

Climate Change Considerations

for **Land Treatment
Consent Applications**

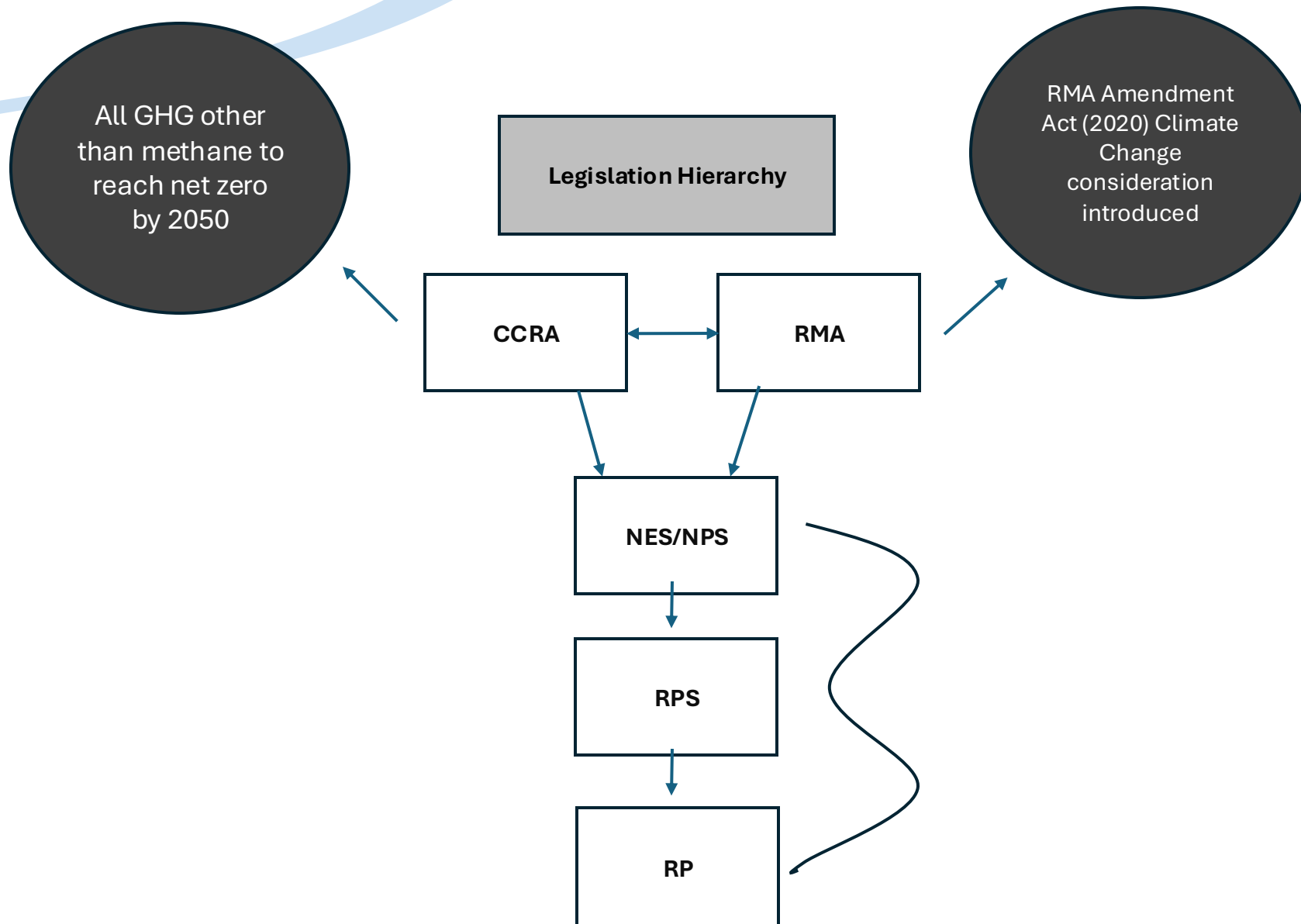
Hamish Lowe, Teagan Graham

There has been a change in legislation that now requires consideration of GHG and Climate Change in resource consent applications.

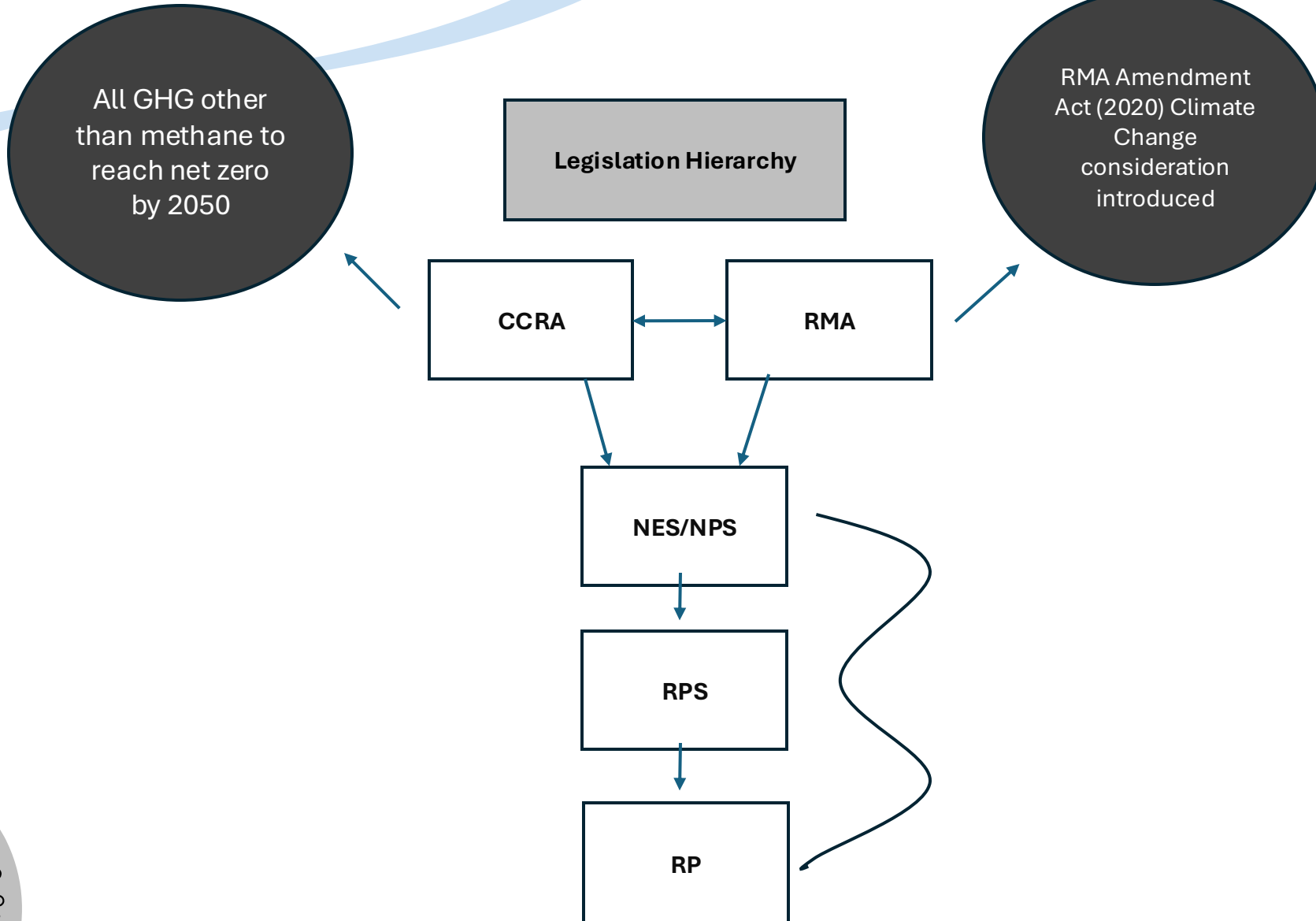
How do we do this?



First, we need a recap on the
“why”



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“why”



So, what does this mean?

Consent applications will require an assessment on the impacts of climate change,

and

some activities will require a resource consent for the discharge of greenhouse gases to air.



Consents Required

Discharge

Contaminant

"Contaminant" is defined in the RMA as:

"Includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat—

a)when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or

b)when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged."



Consents Required

Discharge

Discharge to land commonly requires a discharge to air consent for contaminants to air

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GHG meets the RMA definition of "contaminant", = can be considered under discharge to air rule

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But no specific guidance on how to assess this yet from Councils

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Setting the Scope

Here's an approach LEI is suggesting:

- **Scope**
- **Application structure**



Setting the Scope

What is the
consent for?

Just the land
treatment area
not the whole
farm/operation?



Setting the Scope

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consent for?

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Land
Management
suggestion

Treatment
System
suggestion



Setting the Scope

What is the consent for?

Just the land treatment area not the whole farm/operation?

Land Management suggestion

Exclude land management and produce on and leaving the site

Treatment System suggestion



Setting the Scope

What is the consent for?

Just the land treatment area not the whole farm/operation?

Land Management suggestion

Exclude land management and produce on and leaving the site

Treatment System suggestion

Exclude treatment system effects, focus on effects associated with discharge from system (i.e., from the pump onwards)



Two Scenarios

Consent is required for a dischargeYes?

Is consent required for the
associated discharge of
contaminants to air?



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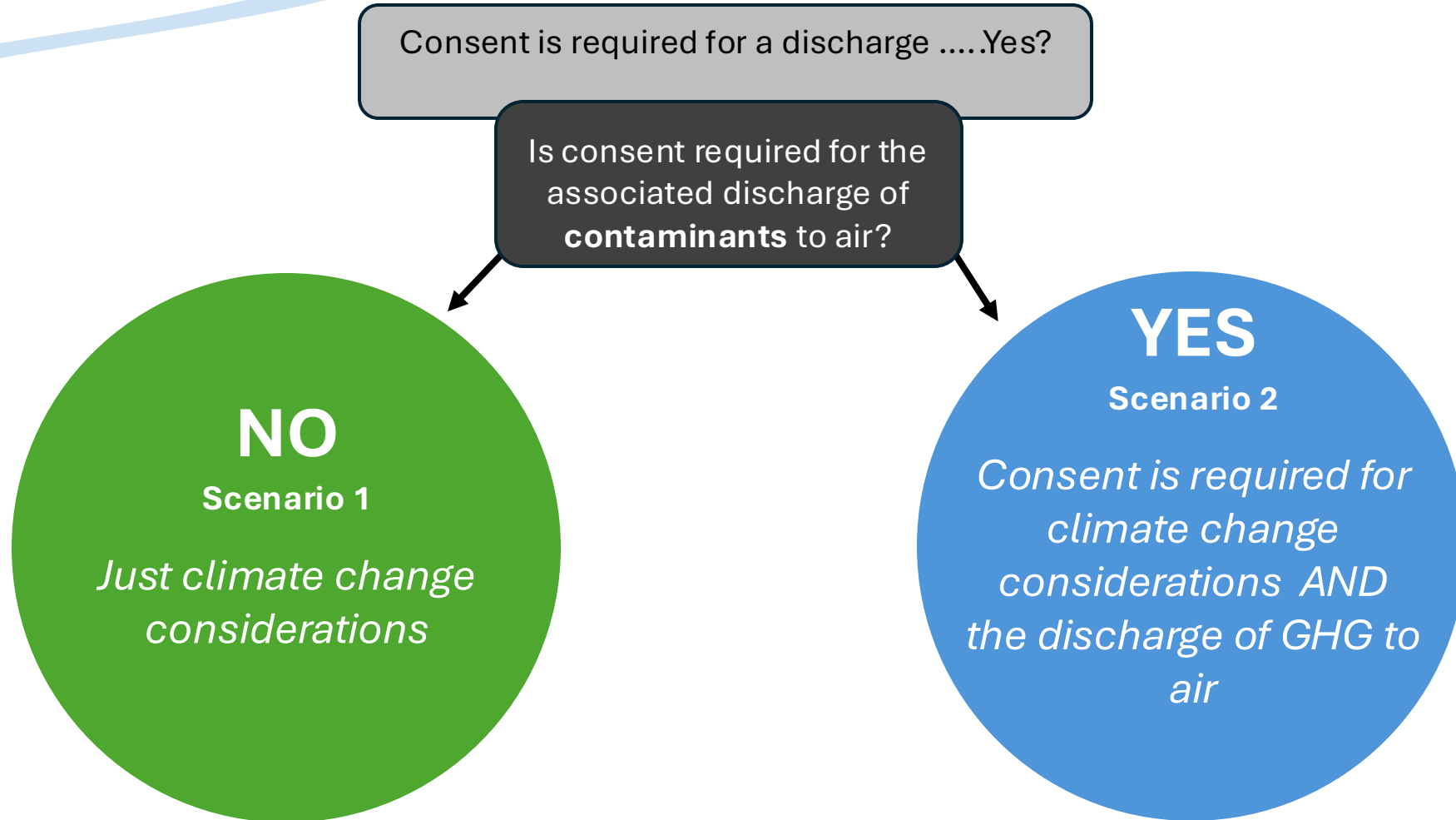
NO

Scenario 1

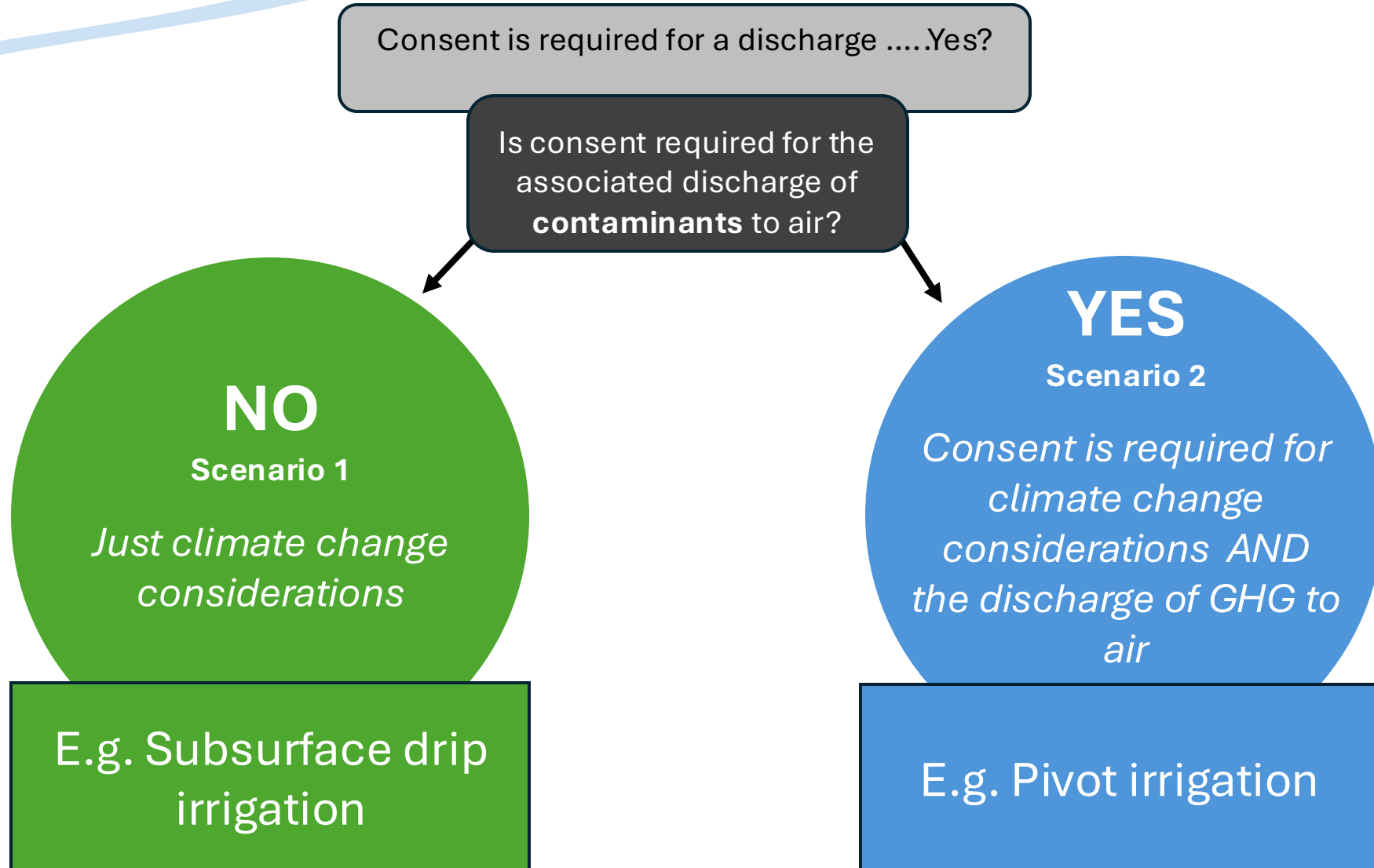
*Just climate change
considerations*



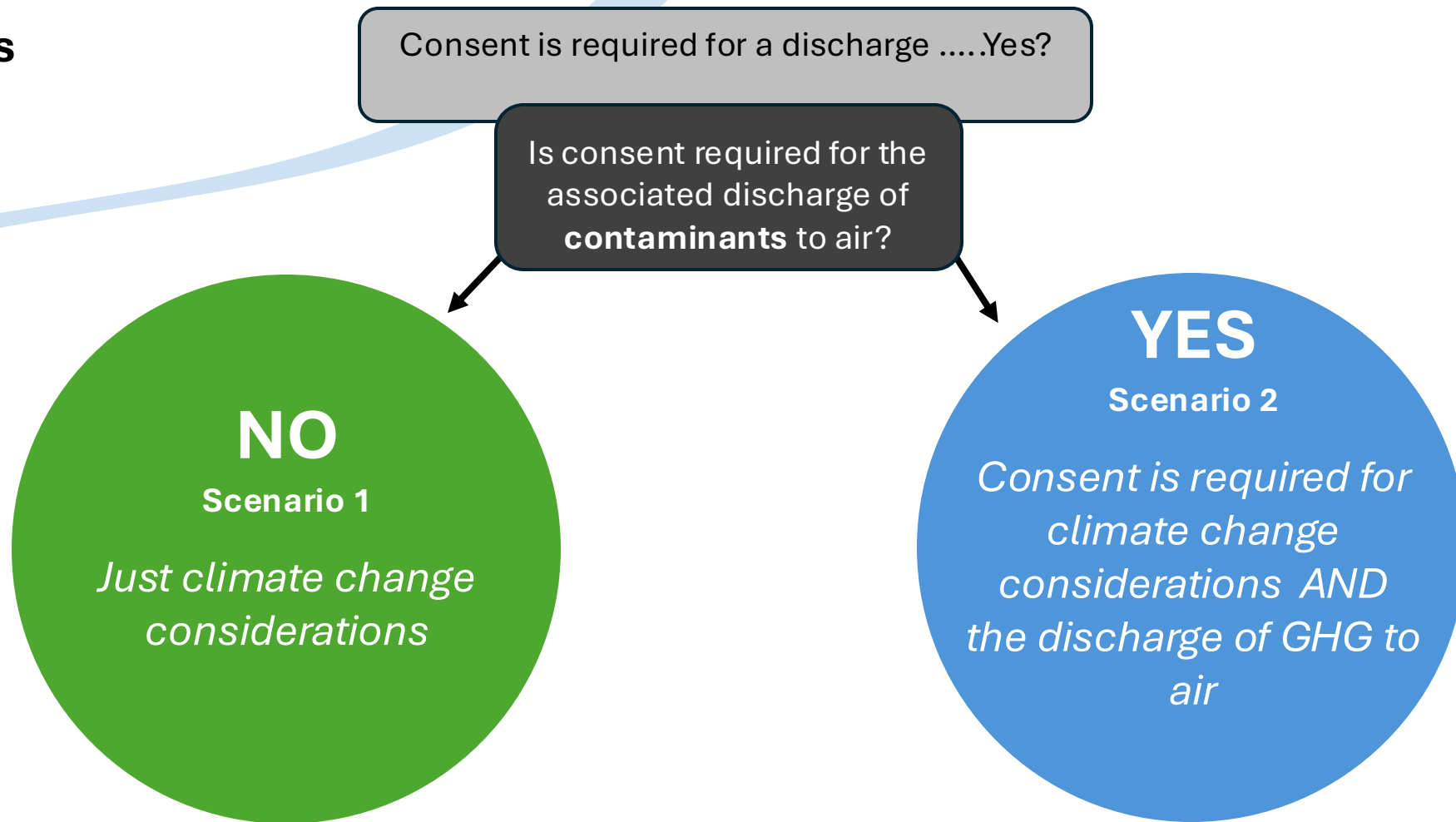
Two Scenarios



Two Scenarios



Two Scenarios



Scenario 1 the focus is on assessing the effects of climate change.

Scenario 2 we have a lot more focus on the impact GHG is contributing to climate change.



Suggested Consent Structure

Usual structure of consent application

- Intro
- Description of environment
- Description of Activity
- Alternatives considered
- Relevant statutes that apply and consents required
- AEE
- Statutory evaluation

Activity

**Level of detail should
be dependent on
whether **S1** & **S2****



Setting the Scene

S1 & S2

- Intro
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- Description of Activity
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Projections for Canterbury

Average temperatures	+
Maximum daytime temperatures	+
Minimum night-time temperatures	+
Hot days (25°C or more)	+
Cold days (frosts)	+
Rainfall	-
<ul style="list-style-type: none">• Most of the region can expect small changes in annual rainfall, up or down 5%.• By 2040, autumn might be dryer in the Mackenzie Basin, with up to 10% less rain.• By 2090, winters could be wetter in many eastern, western and southern parts of the region, with 15 to 40% more rain.• By 2090, Banks Peninsula and many inland areas might get 5 to 15% less rain (if we don't cut emissions).	
Snow	+
Drought	+

S1 & S2

- Climate
- Climate change predictions



Alternatives

S1 & S2

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S1 & S2

- Impact as a result of climate change?



S2

- Discharge methods that will reduce GHG emissions



AEE

S1

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AEE

- Intro
- Summary
- Plants and soil
- Groundwater
- Surface water
- Ecology - Sensitive receptor or large scale
 - Terrestrial
 - Aquatic
- Air
- Effects of climate change
- Cultural
- Amenity



AEE

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Air

- Odour
- High level comment on GHG



Effects of climate change

- Statement of impact from climate change
- Discuss resilience to effects of climate change
- Discuss how effects of climate change will not be exacerbated by the proposed activity
- **Impact on activity**



AEE

S1 & S2

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Air

- Odour
- **Impact on GHG**
 - Gas mass contribution
 - (GHG emissions calculations: MfE guide to Measuring Emissions)
- **Balancing other effects**
 - allowance for growth
 - Surface water quality improvements
 - Treatment efficiency
- **Offsetting**
- **Impact on climate**

Effects of climate change

- Impact on structures
- Impact on system operation
- **Impact on activity**



Statutory Evaluation

S1 & S2

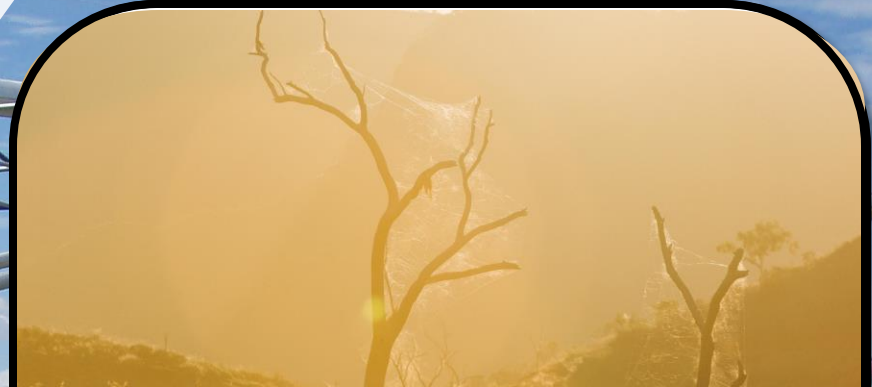
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S1

- Regional Plan requirements for climate change

Impact on activity



S2

- Consider legislation that captures greenhouse gas production
- Consideration more at national/airshed level than activity/site

Impact on climate



Final notes

Scope

Climate
Change

GHG

Balance



Final notes

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Effects assessment limited to specific activity in which consent is sought,
not the whole operation/property

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Climate Change

All consents should consider climate change – **being the impact on the activity**

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All consents should consider climate change – **being the impact on the activity**

GHG

Assessment limited to those activities needing air discharge consent – **being the impact on the climate**

Balance



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Climate Change

All consents should consider climate change – **being the impact on the activity**

GHG

Assessment limited to those activities needing air discharge consent – **being the impact on the climate**

Balance

Assessment is contribution to regional and national airshed, **including offsetting and balancing with other effects.**



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