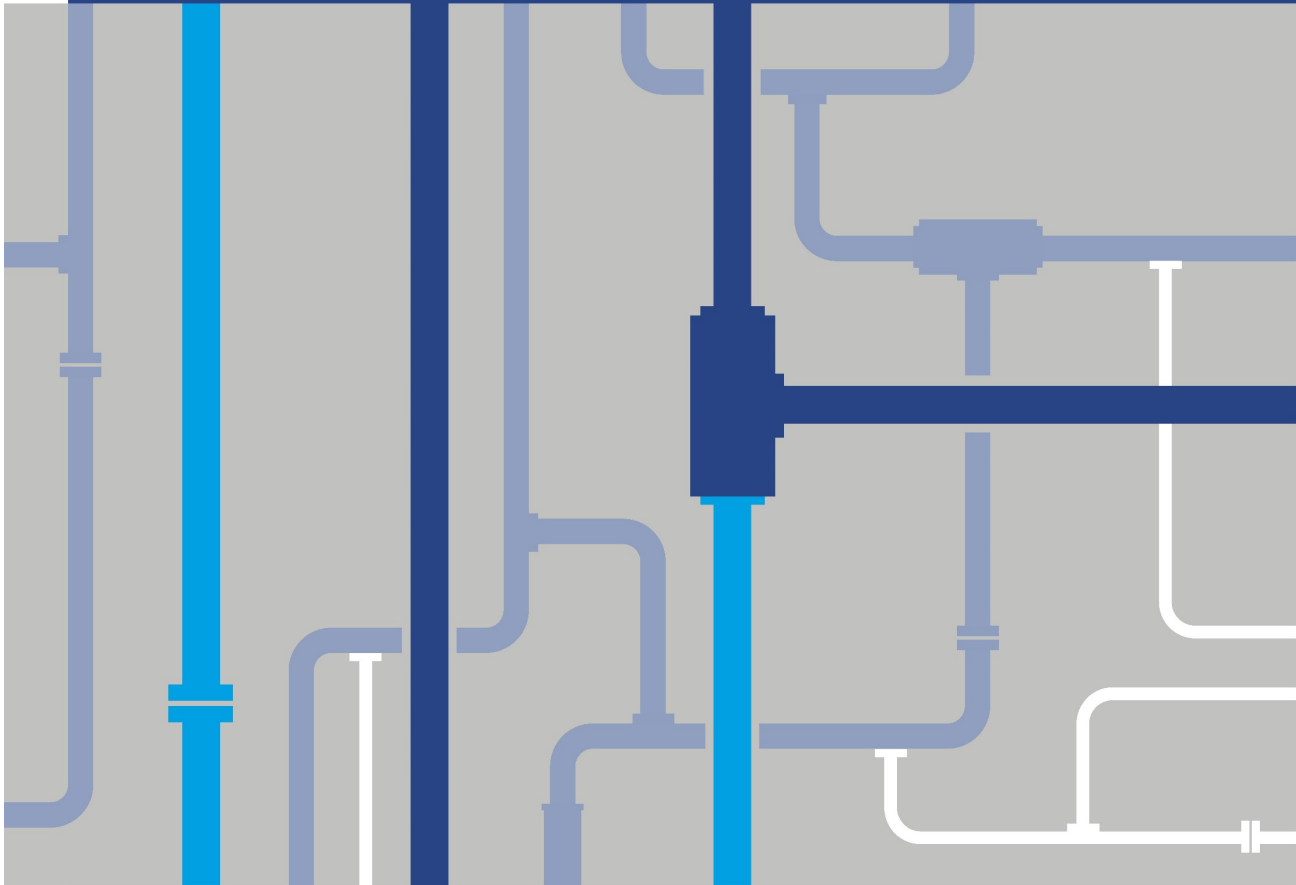
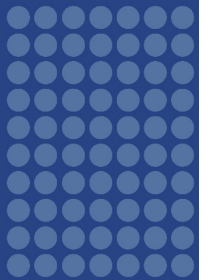


table of contents.



Environment Effects Statement | May 2021



western outer
ring main



Summary brochure

EES main report

Volume 1:	Volume 2:	Volume 3:
Executive Summary	Chapter 7 Biodiversity and habitats	Chapter 18 Matters of National Environmental Significance
Chapter 1 Introduction	Chapter 8 Water (surface water and groundwater)	Chapter 19 Environmental management framework
Chapter 2 Project rationale	Chapter 9 Land stability and ground movement	Chapter 20 Conclusion
Chapter 3 Project development and alternatives	Chapter 10 Waste (contamination and greenhouse gas)	
Chapter 4 Project description	Chapter 11 Air quality	
Chapter 5 Evaluation and assessment framework	Chapter 12 Noise and vibration	
Chapter 6 Community and stakeholder consultation	Chapter 13 Cultural heritage	
	Chapter 14 Landscape and visual	
	Chapter 15 Land use	
	Chapter 16 Social	
	Chapter 17 Safety	

Technical Reports

A. Biodiversity and habitats	H. Greenhouse gas
B. Surface water	I. Cultural heritage
C. Groundwater	J. Landscape and visual
D. Land stability and ground movement	K. Land use
E. Contamination	L. Social
F. Noise and vibration	M. Safety
G. Air quality	

Attachments

I. Pipeline Licence Application (including Construction Environment Management Plan)	III. Community and stakeholder consultation report
II. Ecological Offset Strategy	IV. Map book

EES chapters

Executive summary

ES.1	Introduction	ES-1
ES.2	The Project.....	ES-3
ES.3	Planning	ES-8
ES.4	Assessing the Project's impacts.....	ES-10
ES.5	Assessment of potential impacts	ES-11
ES.6	Managing the Project's impacts	ES-40
ES.7	Consulting with the community	ES-40
ES.8	Concluding the EES process	ES-43

Chapter 1 Introduction

1.1	Introduction	1-1
1.2	The Project proponent.....	1-1
1.3	Project objectives and benefits	1-3
1.4	Background to the Project.....	1-4
1.5	Project overview	1-6
1.6	Project Location	1-6
1.7	Project assessment and approvals	1-8
1.8	Purpose of this EES	1-11
1.9	Approach to the EES.....	1-11
1.10	EES Structure	1-14

Chapter 2 Project rationale

2.1	Introduction	2-1
2.2	How we use natural gas in Victoria.....	2-1
2.3	The importance of gas supply for Victoria’s energy security, efficiency and affordability.....	2-3
2.4	Network infrastructure constraints impacting energy security, efficiency and affordability.....	2-8
2.5	The Project’s contribution to Victoria’s energy security, efficiency and affordability.....	2-11
2.6	Overview of Project benefits	2-13

Chapter 3 Project development and alternatives

3.1	Introduction	3-1
3.2	Project history	3-1
3.3	Overview of project development process.....	3-2
3.4	Project inception.....	3-3
3.5	Early investigations	3-4
3.6	Climate change considerations.....	3-7
3.7	Options evaluation framework	3-8
3.8	Pipeline route options.....	3-9
3.9	Confirmation and refinement of pipeline alignment following options assessment	3-15
3.10	Confirmation of above ground facilities.....	3-20
3.11	Development of design and construction methodology	3-20
3.12	Obtain regulatory approvals.....	3-31
3.13	Construction and operation of pipeline	3-31
3.14	What if the Project does not proceed (‘no project’ scenario)?	3-31

Chapter 4 Project description

4.1	Introduction	4-1
4.2	Status of Project design	4-1
4.3	Project overview	4-1
4.4	The pipeline	4-3
4.5	Mainline valves	4-7
4.6	Wollert Compressor Station upgrades	4-10
4.7	Construction	4-12
4.8	Operation and maintenance	4-34
4.9	Decommissioning	4-37
4.10	Waste and spoil management	4-37

Chapter 5 Evaluation and assessment framework

5.1	Introduction	5-1
5.2	Approvals	5-1
5.3	Environment Effects Act 1978 (Vic)	5-2
5.4	Principal approvals legislation	5-3
5.5	Secondary approvals legislation	5-8
5.6	Other applicable legislation	5-10
5.7	Overview of the EES assessment framework	5-11
5.8	Scoping requirements and evaluation objectives	5-12
5.9	Assessment approach	5-14
5.10	Project development	5-20
5.11	Consultation	5-20

Chapter 6 Community and stakeholder consultation

6.1 Introduction6-1

6.2 EES scoping requirements6-1

6.3 Pipelines Act 20056-2

6.4 Approach6-2

6.5 Stakeholders6-6

6.6 Engagement channels6-14

6.7 Overview of engagement activity6-15

6.8 Feedback summary and response.....6-21

6.9 Monitoring and evaluation6-33

Chapter 7 Biodiversity and habitats

7.1 Introduction7-1

7.2 Method7-2

7.3 Existing conditions7-4

7.4 Conservation areas7-32

7.5 Risk assessment7-33

7.6 Construction impact assessment7-44

7.7 Operation impact assessment7-66

7.8 Cumulative impact assessment7-68

7.9 Environmental management7-69

7.10 Conclusion7-88

Chapter 8 Water

8.1	Introduction	8-1
8.2	Method – surface water.....	8-2
8.3	Method – groundwater	8-6
8.4	Existing conditions – surface water.....	8-8
8.5	Existing conditions – groundwater	8-21
8.6	Risk assessment – surface water	8-38
8.7	Risk assessment – groundwater	8-42
8.8	Construction impact assessment – surface water	8-44
8.9	Construction impact assessment – groundwater	8-54
8.10	Operation impact assessment – surface water	8-62
8.11	Operation impact assessment – groundwater	8-65
8.12	Cumulative impact assessment – surface water	8-67
8.13	Cumulative impact assessment – groundwater	8-68
8.14	Environmental management – surface water	8-68
8.15	Environmental management – groundwater	8-76
8.16	Conclusion	8-79

Chapter 9 Land stability and ground movement

9.1	Introduction	9-1
9.2	Method	9-2
9.3	Existing conditions	9-4
9.4	Risk assessment.....	9-7
9.5	Construction impact assessment	9-11
9.6	Operation impact assessment	9-17
9.7	Cumulative impact assessment	9-18
9.8	Environmental management	9-19
9.9	Conclusion	9-24

Chapter 10 Waste management (contamination and greenhouse gas)

10.1	Introduction	10-1
10.2	Method – greenhouse gas	10-2
10.3	Method - contamination.....	10-3
10.4	Existing conditions - greenhouse gas	10-6
10.5	Existing conditions - contamination.....	10-7
10.6	Risk assessment – greenhouse gas	10-18
10.7	Risk assessment - contamination	10-19
10.8	Construction impact assessment – greenhouse gas	10-22
10.9	Construction impact assessment – contamination	10-23
10.10	Operation impact assessment – greenhouse gas	10-32
10.11	Operation impact assessment – contamination	10-33
10.12	Cumulative impact assessment	10-34
10.13	Environmental management - greenhouse gas	10-35
10.14	Environmental management - contamination	10-37
10.15	Conclusion	10-45

Chapter 11 Air quality

11.1	Introduction	11-1
11.2	Method	11-2
11.3	Existing conditions	11-2
11.4	Risk assessment.....	11-8
11.5	Construction impact assessment	11-10
11.6	Operation impact assessment	11-16
11.7	Cumulative impact assessment	11-22
11.8	Environmental management	11-23
11.9	Conclusion	11-26

Chapter 12 Noise and vibration

12.1	Introduction	12-1
12.2	Method	12-1
12.3	Existing conditions	12-4
12.4	Risk assessment	12-12
12.5	Construction impact assessment	12-14
12.6	Operation impact assessment	12-28
12.7	Cumulative impact assessment	12-31
12.8	Environmental management	12-31
12.9	Conclusion	12-37

Chapter 13 Cultural heritage

13.1	Introduction	13-1
13.2	Method	13-2
13.3	Existing conditions	13-3
13.4	Risk assessment	13-9
13.5	Construction impact assessment	13-12
13.6	Operation impact assessment	13-19
13.7	Cumulative impact assessment	13-19
13.8	Environmental management	13-20
13.9	Conclusion	13-21

Chapter 14 Landscape and visual

14.1 Introduction 14-1

14.2 Method 14-2

14.3 Existing conditions 14-7

14.4 Risk assessment 14-14

14.5 Construction impact assessment 14-17

14.6 Operation impact assessment 14-19

14.7 Cumulative impact assessment 14-28

14.8 Environmental management 14-28

14.9 Conclusion 14-30

Chapter 15 Land use

15.1 Introduction 15-1

15.2 Method 15-2

15.3 Existing conditions 15-5

15.4 Risk assessment 15-14

15.5 Land use planning policy and strategies assessment 15-16

15.6 Construction impact assessment 15-18

15.7 Operation impact assessment 15-28

15.8 Cumulative impact assessment 15-43

15.9 Environmental Management 15-44

15.10 Conclusion 15-46

Chapter 16 Social

16.1	Introduction	16-1
16.2	Method	16-2
16.3	Existing conditions	16-3
16.4	Risk assessment	16-19
16.5	Construction impact assessment	16-22
16.6	Operation impact assessment	16-33
16.7	Cumulative impact assessment	16-37
16.8	Environmental management	16-38
16.9	Conclusion	16-47

Chapter 17 Safety

17.1	Introduction	17-1
17.2	Method	17-3
17.3	Existing conditions	17-5
17.4	APA risk management philosophy	17-8
17.5	Safety Management Study risk assessment.....	17-8
17.6	Risk assessment for aspects not addressed in the Safety Management Study.....	17-14
17.7	Bushfire hazard analysis	17-16
17.8	Environmental management	17-18
17.9	Conclusion	17-21

Chapter 18 Matters of National Environmental Significance

18.1	Introduction	18-1
18.2	Key regulatory approvals	18-1
18.3	Matters of National Environmental Significance	18-2
18.4	Method of assessment.....	18-4
18.5	Threatened ecological communities	18-10
18.6	Threatened flora.....	18-19
18.7	Threatened fauna.....	18-21
18.8	Migratory species	18-36
18.9	Conclusion	18-37

Chapter 19 Environmental Management Framework

19.1	Introduction	19-1
19.2	Responsibilities and accountabilities	19-3
19.3	APA management systems.....	19-6
19.4	Statutory approvals and consents.....	19-7
19.5	Risk assessment.....	19-8
19.6	Environmental management documents	19-9
19.7	Evaluating compliance	19-12
19.8	Consultation	19-25
19.9	Environmental management measures	19-25

Chapter 20 Conclusion

20.1	Overview	20-1
20.2	Assessment conclusions against the evaluation objectives	20-2
20.3	Environmental Management Framework.....	20-18
20.4	Next steps	20-19

Attachments

- I Pipeline licence application (including Construction environment management plan)
- II Ecological offset strategy
- III Community and stakeholder consultation report
- IV Map book

Technical reports

- A Biodiversity and habitats
- B Surface water
- C Groundwater
- D Land stability and ground movement
- E Contamination
- F Noise and vibration
- G Air quality
- H Greenhouse gas
- I Cultural heritage
- J Landscape and visual
- K Land use
- L Social
- M Safety