



Steven Hails

Crossrail

Whispering Health and Shouting Safety in the Construction Industry

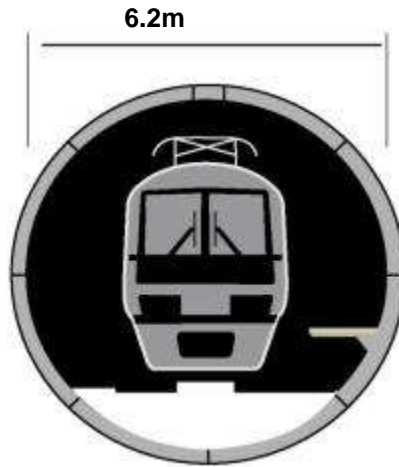
◀ Whispering Health & Shouting Safety in construction

- ◀ Steve Hails
- ◀ Health and Safety Director

The Challenge



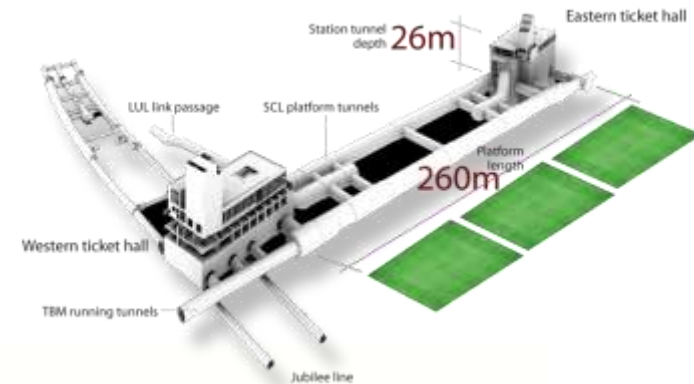
VICTORIA LINE



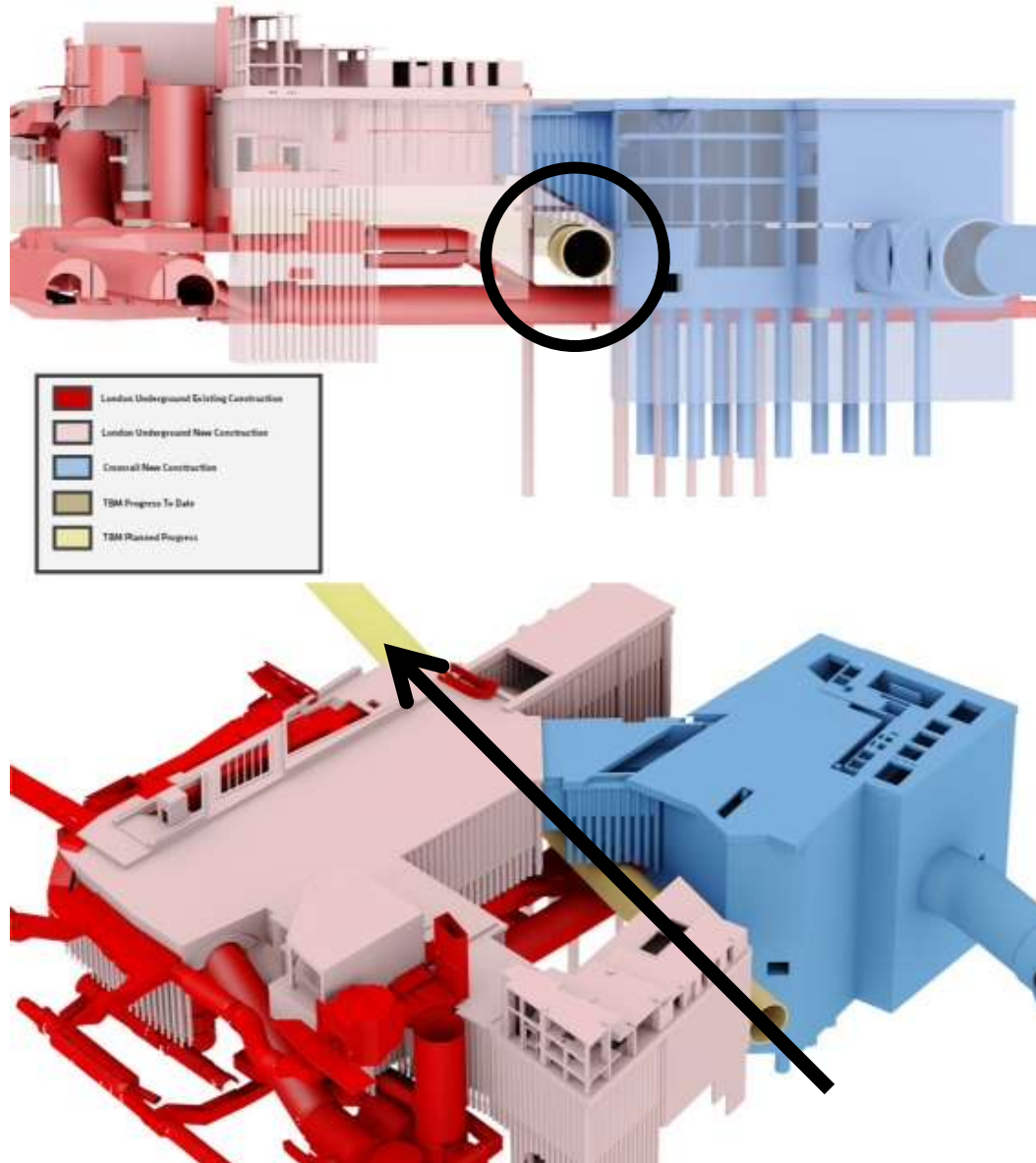
CROSSRAIL

- 250,000 concrete segments
- 400,000 tonnes of steel
- 1.6 million³ meters of concrete
- 8 TBMs

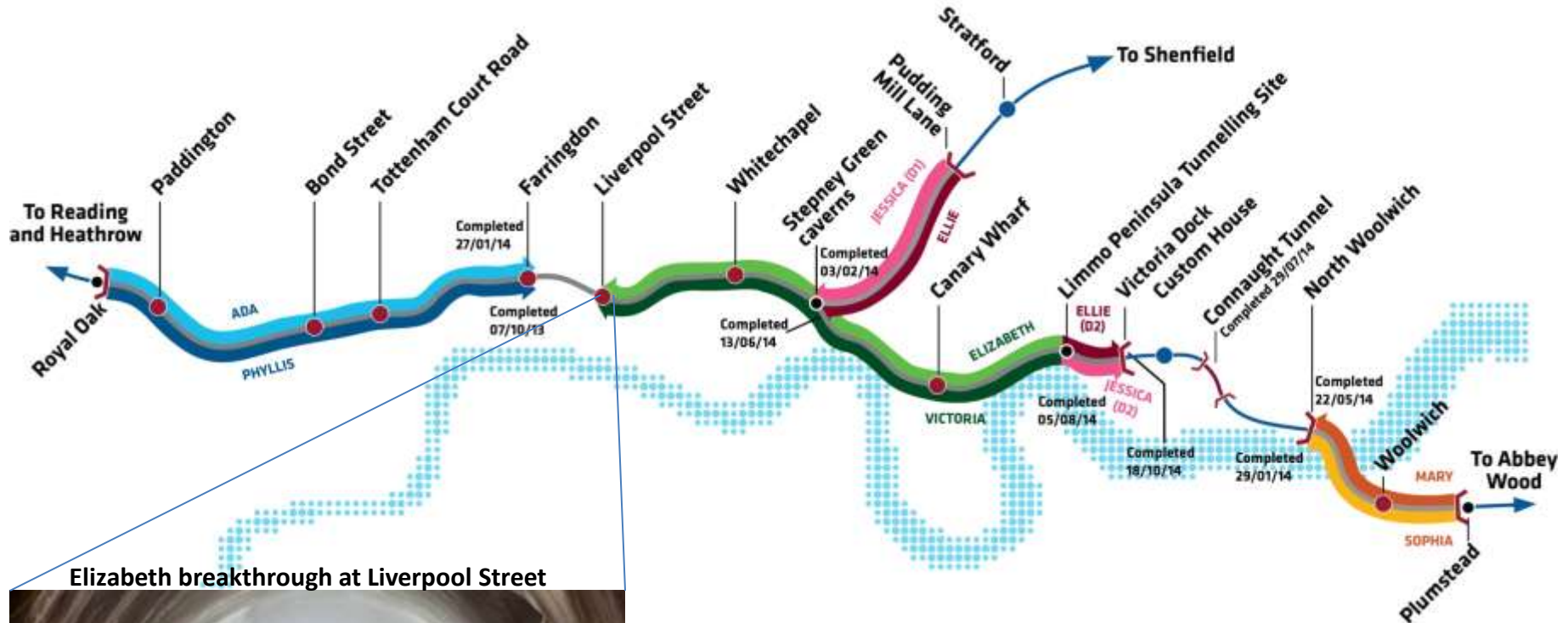
200m long trains



Complexity



Tunnelling progress



Elizabeth breakthrough at Liverpool Street



April 2015

Over 40km

97% complete

6TBMs complete

Q2 2015

42km

100% complete

8 TBMs complete

Tunnels – Sprayed Concrete Lining



SCL Progress: 75% complete

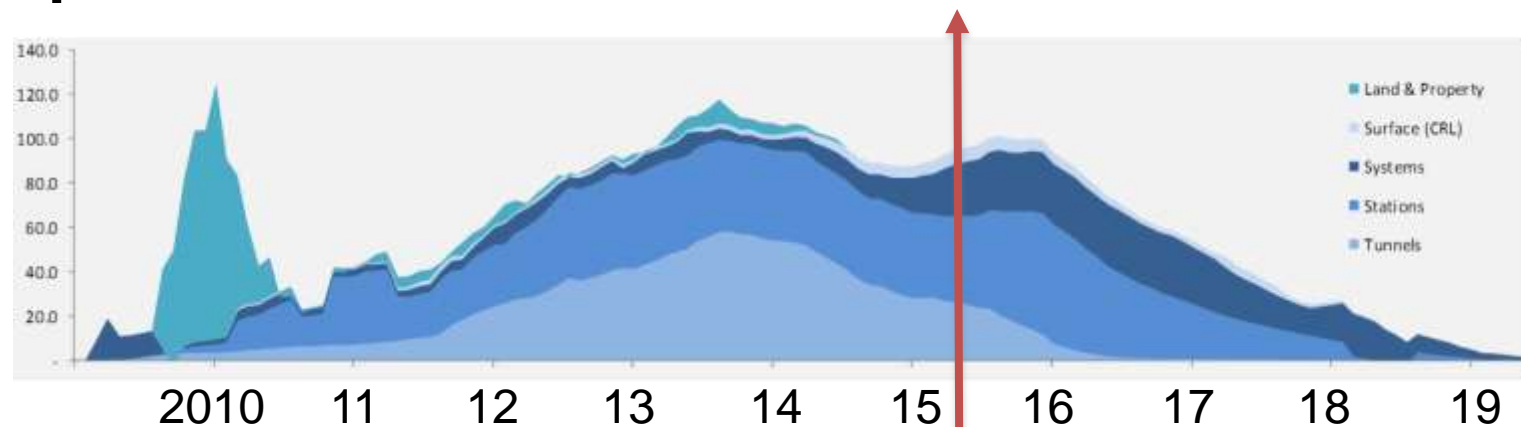
Stations



Our focus is changing



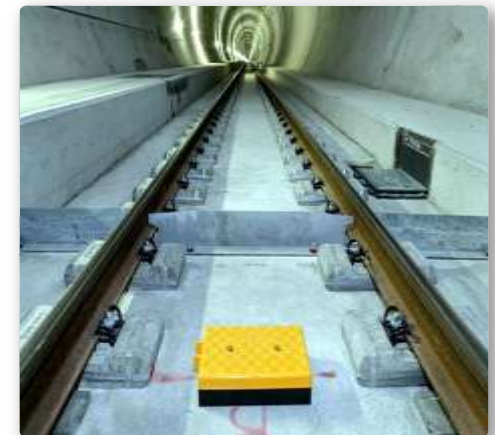
Spend (£m/month)



Focus



The second half - Delivering a World Class Railway

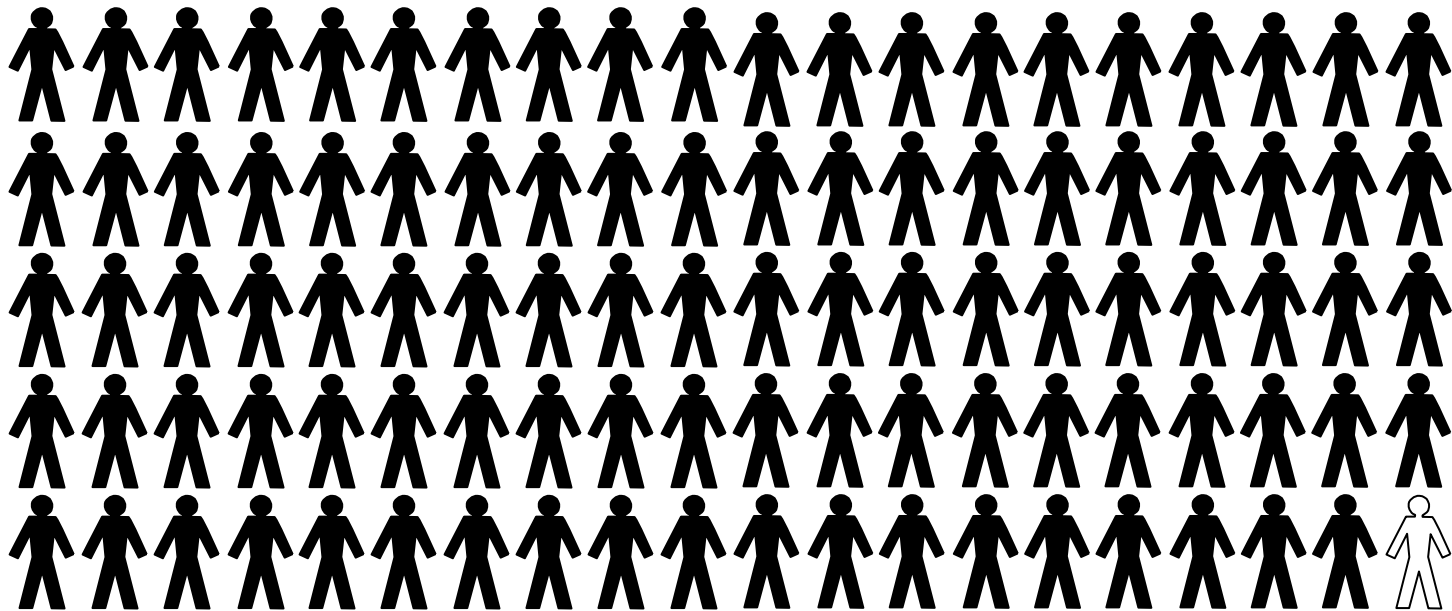


◀ Work-related Ill-Health

The Problem



99%



1%

The Problem



The Problem

- ▶ Deaths from Occupational Disease



x 25

- ▶ Deaths from Occupational Cancer



x 15

- ▶ Deaths from COPD



x 8

- ▶ New Cases of Occupational Cancer Diagnosed



x 27

Health and Safety compared

Source: HSE



Safety	Health
133 workers killed at work	2535 mesothelioma deaths
87% reduction since 1974	Asbestos-related death increased year-on-year from 1974 to 2012
78,000 other RIDDOR injuries	1.2 million work-related illnesses
77% reduction since 1974	Broadly flat since late 90s
28.2 million working days lost	
£14.2 billion estimated cost of injury and ill health	

Work-related Ill Health



Common Health Conditions

Stress
244,000 new
487,000 total

MSDs
184,000 new
526,000 total

Dermatitis
950 cases
(new low)

Long Latency Conditions

Asbestos
5,000 deaths
per year

Cancers
8,000 deaths
per year

Vibration
100 new claims
per year

NIHL
18,000 new
cases

Respiratory
4,000 new
COPD

Construction Industry



5% of working population

32% of fatal injuries to workers

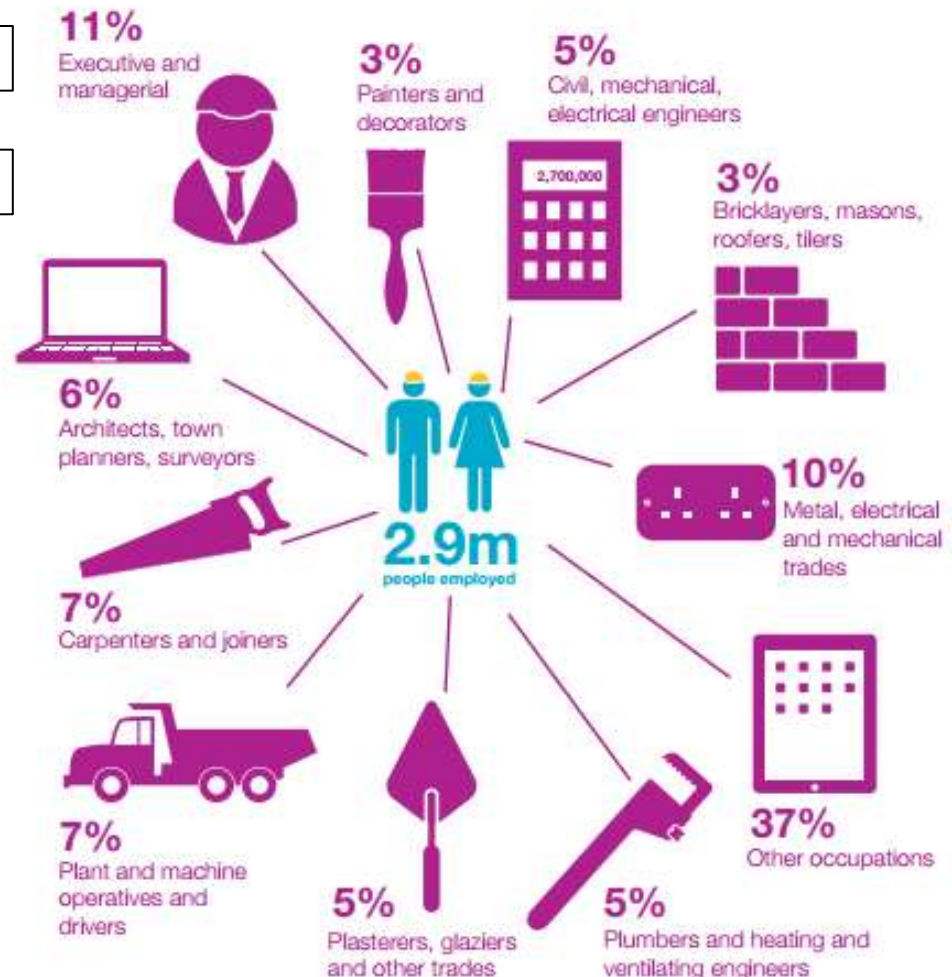
42% of occupational cancers

76,000 cases of work related ill health

2.3 million working days lost in 2013/14

- 1.7 million to ill health
- 592,000 to workplace injury

Injuries and new cases of ill health costs society £1.1 billion per year



The Problem in Construction



Top 10 Industry Sectors attributed to Occupational Cancer Deaths

L Rushton/HSE

Rank	Sector	No. of Deaths
1	Construction	3457
2	Personal & Household	556
3	Shiftwork	552
4	Land Transport	416
5	Metal workers	284
6	Painters & Decorators	254
7	Printing	243
8	Mining	228
9	Retail & Restaurants	211
10	Manufacture of Transport Equipment	155

The Problem in Construction



Top 10 Industry Sectors attributed to Occupational Cancer Registrations

L Rushton/HSE

Rank	Sector	No. of Deaths
1	Construction	4668
2	Metal workers	1252
3	Personal & Household	670
4	Shiftwork	552
5	Land Transport	498
6	Roofers, Road Surfacers & Paviers	471
7	Painters & Decorators	334
8	Mining	296
9	Printing	282
10	Public Administration & Defence	273

The Problem in Construction



Top 10 Causes of cancer deaths attributable to occupational carcinogens

L Rushton/HSE

Rank	Sector	No. of Deaths
1	Asbestos	3909
2	Silica	789
3	Diesel Engine Exhaust Emissions	652
4	Mineral Oils	566
5	Shiftwork	552
6	Painters	334
7	Tobacco Smoke	249
8	Tetrachlorodibenzodioxin	231
9	Radon	184
10	Welders	152

The Problem in Construction



Top 10 Causes of cancer registrations attributable to occupational carcinogens

L Rushton/HSE

Rank	Sector	No. of Deaths
1	Asbestos	4216
5	Shiftwork	1957
4	Mineral Oils	1730
10	Solar Radiation	1541
2	Silica	907
3	Diesel Engine Exhaust Emissions	801
9	Coal Tars and Pitches	545
6	Painters	359
8	Tetrachlorodibenzodioxin	316
7	Tobacco Smoke	284

◀ Health like Safety

Why bother



WHO workplace framework:

- ✧ The right thing to do: Business Ethics
- ✧ It's the Smart thing to do: Business Case
- ✧ It is the legal thing to do: The Law

- ▶ Inspection campaign
 - ◆ 853 inspections
 - ◆ 107 improvement notices – COSHH (46), manual handling (16), Noise & vibration (18), others (27)
 - ◆ 13 prohibition notices – COSHH (8), manual handling, lead and others
 - ◆ 239 contravention notices under FFI Regulations
- ▶ Ongoing campaign using philosophy of “Health like Safety”

◀ Hygiene, Health or Wellbeing

A Venn diagram consisting of three overlapping circles. The top circle is light blue, the bottom-left circle is light orange, and the bottom-right circle is light green. Each circle contains text describing its domain. The circles overlap in various combinations, creating darker shades of their respective colors in the intersection areas.

Occupational Hygiene

Protecting People
from Workplace
Health Risks

**Occupational
Health**

Managing Health
of Workers

Wellbeing

Promoting
Healthy Lifestyle
Choices

◀ Health at Crossrail

Health & Safety framework



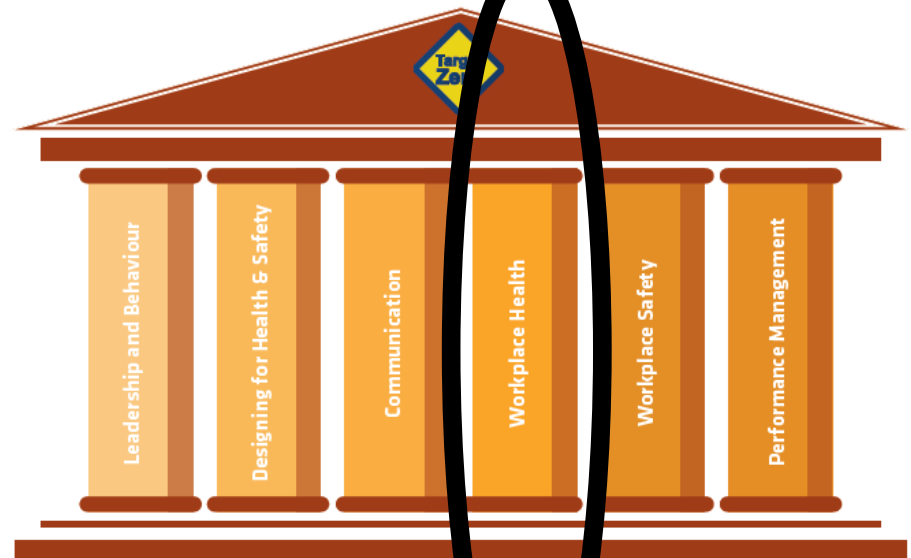
Principles

We all have the right to go home unharmed every day.
We believe that all harm is preventable.
We must all work together to achieve this



A STATE OF MIND

Pillars



Golden Rules



High Risk Activities



Four cornerstones for health



Activities

- ❖ Visible commitment to national and industry campaigns – PHRD, NTTL, TTC
- ❖ Setting Standards and good practice
- ❖ Improve understanding of occupational health
- ❖ Robust management system
- ❖ Audit and assurance

A decorative graphic in the bottom right corner consisting of two overlapping circles. The top circle is grey and contains the text 'Commitment to the health of our workforce'. The bottom circle is green and contains the text 'Healthy Company' in white.

Commitment to the
health of our workforce

Healthy
Company

Activities

- ❖ Medical assessment
 - ❖ Pre-placement
 - ❖ Management referral
- ❖ Drug & alcohol testing
- ❖ Clinical standards

A decorative graphic in the bottom right corner consisting of two overlapping circles. The foreground circle is pink and contains the text 'Fitness for work'. The background circle is grey and contains the text 'Managing the effects of health on work'.

Managing the effects
of health on work

**Fitness
for work**

Activities

- ❖ Managing key risks
 - ❖ Air quality
 - ❖ Fatigue
- ❖ Monitoring
 - ❖ Occupational hygiene
 - ❖ Health surveillance

**Health risk
management**

Protecting our
workforce from inherent
risk and ensuring
Zero harm

Activities

- ❖ Health & wellbeing survey
- ❖ Monthly toolbox talk
- ❖ Health campaign – mental health
- ❖ Lifestyle assessment – 2 yearly

A graphic consisting of two overlapping circular shapes. The top shape is orange and contains the word "Wellbeing". The bottom shape is grey and contains the text "Providing information and tools to maintain optimal health".

Wellbeing

**Providing information
and tools to maintain
optimal health**

A health legacy



► Building on the work of the ODA...

- ◇ Occupational hygiene & health standards
- ◇ Employee wellbeing
- ◇ Public Health Responsibility Deal

In Summary



- ▶ Health needs parity with Safety
- ▶ Occupational Hygienists' expertise are required
- ▶ Help us make this transition quickly
- ▶ It is not either/or with health and wellbeing
- ▶ We must act now and decisively

Moving London Forward

