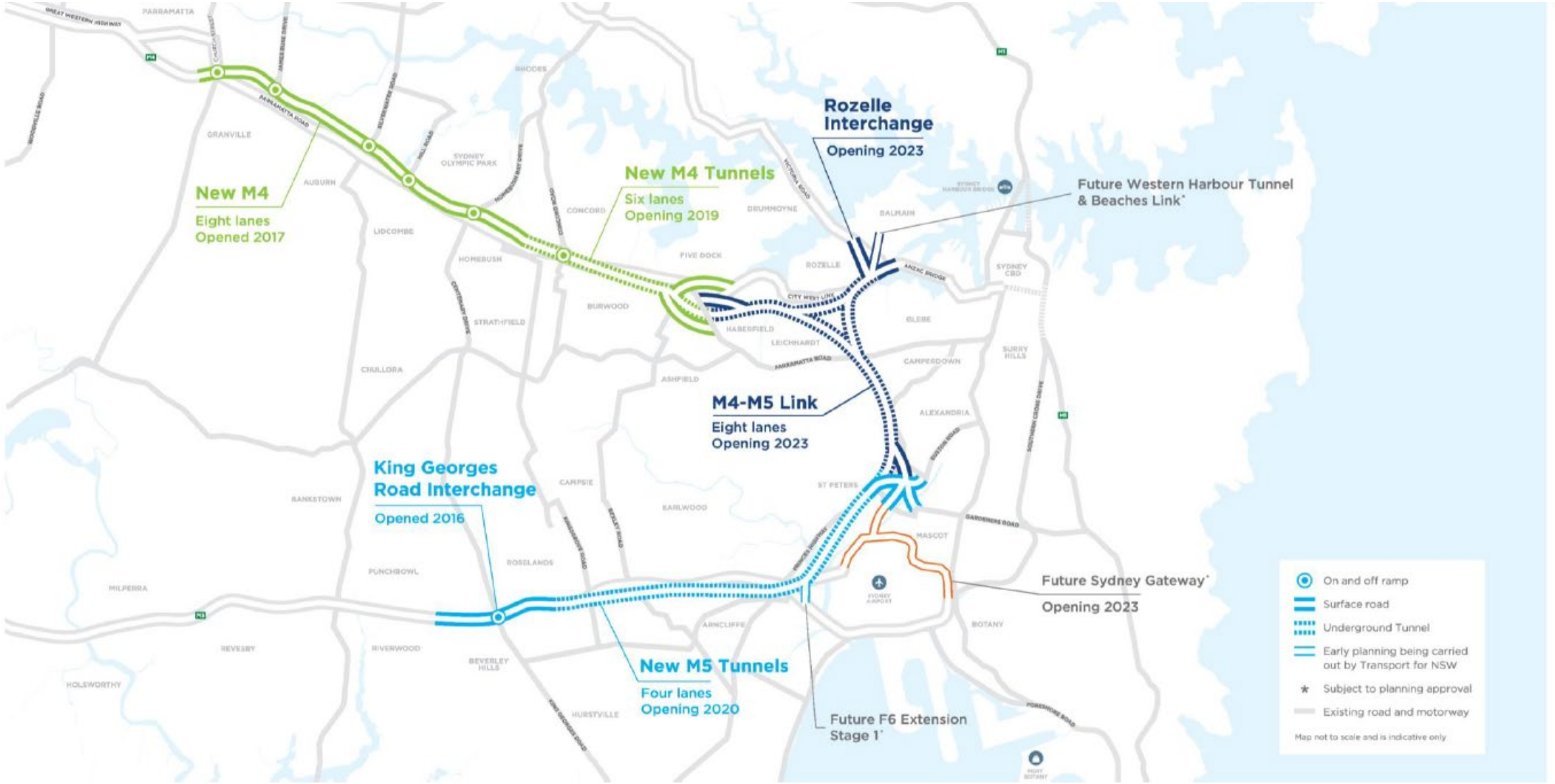
Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Asbestos Removal Works Rozelle Interchange Project

Asbestos Awareness Training

Asbestos Removal Works Rozelle Interchange Project

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS



Objectives and Aims

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

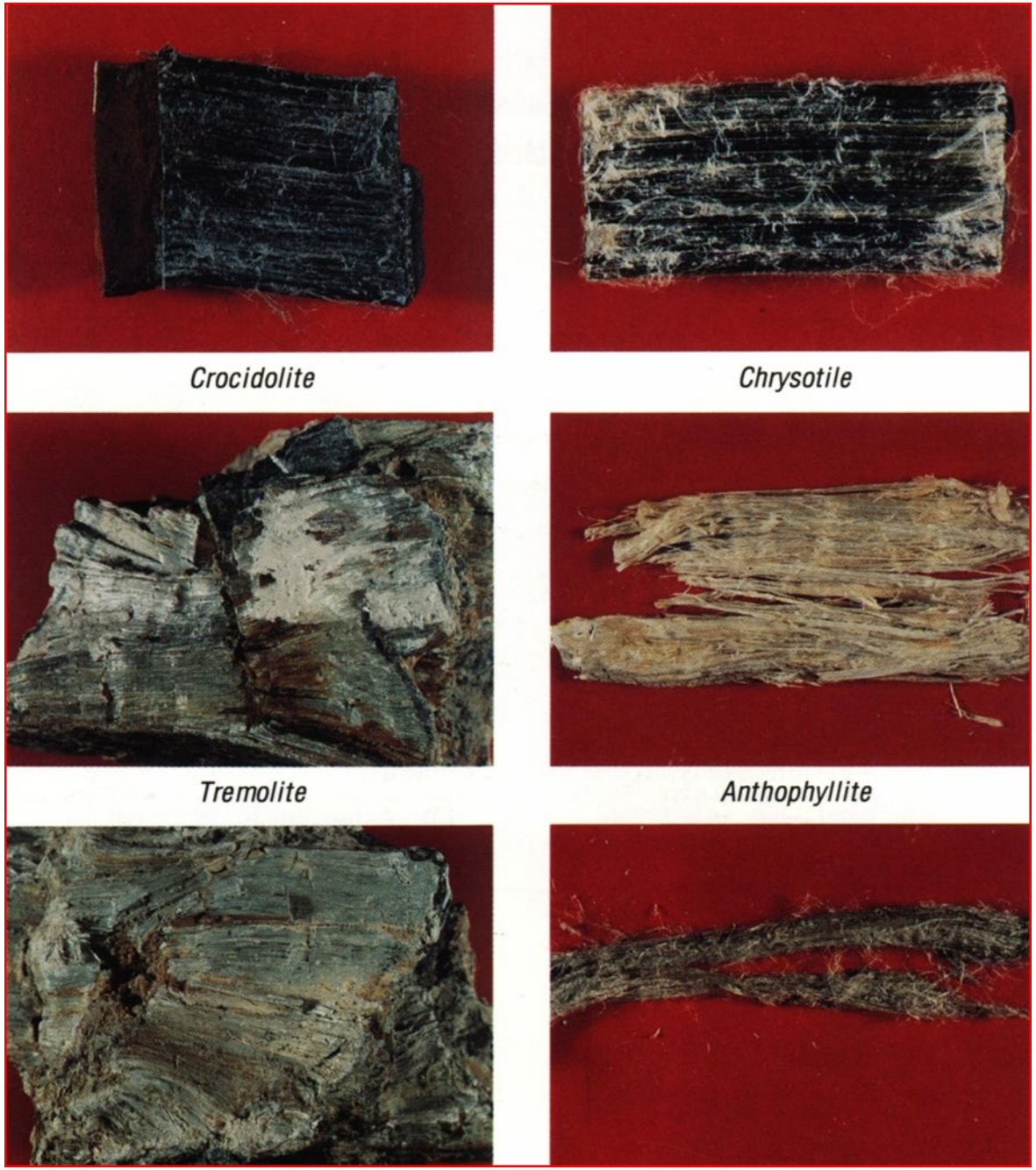
- What is Asbestos?
- Health Risks and Exposure Standards
- Risks in Perspective
- Scope of Work
- Management and Control, Personal Protective Equipment (PPE) etc

What is Asbestos ?

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Naturally occurring fibrous form of mineral silicates in over 3000 products
- Three main commercial types – Chrysotile (white), Amosite (brown) & Crocidolite (blue)
- Other types Anthophylite, Tremolite, Actinolite
- Occurs in each Australian state and countries around the world and until recently was actively mined in USA, China, Russia, India, South Africa, and Australia

Chrysotile Asbestos in Mineral Form



The six minerals that are classed as Asbestos

Historical Perspectives

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Historical usage – dates from BC
- Modern usage dates from late 1800’s
- Extensively used in the construction industry
- May be encountered in buildings more than 15+ years old
- Contaminated sites, fill soils, construction and demolition waste

Where can Asbestos be found?

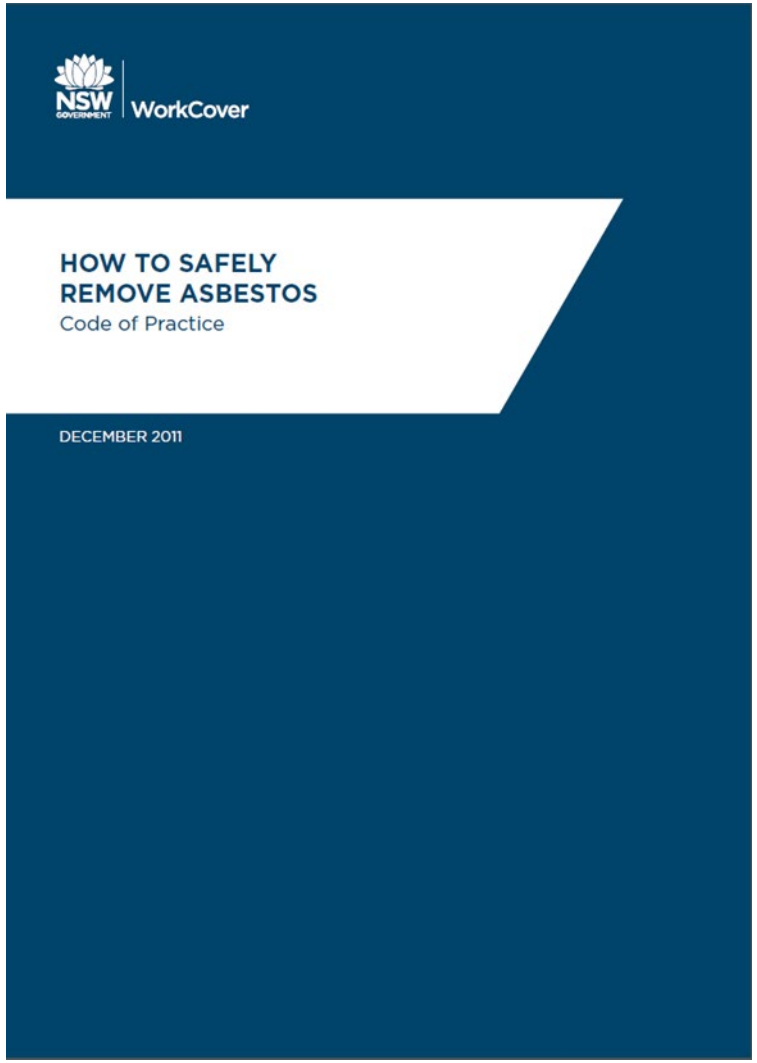
Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Fire Doors
- Inline Heater Banks
- Thermal Lagging
- Electrical Insulation
- Fire proofing
- Fibre Cement Products
- Building Materials
- Packing (penetrations)
- Limpet Insulation
- Vinyl Floor Covers
- Bonded Asbestos
- Electrical Boards
- Brakes
- Brakes
- Spark Arrestors
- Pipes
- Mechanical Applications
- Gasket Material
- Sound Dampener
- Water Proofing
- Adhesives

Worksafe Code OF Practice

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Bible' of asbestos work
- Exposure standards
- Responsibilities of owners, employers and employees
- Control methods
- Labelling/warning signs
- Safe Removal procedures
- Air monitoring etc



Australian Exposure Standards

- NOHSC has specified that the average respirable fibre concentration of the air breathed by a worker throughout a working shift should not exceed the Exposure Standard

Control Level (fibres/mL)	Action
<0.01	Continue with Control Measures
≥0.01	Review Control Measures
≥0.02	Stop removal work and find the cause, and notify SafeWork NSW

Encountering Asbestos

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- The probability of encountering asbestos in the natural environment is very low
- The probability of encountering asbestos in the average workplace is medium
- On this site, asbestos is present in its bonded form in stockpiles, potentially in soil (unexpected finds), and in the plastic lined asbestos skip bins and in its friable form within the ‘Contaminated Area’ located in the northeast section of site within the soil
- Friable asbestos material in recycled rubble material that has been imported to site
- On this site there is a high likelihood that you could encounter asbestos in either it’s bonded or friable form. Ensure you report any unexpected finds and adhere to control measures put in place

Two Categories of Products

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Friable Asbestos Materials

- Easily Disturbed
- Airborne fibres liberated

Bonded Asbestos Materials

- Asbestos bonded into matrix
- Requires significant disturbance to liberate airborne fibres

Bonded Asbestos Types

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Asbestos Cement Pipe

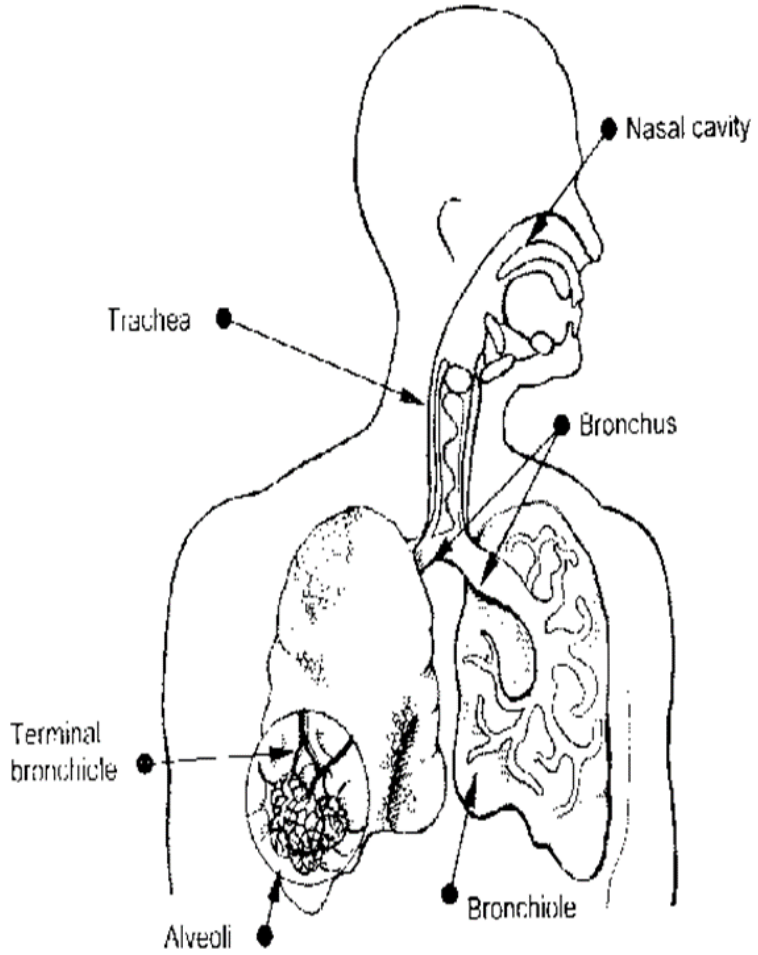
Asbestos Cement Sheeting

Bonded Asbestos Pipe

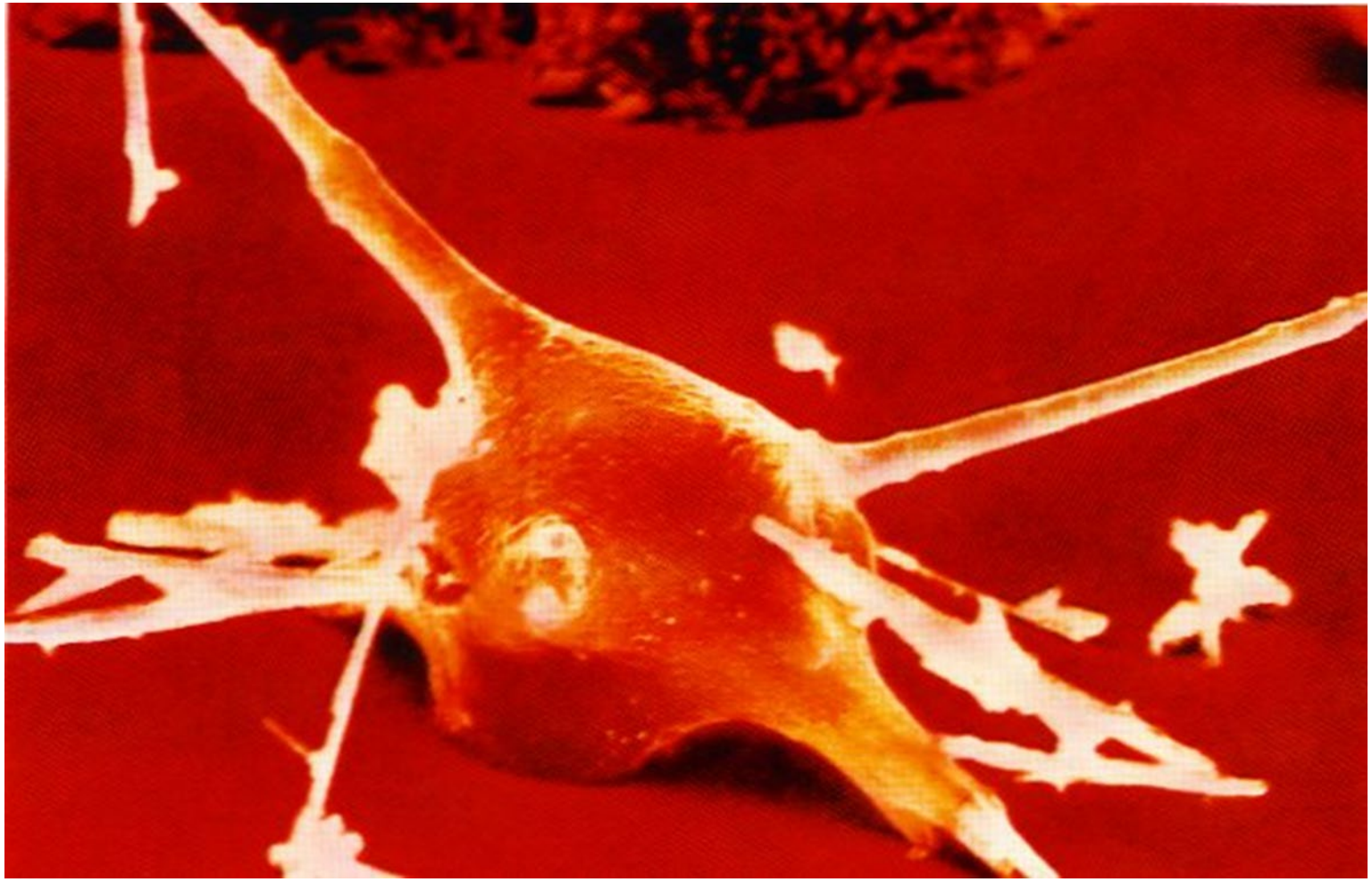
Health Risks and Effects on the Respiratory System

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Trachea
- Airway from the throat to lungs
- Bronchus
- Airway from trachea to bronchioles
- Bronchioles
- Airway from bronchus to alveoli
- Alveoli
- Tiny air-sacs in lung where gas exchange occurs
- Cilia
- Tiny hair in respiratory tract



Fibre lodged in lung wall



Asbestos Diseases

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Asbestosis

- Scarring of lung
- ~10yr latency
- Caused by very high exposure

Lung Cancer

- Cancer of upper lung
- ~15yr latency
- Smoking increases risks markedly

Mesothelioma

- Cancer on lung lining
- ~25yr latency
- Can be caused by low exposure
- Some non-occupational cases

Summary of Health Risks

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Diseases of Lungs

- fibre must be disturbed
- become airborne
- inhaled
- lodge in lungs

All have latency

- i.e. delay between exposure and disease

All dose-response related

- i.e. greater the dose-greater the risk

No Cure

Risks in Perspective

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Activity	Lifetime risk per 100, 000
Smoking	22,000
U/ground mine	7,000
Road accidents	1,184
Influenza (Aust)	650
Surface mining	600
Asbestos (0.1f/ml)	300
Alcohol (moderate)	290
Asbestos (0.05f/ml)	150
Football (Aust)	145
Contraceptive pill	140
Home accidents	88
Train/plane travel	30
Asbestos (0.01f/ml)	30
Lightning (death)	3

MONITORING

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Air pumps;
- Filter cowls
- Observations for dust

- Pumps to be set up daily;
- On site fences, in YOUR cabs
- Results reported as soon as possible, actioned if required

Controls

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Isolation of Impacted areas from workers
- Water cart / hoses – keep all material wet
- Handling to minimised STAY IN YOUR CAB
- Air-con set to recirculate
- Ground crew:
  - Disposable Asbestos rated cover all suits, respirators – P2 or P3, booties
  - Refer to SWMS/JSEA for detailed controls

Asbestos Area Isolation

PPE

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

Operators to carry the following:

- P2 mask, Disposable suit and booties. Must be work when leaving cab within exclusion zone
- Ground crew to wear P2 or P3 mask, disposable suit and booties whenever within exclusion zone

Asbestos PPE In Use

Decontamination

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- For plant, wash down outside of vehicle
- Assume all mud may have asbestos fibres, remove all visible mud
- Remove mud from wheel and tracks
- Full PPE to be worn during wash down
- Inside of plant to be vacuumed at end of works with HEPA filtered vacuum

Cross Contamination

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

- Tracking asbestos into other areas of the Site;
  - On your feet
  - On your truck or tracks
- Vehicles to use designated decon area
- Plant to remain in ASBESTOS WORK AREA for duration
- Stick to the designated haul routes
- Water cart to be decontaminated after each entry

What to do if you find asbestos

Rozelle Interchange
WestConnex
JOHN HOLLAND | CPB CONTRACTORS

In the case of unexpected finds or suspected finds:

- Stop work immediately
- Inform your JHCPB supervisor
- Minimise disturbance of the area
- Cover the item/area with geotextile fabric, plastic or suitable sub grade material to prevent disturbance
- Prevent access and communicate to other teams
- Establish an exclusion zone using barricades and warning signs to restrict access to contaminated areas