



WORKSAFE

NEW ZEALAND | MAHI HAUMARU
AOTEAROA

MAJOR HAZARD FACILITIES (MHFS)

GEOFF COOKE

DEPUTY CHIEF INSPECTOR

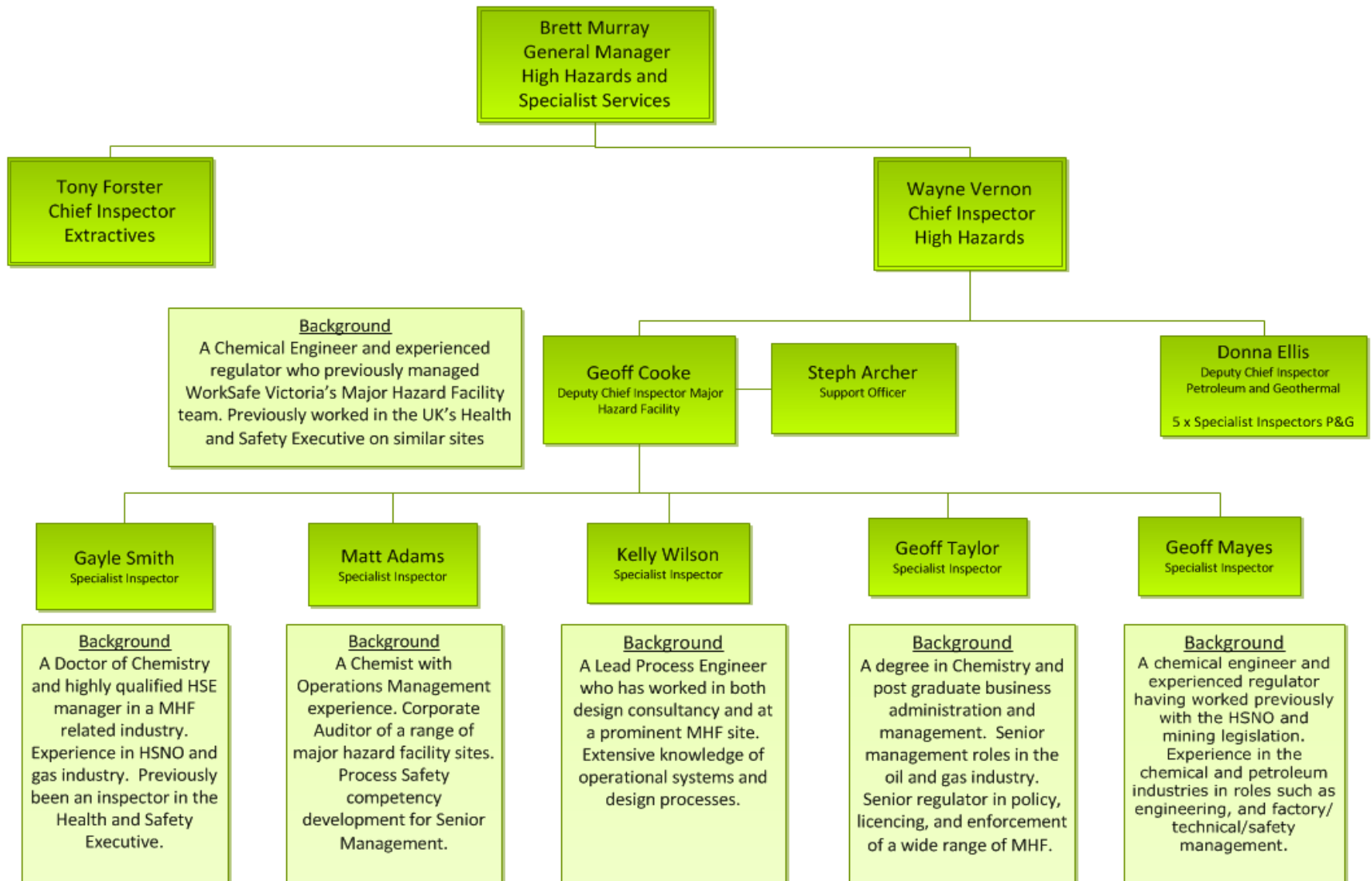
MAJOR HAZARD FACILITIES



INTRODUCTION

- Who are the MHF Inspectors
- Why MHF Regulations
- About potential MHFs
- A bit about the Regulations
- What the MHF team is doing

WHO WE ARE



WHY SPECIFIC MHF REGULATIONS?

Concern about catastrophic events - increased regulatory focus on potential high hazards:

- Mandating a formal safety assessment process with 'Acceptance' by the Regulator
- Mandating process for informing, consulting or engaging with persons that might be affected
- Robust regulation and oversight of those facilities
- HSNO doesn't cover it all



HazSubs thresholds – Named Substances

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Table 2
Named hazardous substances

Column 1	Column 2	Column 3	
		Threshold quantity (tonnes) for the application of	
Hazardous substances	CAS number ¹	Lower-tier requirements	Upper-tier requirements
1 Ammonium nitrate (<i>see note 11</i>)	—	5 000	10 000
2 Ammonium nitrate (<i>see note 12</i>)	—	1 250	5 000
3 Ammonium nitrate (<i>see note 13</i>)	—	350	2 500
4 Ammonium nitrate (<i>see note 14</i>)	—	10	50
5 Potassium nitrate (<i>see note 15</i>)	—	5 000	10 000
6 Potassium nitrate (<i>see note 16</i>)	—	1 250	5 000
7 Arsenic pentoxide, arsenic (V) acid and/or salts	1303-28-2	1	2
8 Arsenic trioxide, arsenious (III) acid and/or salts	1327-53-3		0.1
9 Bromine	7726-95-6	20	100
10 Chlorine	7782-50-5	10	25
11 Nickel compounds in inhalable powder form: nickel monoxide, nickel dioxide, nickel sulphide, trinickel disulphide, dinickel trioxide	—	—	1

Consultation draft

Schedule 1

Health and Safety at Work (Major Hazard Facilities) Regulations 2015

¹ The CAS number is shown only for indication.

HazSubs thresholds - Categories

Schedule 1 Hazardous substances

r 22

Table 1
Categories of hazardous substances

Column 1			Column 2	Column 3
Hazard classes and categories in accordance with the <i>United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Fifth revised edition</i>			Threshold quantity (tonnes) of hazardous substances as referred to in regulation 23 for the application of	
Hazard class	Hazard category		Lower-tier requirements	Upper-tier requirements
Health hazards (section H)				
Acute toxic	H1	Category 1, all exposure routes	5	20
Acute toxic	H2	Category 2, all exposure routes	50	200
		Category 3, inhalation exposure route (<i>see note 7</i>)		
Specific target organ toxicity—single exposure (STOT SE)	H3	STOT SE Category 1	50	200

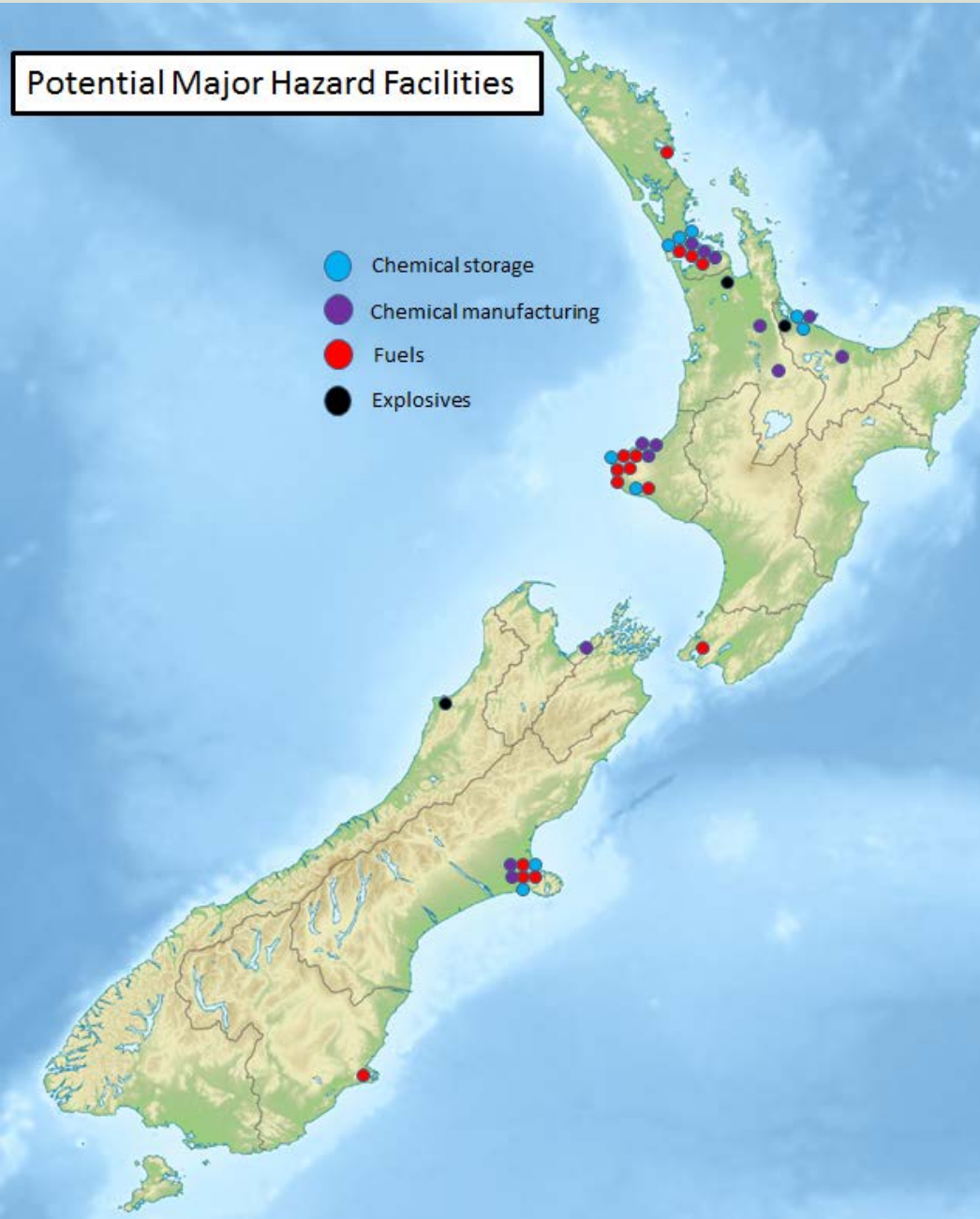
Consultation draft

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Health and Safety at Work (Major Hazard Facilities) Regulations 2015

Schedule 1

Pre-MHF Regulations Engagement at Potential UT and LT MHFs



The MHF team are currently engaging with:

- 37 companies that operate 62 individual potential upper tier MHFs
- 41 companies that operate 91 potential lower tier MHFs



KEY REQUIREMENTS IN PROPOSED REGULATIONS

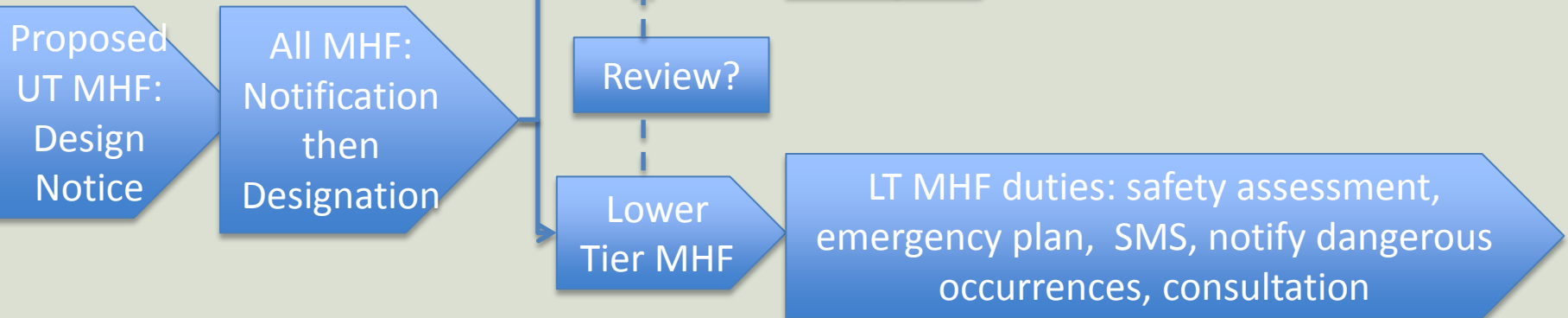
1. Notification of MHF Site
 2. Design Notices –Proposed Upper Tier site only
 3. Safety Assessment
 4. Safety Management System
 5. Emergency Response Plan
 6. Safety Case – site specific - Upper Tier only
 7. Notify dangerous occurrences
 8. Consultation, local community, workers, emergency services
- } Proportionate - MAPP for Lower Tier?

PROPOSED MHF REGS - DUTY HOLDER ACTIVITIES

Health and Safety Reform Bill

Review and comply with new duties under the health and safety reform bill

Proposed MHF Regulations



The MHF Regulations will have transitional arrangement for existing facilities

SAFETY ASSESSMENT

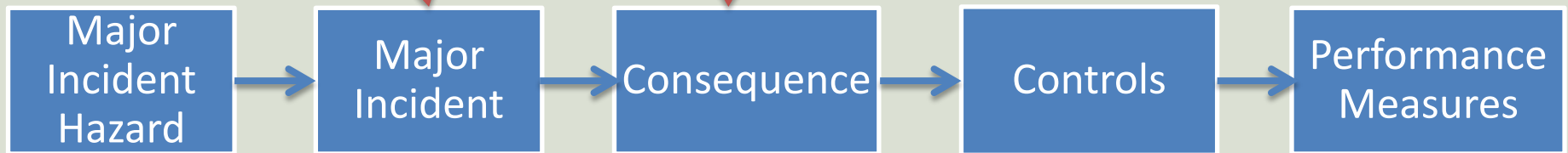
- Heart of a successful SMS
- Focus on major incident hazards
 - Tabled substances
 - Systematic and specific
 - Identify controls to prevent and/or mitigate
 - Clear pathways:
 - causes → events →
 - consequences →
 - controls →
 - emergency plan



PROVIDE A CLEAR PATHWAY

Loss of
containment

- How big?
- How far?
- Secondary Events



- Overfill – human error
- Overfill – control system failure
- Corrosion at tank
- Impact from truck
- Piping failure through overpressure

- For every hazard
- Preventative / Mitigative?



SMS LINKAGE TO CONTROL MEASURES

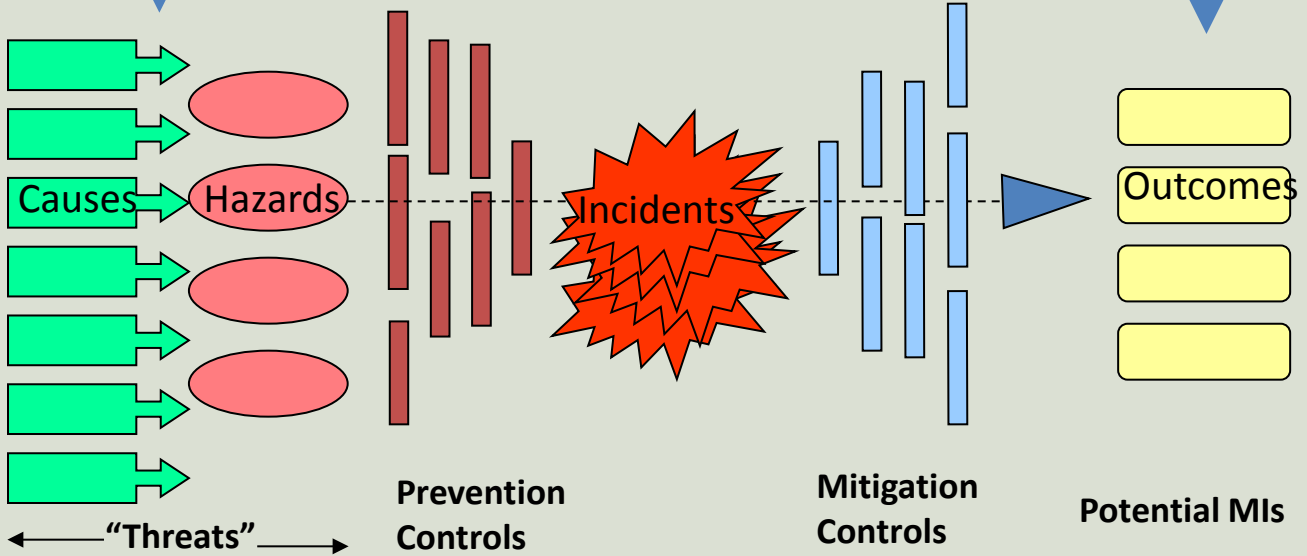
Level 1



Level 2



Level 3



EMERGENCY PLAN

To limit the magnitude **and** severity of consequences.

- Command structure & site personnel
- Resources and equipment
- Cover on and off site emergencies
- Consultation
- Tested



SAFETY CASE

Summary of Safety
Assessment

Summary of
Emergency Plan

Safety Case
Implement & Comply
Revise every 5 years

Summary of Safety
Management
System

Specific Information
required by the
Regulations



WHAT THE MHF TEAM IS DOING

In addition to engagement visits to potential MHFs, the MHF team is contributing to:

- Shaping draft MHF regulations
- Implementation of Regulatory Framework (IRF) for the MHF Regs
- MHF Guidance
 - Notification and Designation
 - Safety Assessment
 - Safety Management Systems
 - Emergency Planning
 - Safety Cases

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Questions?

[worksafe.govt.nz](https://www.worksafe.govt.nz)
0800 030 040