Source: LME, LSE, Shard Capital

- **Demand remains robust.** We believe that demand for stainless steel continues to look robust. Sentiment remains positive for the demand segment that consumes two-thirds of the world's nickel production. In conjunction with critical alloys, chemicals and other uses, the base-line demand trend still appears to be very encouraging even before factoring in the potential exponential growth of the electric vehicle market (nickel is used in the batteries).

- **Chinese stainless.** Demand remains strong, underpinned by growth in 300-series steel output, up 7% in 2017. Glencore estimates that 2017 primary Ni demand in stainless will increase by almost 9% to more than 1.5Mt. Glencore quote "The nickel market's fundamentals are the best we've seen since 2006/2007, as evidenced by stock draws, demand rates across all geographies and physical premia, which are at 10-year highs".

- **EV remains a disruptive force.** Under almost any EV penetration scenario, the case for a significant increase in nickel demand looks compelling. With an average nickel metal use per vehicle of c.30kg, the numbers add up quickly. Glencore and CRU for instance, estimate that to meet the Electric Vehicle Initiative target of 30% EV market share by 2030, an extra 1.1Mtpa of nickel would be required, equating to 55% of 2017 supply. As early as 2020, the forecast demand looks material with an extra 85kt nickel required.

- **Disruptions start to bite.** First Quantum (TSX:FQM) reported 2017 nickel production was 17.8kt, down 25% from 23.6kt in 2016 as its Ravensthorpe nickel mine in Australia, was placed on C&M in October. In December, Vale cut its expectation of 2018 nickel output by 15% (45kt) to "to "preserve its nickel optionality" ahead of an expected boom in electric vehicles in the next decade". The sale process for Vale's New Caledonia assets remains ongoing. Sumitomo's Ambatovy nickel operations added to market jitters in January as a tropical cyclone hit Madagascar causing damage to the operations, with the plant running at 50% utilisation in Q1 2018.

- **New supply.** Not much has changed, the systematic lack of investment for new projects and expansions is likely to exacerbate the forecast nickel deficit, which creates a window of opportunity.

Disclaimer

This document has been prepared and issued by Shard Capital Partners LLP ("Shard Capital"), which is authorised and regulated by the Financial Conduct Authority.

This document constitutes a minor non-monetary benefit. This document is a marketing communication and not independent research. As such, it has not been prepared in accordance with legal requirements designed to promote the independence of investment research.

This document is published solely for information purposes and is not to be construed as a solicitation or an offer to buy or sell any securities, or related financial instruments. It does not constitute a personal recommendation as defined by the Financial Conduct Authority, nor does it take account of the particular investment objectives, financial situations or needs of individual investors. The information contained herein is obtained from public information and sources considered reliable. However, the accuracy thereof cannot be guaranteed.

The information contained in this document is solely for use by those persons to whom it is addressed and may not be reproduced, further distributed to any other person or published, in whole or in part, for any purpose, at any time, without the prior written consent of Shard Capital. This document is not intended for retail customers and may not be distributed to any persons (or groups of persons) to whom such distribution would contravene the UK Financial Services and Markets Act 2000. Moreover, this document is not directed at persons in any jurisdictions in which Shard Capital is prohibited or restricted by any legislation or regulation in those jurisdictions from making it available. Persons into whose possession this document comes should inform themselves about, and observe, any such restrictions.

Shard Capital or its employees may have a position in the securities and derivatives of the companies researched and this may impair the objectivity of this report. Shard Capital may act as principal in transactions in any relevant securities or provide advisory or other service to any issuer of relevant securities or any company connected therewith.

None of Shard Capital or any of its or their officers, employees or agents accept any responsibility or liability whatsoever for any loss however arising from any use of this document or its contents or otherwise arising in connection therewith. The value of the securities and the income from them may fluctuate. It should be remembered that past performance is not a guarantee of future performance. Investments may go down in value as well as up and you may not get back the full amount invested. The listing requirements for securities listed on AIM or ISDX are less demanding and trading in them may be less liquid than main markets. If you are unsure of the suitability of share dealing specifically for you then you should contact an Independent Financial Adviser, authorised by the Financial Conduct Authority. By accepting this document, the recipient agrees to the foregoing disclaimer and to be bound by its limitations and restrictions.

Shard Capital has in place a Conflicts of Interest Policy relating to its research and marketing communication activities, and disclosure and conflicts in general is available on request.

Shard Capital Partners LLP
23rd Floor,
20 Fenchurch St,
London, EC3M 3BY

T +44 (0)207 186 9900
F +44 (0)207 186 9979
E info@shardcapital.com
W shardcapital.com