



Severfield

Capital Markets Day Twentytwo

31 January 2019





Alan Dunsmore
Chief Executive Officer





Kyle Fletcher
Severfield Project Manager





Design - Overview

- 62 storeys, 278m (912ft) tall
- City of London's highest building, second only to the Shard in Western Europe
- 1.275 million sq ft of office space
- 100,000 sq ft of amenities
- Minimal internal columns, long clear spans up to 17m
- Food market, open kitchens, innovation hub, gym, well-being retreat and spa, restaurant, London's highest free public viewing gallery
- Built on the plot of previously installed Pinnacle scheme
- Re-use 100% of existing piles
- Use of original tower crane scheme
- Numerous interesting structural design features



Design – Severfield Scope of Works

Our Scope

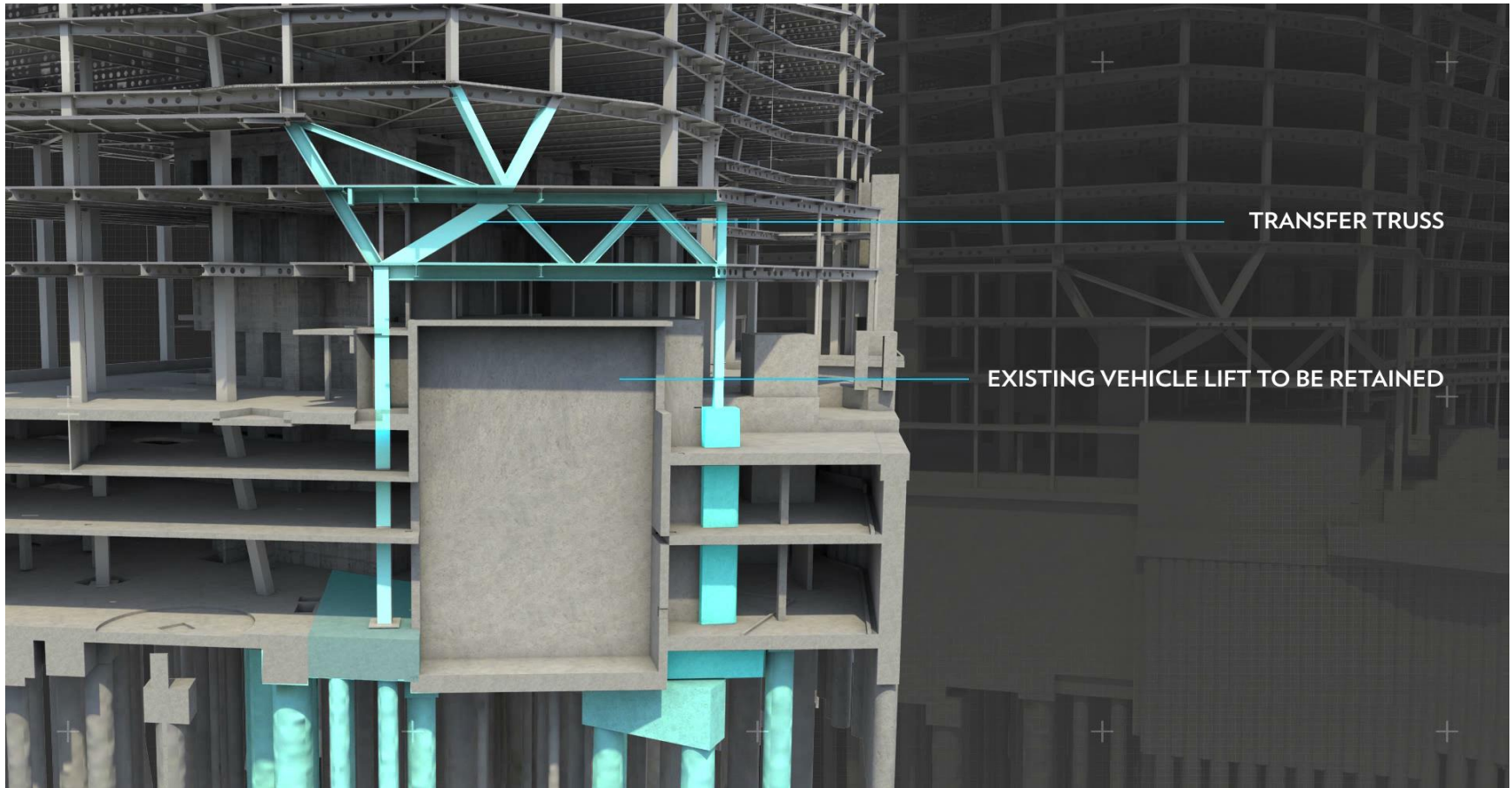
Detailed connection design, supply, fabrication, 90 + 120mins intumescent paint, delivery to site, offloading and erection of approximately 17,000 tonnes of structural steelwork

- Approximately 17,000 tonnes structural steelwork
 - Rolled steel sections/hollow sections
 - Fabricated plate and box girders
 - Macalloy hanging bars
- Approximately 130,000m² paint
- Approximately 97,600m² 90 & 120 minute intumescent
- Approximately 170,000m² Metal Decking (MF55)
- Approximately 360,000 19*95 LAW shear studs
- Approximately 900 Steel Deliveries to Site





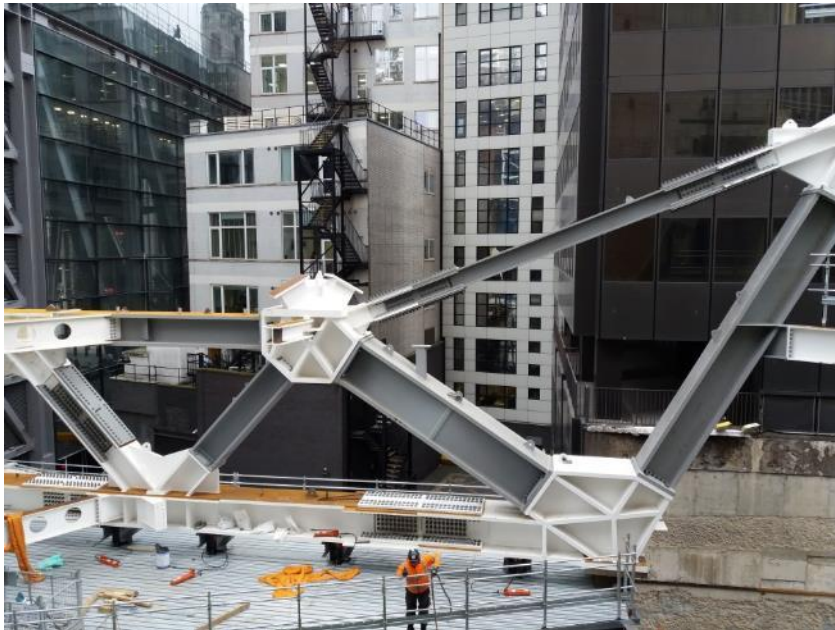
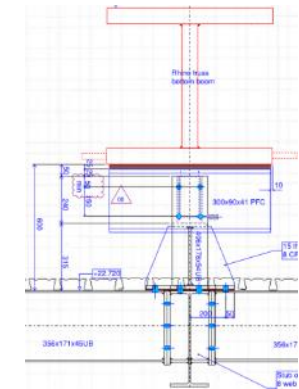
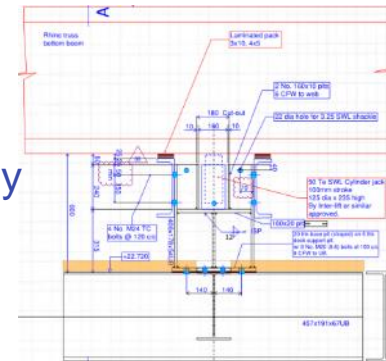
Design – Rhino Truss Level 1M to Level 3





Design – Rhino Truss Level 1M to Level 3

- Circa 150 tonnes
- 17m span
- Erected using 2 tower cranes simultaneously
- Existing basement loading bay
- Site bolted booms, nodes and diagonals





Design – Outriggers

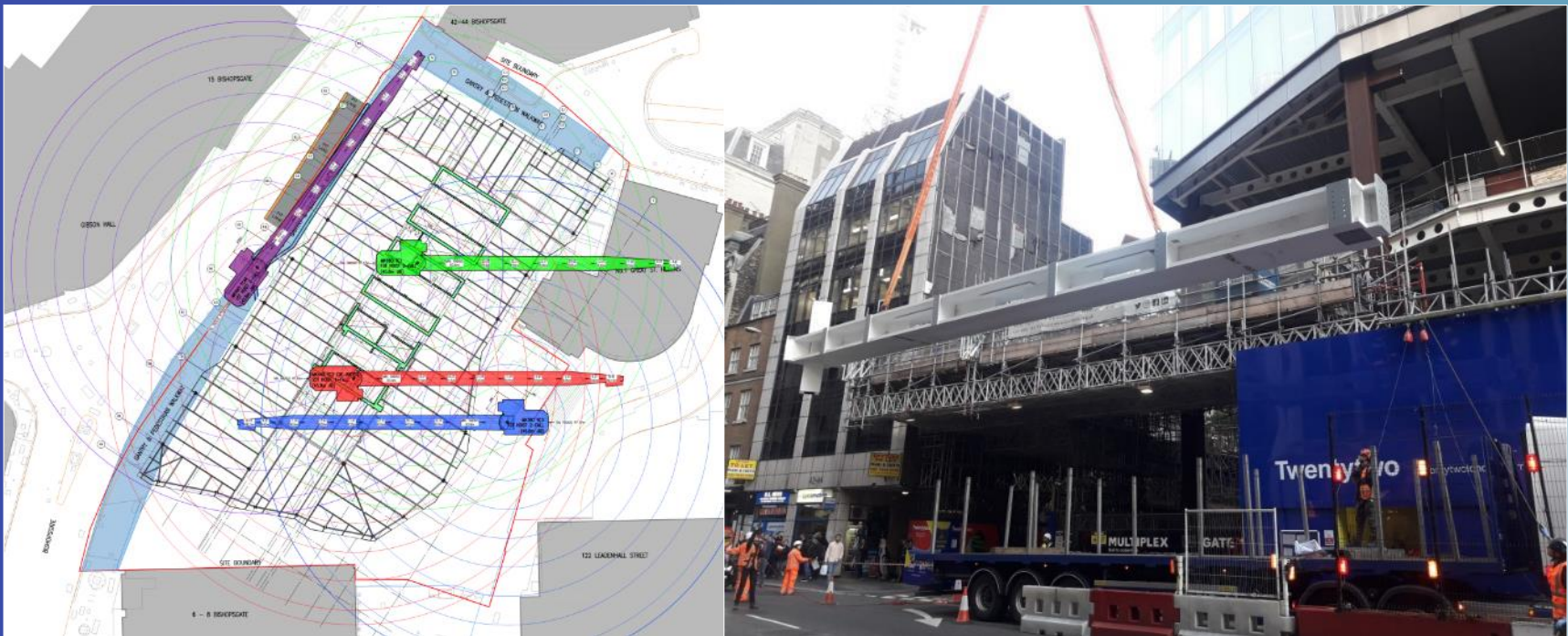
- Outrigger sections embedded in the core
- Presetting and effect on geometry and fit-up
- Transported to be lifted vertical on transport frames
- Largest truss 15m x 7.6m





Logistics - Site Set Up

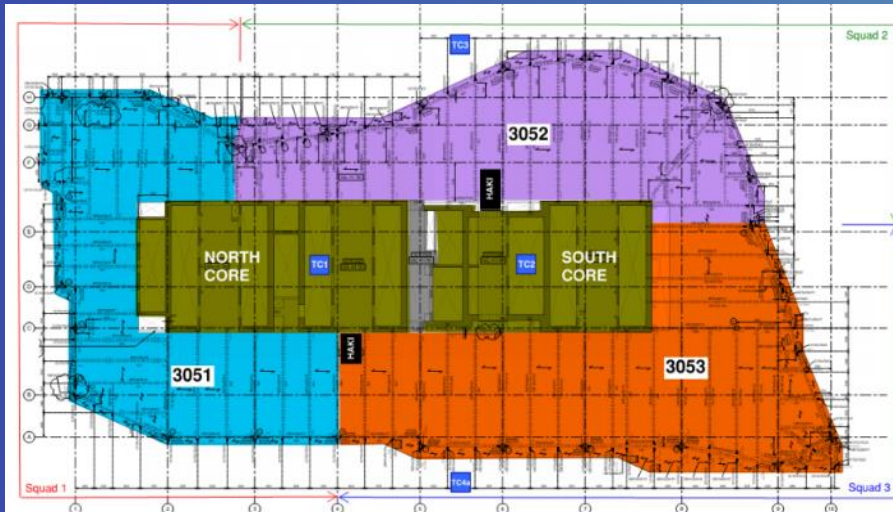
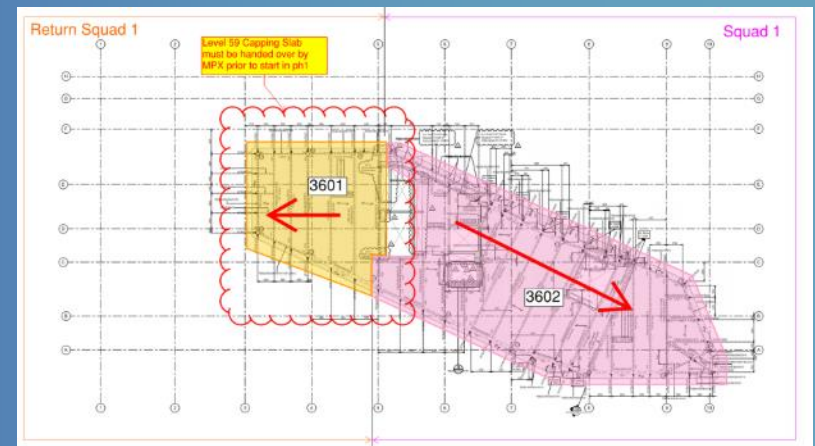
- 4 tower cranes
- 1 pit lane on Bishopsgate – primary offload
- 1 offload point out of hours on Undershaft
- 12 minutes offload





Logistics – Erection Sequence

- Typically 3 sub phases erected by 3 erection crews
- Top hat 2 sub phases
- 2 storeys erected at a time





Logistics – The Challenges

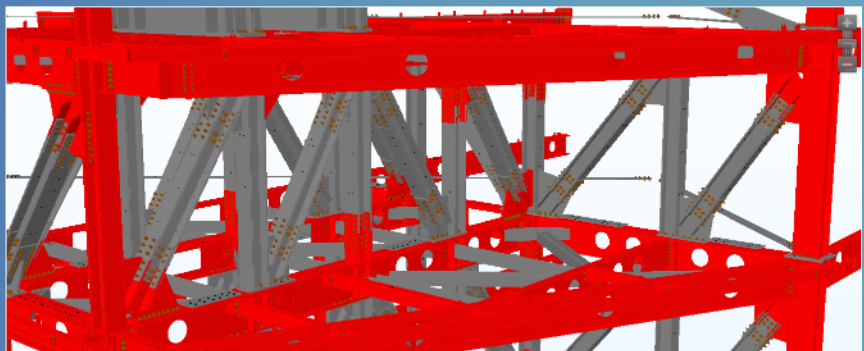
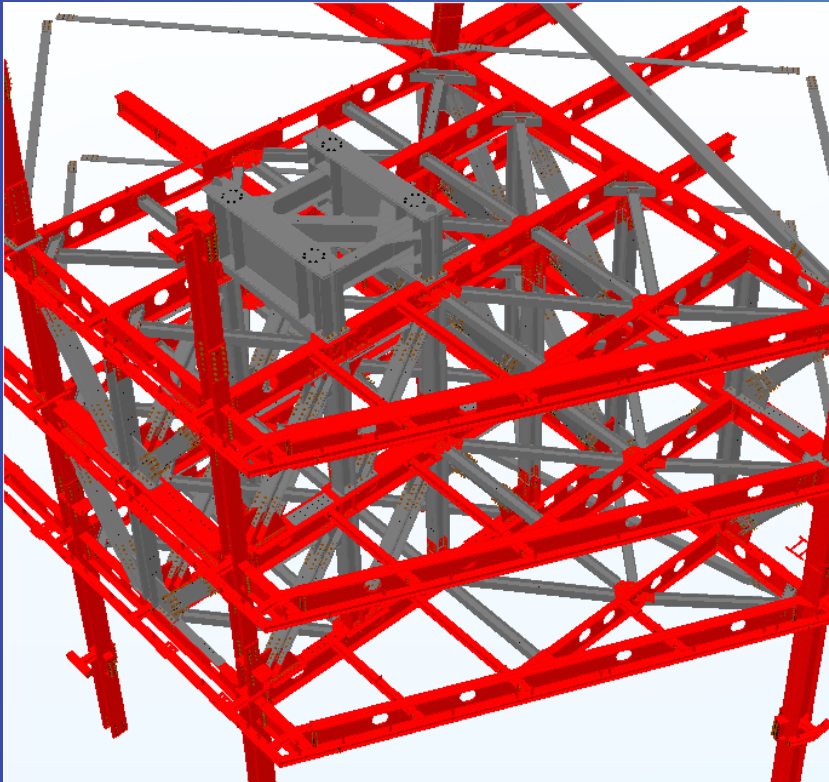
- City airport flight path and airspace 308m
- Tallest tower cranes in Europe – encroaching 308m
- Tower crane adaptations and changes





Logistics – TC6 Grillage

- 2-storey grillage L48-50
- 4x 2-storey vertical trusses
- 2-storeys of plan trusses
- Cast in floor straps
- 176x new steel in total
- Monthly inspections



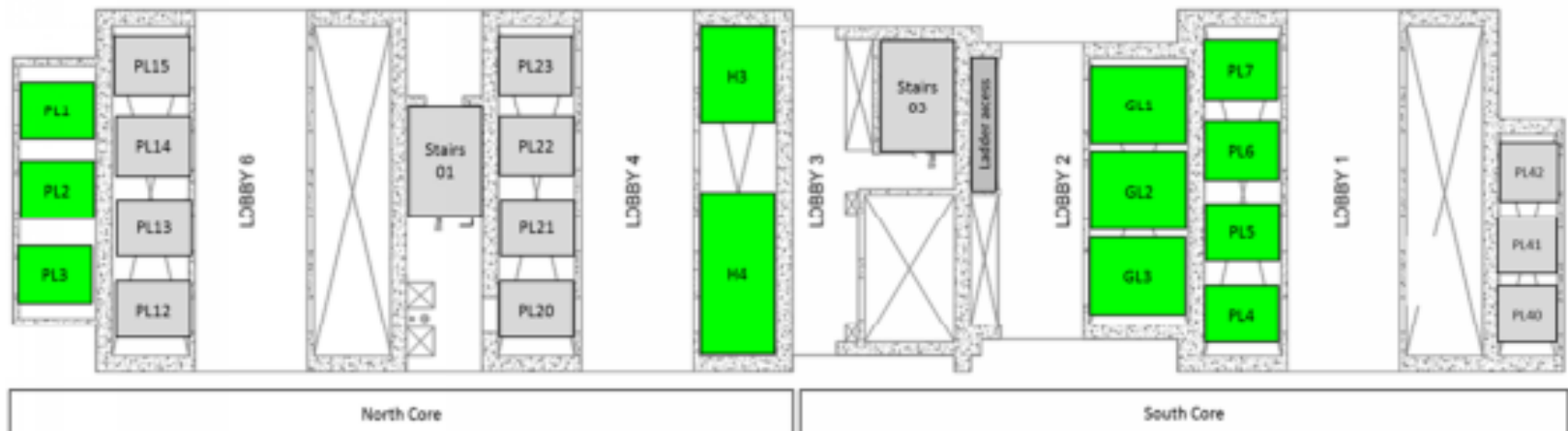
Logistics – The Challenges – TC6 Counterweight Lifting Beam





Vertical Logistics

- 70 Severfield operatives at peak
- PL1-3 provide access to Level 03 welfare, Level 04 site office, Level 05 marketing suite
- Materials were transported by independent hoist (hoist 4) until end 2018, materials now transported by 3 goods lifts
- Operatives were transported by hoist 3. However, in New Year one goods lift is now allocated to labour movements up to Level 44 whereby operatives must then move to a second hoist to the top level
- Ground floor to the work front = 15 minutes





High Rise Health and Safety – High Rise

Key Project Hazards

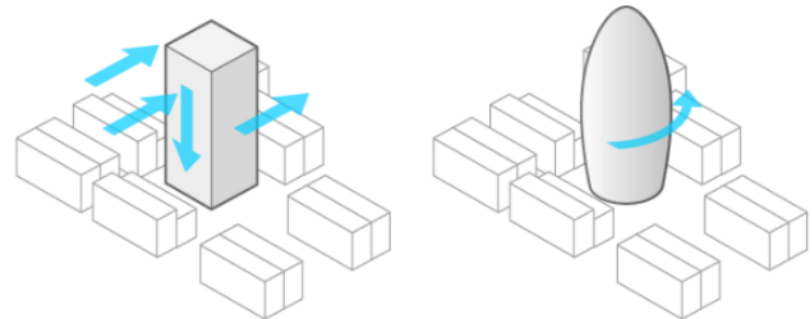
Activities	Hazards
Work at height	Dropped objects, falls from height
Wind effects	Materials and equipment blown from the building edge Funnelling effect Lack of awareness of wind forces at high level
Falsework and scaffolding	Stability, loose materials, wind loading, gaps and voids
Use of access equipment	Awareness and use of non-wind rated equipment in external environments at height Mobile towers vulnerable to wind effects
Waste management	Loose waste materials blown from building edge
Voids and shafts	Falls from height and falling objects
Fire	Wind driven fire effects



High Rise Health and Safety - Wind

- Tunneling (Venturi effect)
- Wind pressure – doubles every 100m
- Microclimates
- Wind ratings of plant and equipment
- Safe storage and housekeeping

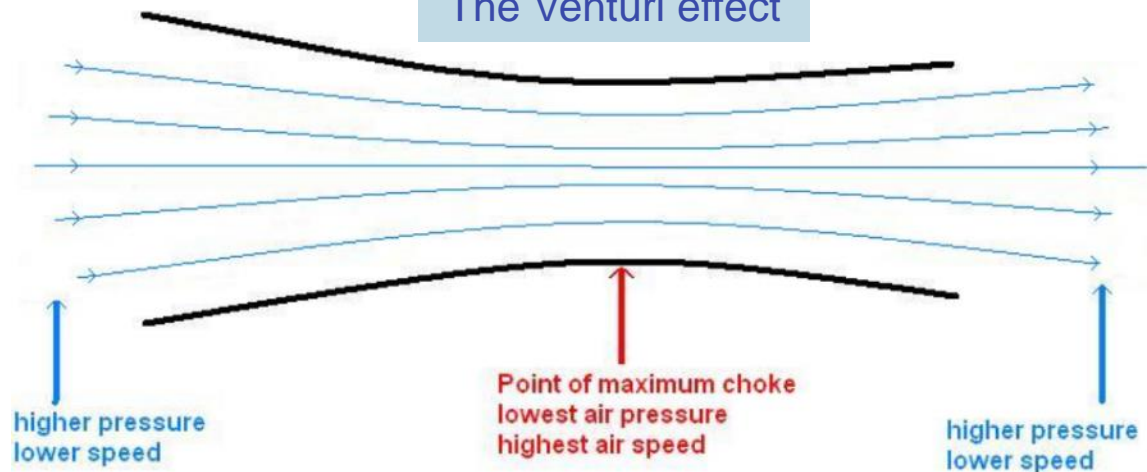
The effect of buildings on wind direction



Wind hitting a flat-fronted skyscraper is directed down the building, creating a windier and colder microclimate in the surrounding area.

Different shaped skyscrapers, such as London's Gherkin, are curved and allow wind to travel around the exterior.

The Venturi effect

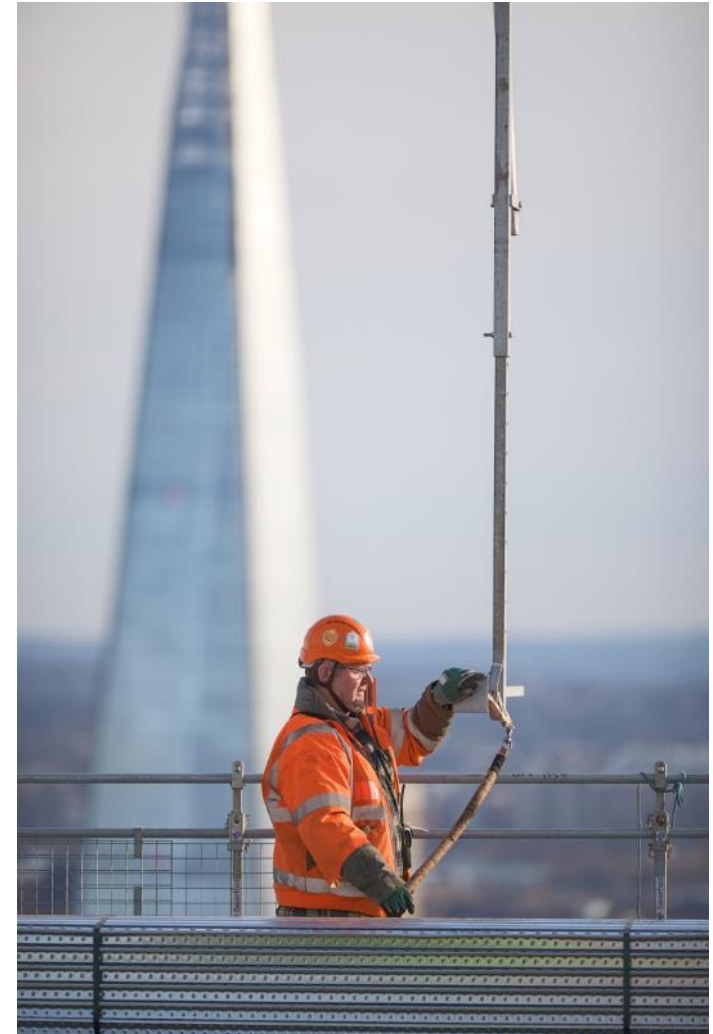




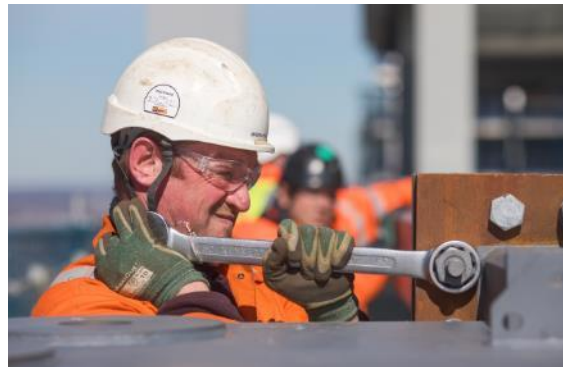
High Rise Health and Safety – High Rise

Severfield high rise risk mitigation

- Severfield safety fans
- Seversafe edge protection
- Severfield stability post – steel storage
- Tool and equipment tethering
- Windspeed monitoring at the work front
- Wind ratings of plant and access equipment
- Strapping down of materials and waste
- Extended exclusion zones
- Debris netting over voids
- Restricted and tethered mobile phone use



High Rise Health and Safety – Severfield standards





Adam Semple
Group Finance Director





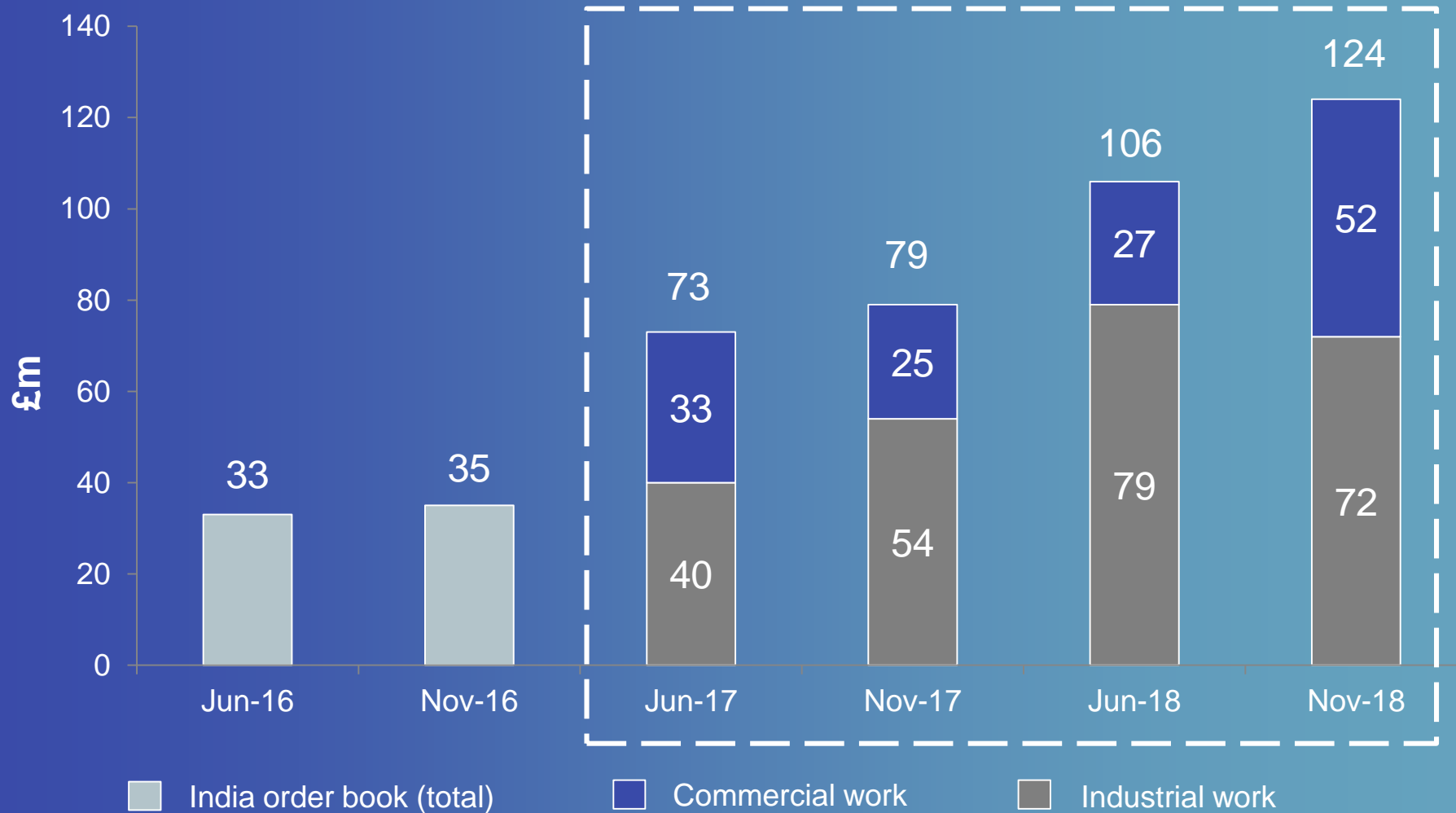
India income statement

£m	6 months to 30 Sep 2018	12 months to 31 Mar 2018	12 months to 31 Mar 2017	12 months to 31 Mar 2016
Revenue	31.8	48.6	41.5	39.7
Operating profit	2.2 7.0%	4.5 9.2%	4.0 9.7%	2.8 7.0%
Finance expense	(1.1)	(3.1)	(3.6)	(3.8)
Profit before tax	1.1	1.4	0.4	(1.0)
Tax	(0.3)	(0.4)	(0.1)	0.3
Profit after tax	0.8	1.0	0.3	(0.7)
Group share after tax (50%)	0.4	0.5	0.2	(0.3)

- Expansion now underway to increase in-house capacity by 30,000 tonnes to 90,000 tonnes (120,000 tonnes including sub-contract)



India order book





Derek Randall
Executive Director and JSSL
Managing Director



Business Update - Agenda



- History
- Health and safety
- India and market
- Strategy
- Summary and outlook

JSSSL Timeline

JV Signed - 2008

- Construction of plant 2010 (60kt)
- Modelled on Severfield
 - Integrated design, fabrication and erection business

2008-10

Start of turnaround period

- Major change of executive management
- Indianisation of business
- Major change in cost, structure and approach

2014-16

Healthy order book

- Plant expansion (incremental to step growth)—30kt per annum
- Building strategic contracting alliances

2019

2011-13

Difficult development stage

- Sluggish market growth and penetration
- Heavy debt servicing and repayments



2017-18

Steady sustainable market and business growth

- More penetration through focused approach
- Clients realising the steel value proposition
- 100+ projects completed
- No major contractual issues

Commercial Projects - Completed



Intel SRR3, Bengaluru



Intel SRR4, Bengaluru



MLCP, Bengaluru



3 niche projects of Intel
First top down construction in India

NetApp, Bengaluru



Reliance Data Centre, Jamnagar



Reliance JIO HQ, Mumbai



JSW Steel Projects - Completed



Sinter Plant, Dolvi



Bar Mill, Dolvi



Billet Caster, Dolvi

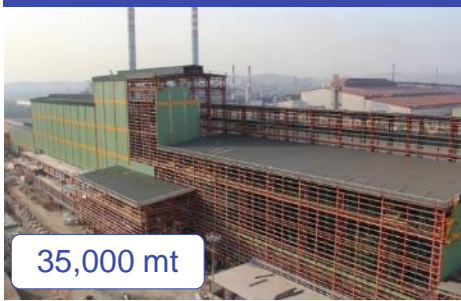


26,000 mt of 3 Different Structures in one location and completed within a span of 12 months

Coal Shed, Dolvi



CRM 2, Bellary



CRM 2 Extn, Bellary



OPG Plant, Chennai



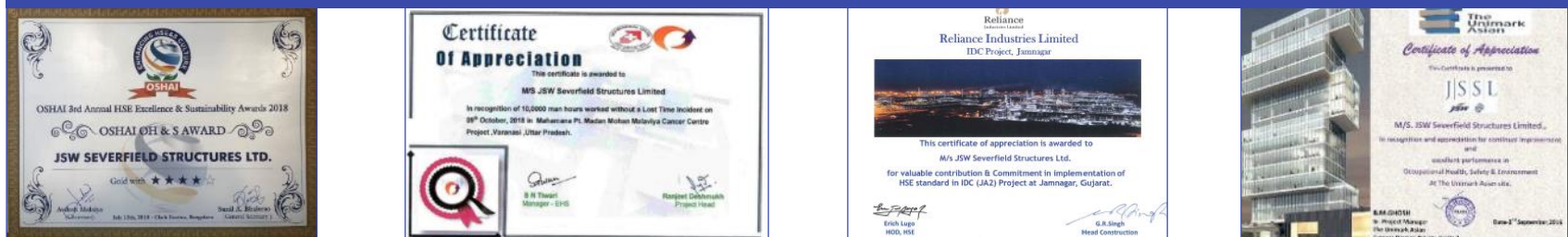
Health, Safety and Environmental



- 14001 and OHSAS 18001 certified
- Regular training programs conducted to ensure effective EHS management
- Strict compliance to EHS statutory and legal requirements
- Exemplary health and safety record – over 13.5mn hours (since 2014) without a LTI

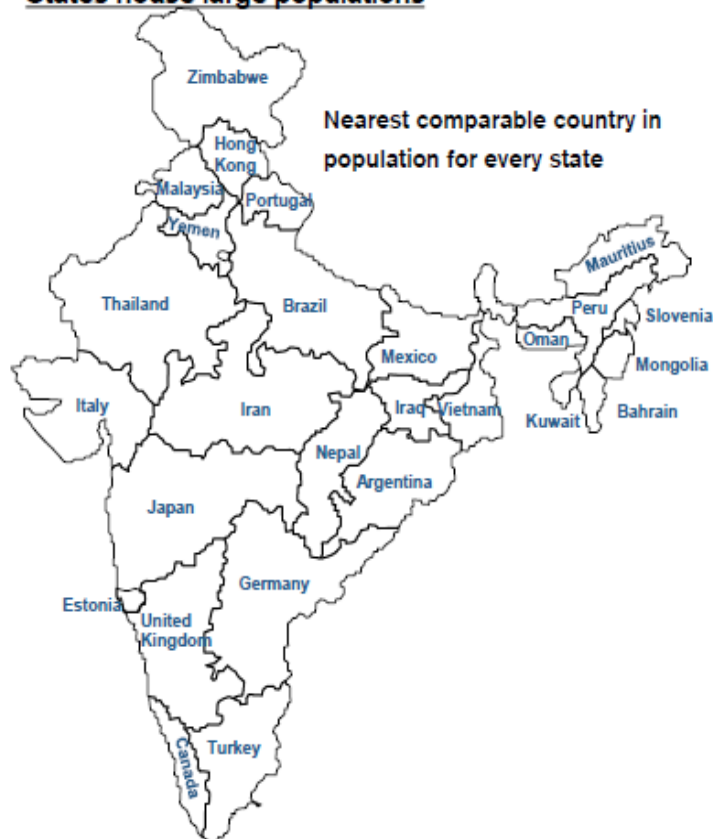


Certification of appreciation from clients

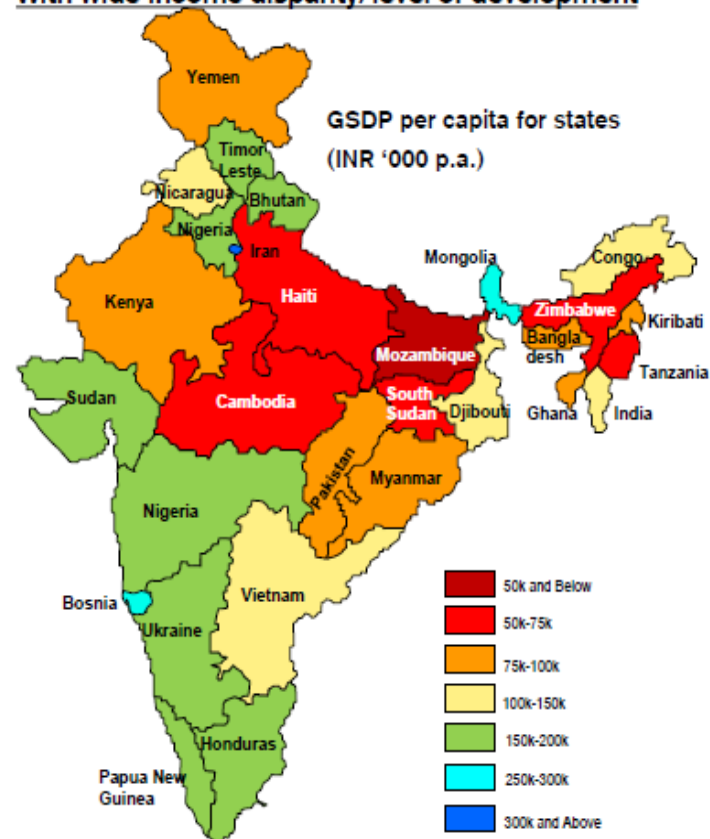


India

States house large populations



With wide income disparity/level of development



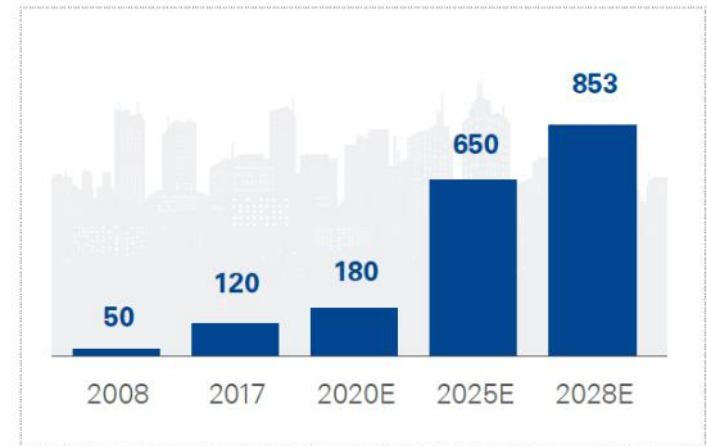
- Market Size – **\$3 trillion**
- **7%** average **GDP**
- Ease of doing business **#77**
- Construction 8/9%
- Steel Industry 115 mtpa targeting > 300 mtpa by 2030
- Graduate 10 m/pa

Source: Census of India, IMF World Economic Outlook, Planning Commission, CSO, Credit Suisse research

Construction Market Scenario

- **By 2030**, the Indian real estate industry is expected to touch **USD 1 trillion**, becoming the **third largest globally**
- Construction sector in India will grow due to **increased demand** from real estate, infrastructure projects, **retail, commercial** and hospitality sectors
- Future cities of India will require **smart real estate** and **urban infrastructure**
- **Healthcare development** allocation of **USD 7.5 billion** realising the pressing need of this sector's development. **Medical tourism**
- India has an estimated **urban housing shortage of 20 Million dwelling units**. The housing shortage in as of Dec 2018 is estimated to be 19 Million units
- Overall, **strong economic ground rules**, proactive reforms and usage of technology will continue to boost the sector. Recognizing the potential, a number of other asset classes —such as **co-working space, affordable housing, rental housing, and warehousing realty** have mushroomed in the country and are fast gaining traction
- Focus on **Green building solutions**

Indian real estate — Market size (USD billion)



Source: KPMG in India analysis, Assessing the Economic Impact of India's Real Estate, CREDAI - CBRE Report, September 2017

* Source – KPMG/NAREDCO report 2018

Regulatory Reforms

Regulatory reforms transforming Indian Real Estate Industry. Five key regulatory reforms are working in tandem to bring in the next wave of transformation in the sector:



Goods and Services Tax (GST)

Implemented from 1 July 2017. Aims to streamline the indirect tax structure by subsuming multiple taxes into a unified GST. The net tax rate on real estate post-GST is **12 per cent**.



Real Estate (Regulation and Development), Act, 2016

Came into force on 1 May 2017. Aims to increase transparency, accountability, and overall efficiency. Over **19,000** projects across 27 cities alone entailing an investment of over INR21 trillion (tn), or **USD320 billion (bn)** expected to come under purview of RERA.



Ease of Doing Business

Construction permits to be issued in just **60 days**.

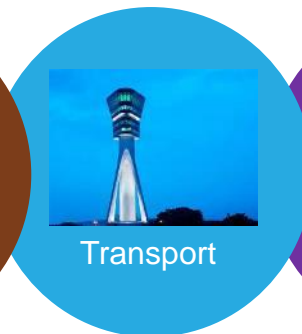
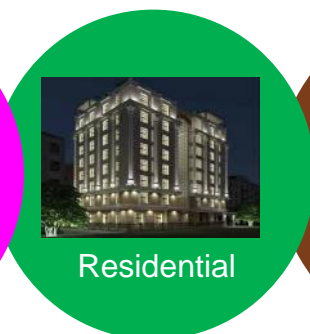
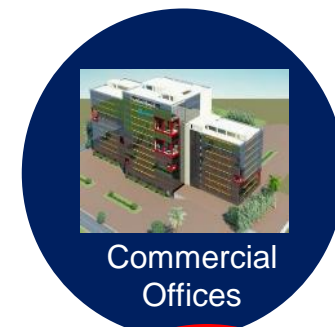
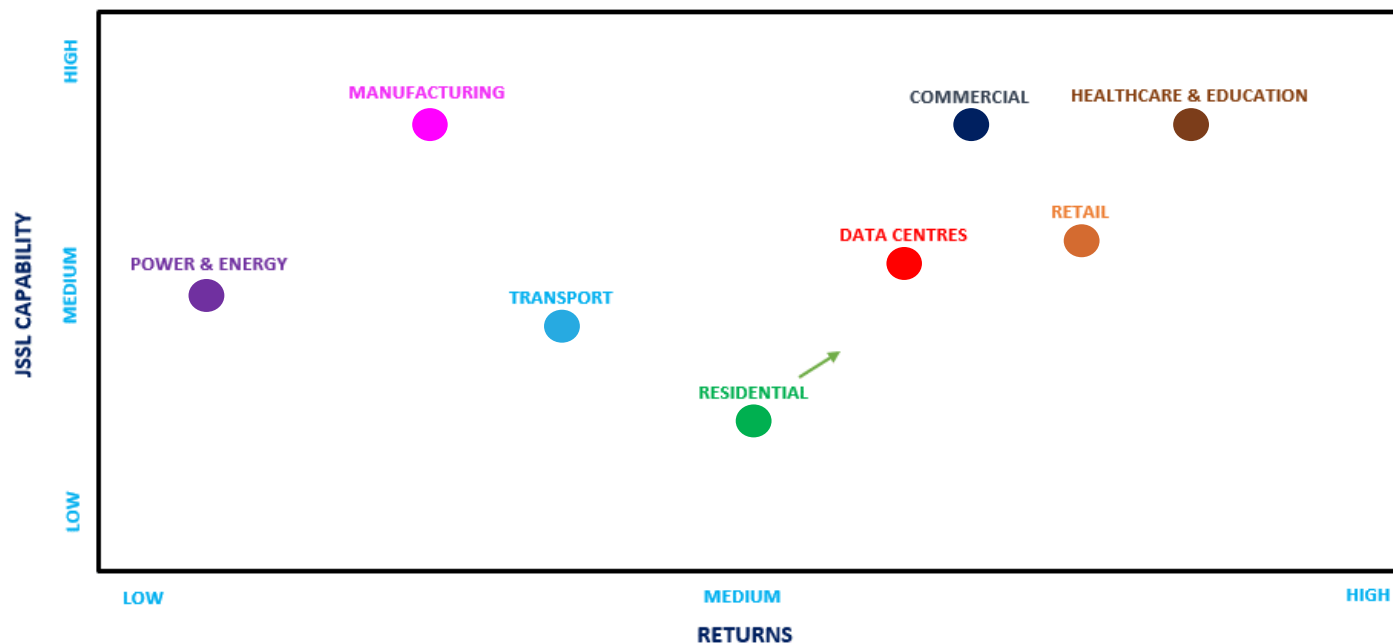


National Disaster Management Authority

New Hospital Guidelines with stringent design criteria aligning to International Standards.

* Source – KPMG/NAREDCO report 2018

Strategic Sectorial Focus



Strategy

Capability – Core Strength Focus

- In house Design, Drawing Office
- Graduates/GETs
- Quality Manufacturing
- Consistent + Fast Project Delivery (Project Management + Erection)
- Value Proposition (Steel/Composite)

Strategic Initiative

- Alliances in the Design + Supply chain
- New products, new markets e.g: Residential, Decking/Flooring, Top – Down, LGSF etc
- Changing codes and standards
- Long term Steel Development (e.g Ministers, INSDAG, Forums)
- Expansion, growth

Current projects

Good projects currently being done: **Sattva Knowledge Park, Amravati HOD Towers, Phoenix – Aquila and Centaurus, TATA Trusts Hospital in Varanasi, National Cancer Hospital, Nagpur, JSW Projects**

TATA Cancer Hospital



Sattva Knowledge Park, Hyderabad



National Cancer Hospital, Nagpur



Phoenix Aquila A&B



Amravati Tower 1&2



SMS 2, Dolvi



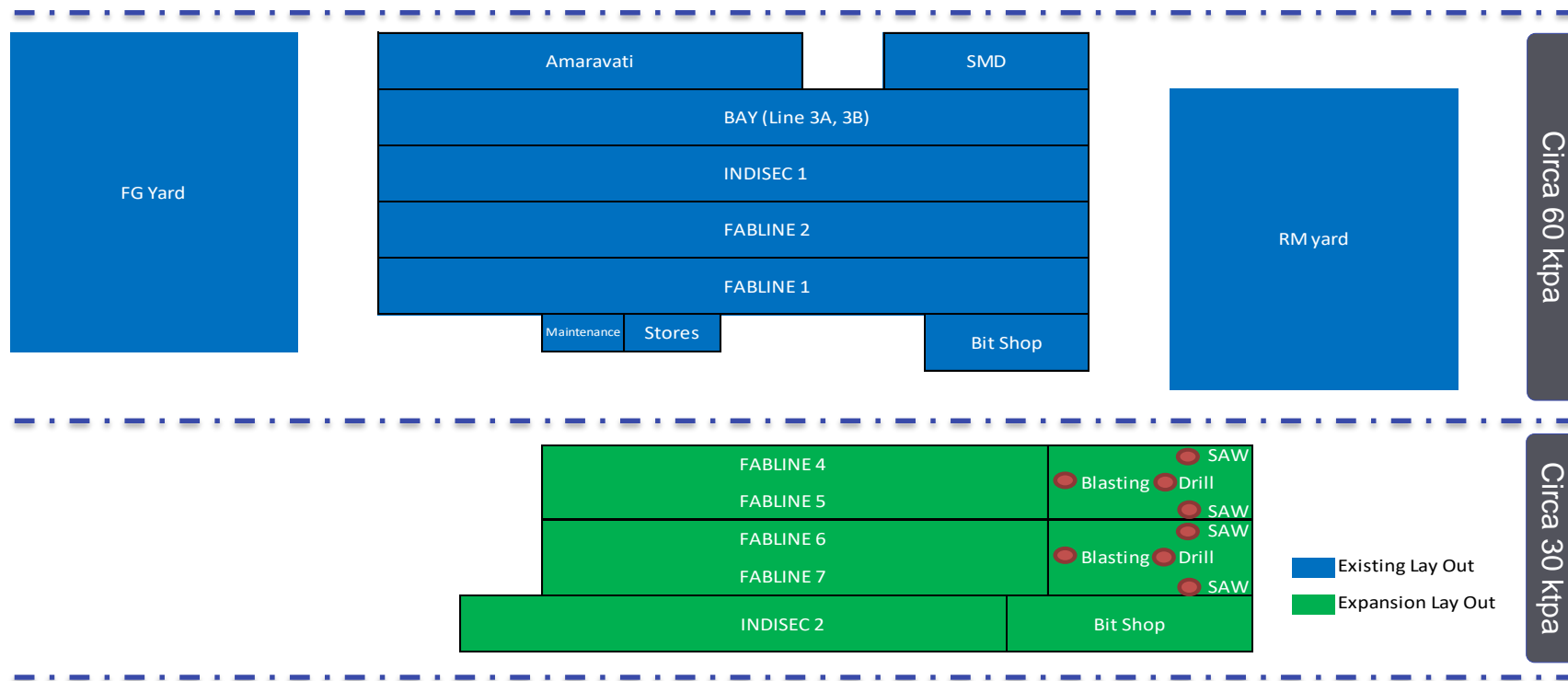
Phoenix Centaurus



Pellet Plant 2, Dolvi



Bellary Expansion

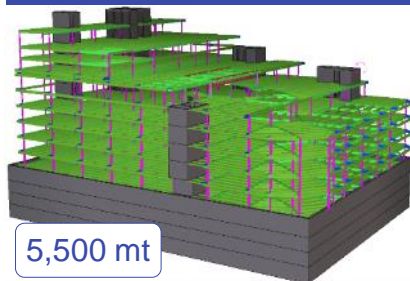


- Start production **Q4 - 19/20**
- **Industrial** and **commercial** capability
- **In-house and sub-contracting** will take **potential** output to **Circa 120 ktpa**
- **Next growth different** location

Summary and Outlook

- Indian market growing
- Construction market developing and growing
- Established business seen as No.1 design and build structural steel company
- Strong order book
- Good pipeline of prospects
- Strong partners keen on building the business and brand
- Long-term value creation opportunity

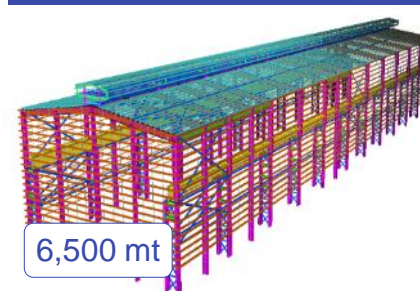
Juhu Mall, Mumbai



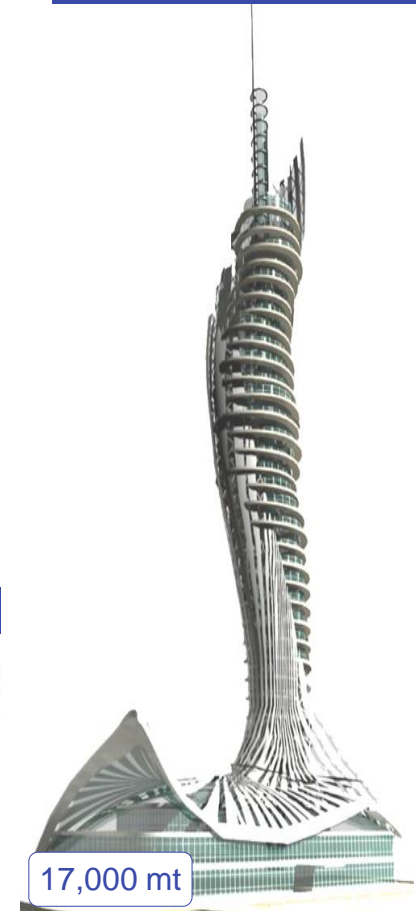
Twin Tower, Assam



JSW CRM 1 Ext



Dancing Tower, Amaravati



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Thank you

