



WILLOWTREE PLANNING

ENVIRONMENTAL IMPACT STATEMENT: MAMRE ROAD DATA CENTRE CAMPUS (SSD-92743706)

706-752 Mamre Road, Kemps Creek
Lot 10 DP 1280592

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Prepared by Willowtree Planning Pty Ltd
for Plan Project Management Pty Ltd

2 February 2026

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ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus
706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

EIS DECLARATION

Declaration Form: Submission of EIS

Project Details

Project name	Mamre Road Data Centre Campus
Application number	SSD-92743706
Address of the land on which the development is to be carried out	706-752 Mamre Road, Kemps Creek NSW 2178

Proponent Details

Proponent name	Plan Project Management Pty Ltd
Proponent address	Level 1, Shop 2A, 17 Macmahon Street, Hurstville NSW 2220

Prepared by

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Declaration by Registered Environmental Assessment Practitioner

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Registration number	135475
Organisation registered with	Planning Institute of Australia (PIA)

Declaration	The undersigned declares that this EIS: ▪ has been prepared in accordance with the <i>Environmental Planning and Assessment Regulation 2021</i>; ▪ contains all available information relevant to the environmental assessment of the development, activity, or infrastructure to which the EIS relates; ▪ does not contain information that is false or misleading; ▪ addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project; ▪ identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments; ▪ has been prepared having regard to the DPHI's <i>State Significant Development Guidelines - Preparing an Environmental Impact Statement</i>; ▪ contains a simple and easy to understand summary of the project as a whole, having regard to the economic, environmental, and social impacts of the project and the principles of ecologically sustainable development; ▪ contains a consolidated description of the project in a single chapter of the EIS; ▪ contains an accurate summary of the findings of any community engagement; and ▪ contains an accurate summary of the detailed technical assessment of the impacts of the project as a whole.
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Signature



Date

2 February 2026



TABLE OF CONTENTS

EIS DECLARATION	i
APPENDICES LIST	viii
ABBREVIATIONS AND GLOSSARY OF KEY TERMS	x
PART 1: SUMMARY	11
1.1 Overview & Project Description	11
1.2 The Site	13
1.3 Planning and Legislative Framework	14
1.4 Engagement.....	14
1.5 Environmental Impact Assessment	15
1.6 Justification for the Proposed Development	15
PART 2: INTRODUCTION	16
2.1 Introduction	16
2.2 Statutory Requirements	16
2.3 Mandatory Considerations.....	16
2.4 Supporting Project Documentation	16
2.5 Estimated Development Cost (EDC)	17
2.6 Proponent	18
2.7 Secretary's Environmental Assessment Requirements.....	18
2.8 Agreed Planning Approval Pathway	18
2.9 Objectives of the Proposed Development	18
2.10 Development History	19
2.11 Easements, Restrictions and Covenants	27
PART 3: STRATEGIC CONTEXT.....	28
3.1 Site Description and Context	28
3.2 Strategic Planning Context.....	36
3.2.1 National Data Infrastructure Strategy & National Digital Economy Strategy	36
3.2.2 National AI Plan 2025	36
3.2.3 Greater Sydney Region Plan – A Metropolis of Three Cities	37
3.2.4 Western City District Plan	39
3.2.5 Future Transport Strategy 2056	41
3.2.6 State Infrastructure Plan 2025-26	42
3.2.7 State Infrastructure Strategy 2022-2042	42
3.2.8 Mamre Road Precinct Plan	43
3.2.9 Mamre Road Development Control Plan (2021)	44
3.3 Site Suitability.....	44
3.4 Consideration of Feasible Alternatives	45
3.5 Project Need	46
PART 4: PROJECT DESCRIPTION	47
4.1 Detailed Description of Development	47
4.2 Key Project Details	48



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

4.3	Project Area	49
4.4	Use and Operations	50
4.5	Phasing Details	53
4.6	Physical Design and Layout	57
4.7	Built Form	60
4.7.1	Building Height	63
4.7.2	Building and Landscape Setbacks	65
4.8	Visual and Acoustic Screening	68
4.8.1	Materials and Finishes	69
4.8.2	Signage	73
4.8.3	Landscape Design	75
4.9	Site Preparation and Establishment Works	76
4.9.1	Demolition and Tree Removal	76
4.9.2	Dam De-watering	77
4.9.3	Remediation	77
4.9.4	Earthworks	77
4.9.5	Retaining Walls	78
4.10	Stormwater Management	79
4.10.1	Erosion and Sediment Control	79
4.11	Road Design and Parking	80
4.11.1	External Road Network	80
4.11.2	Internal Road Network	80
4.11.3	On-Site Parking	81
4.11.4	Vehicle Access	81
4.11.5	Service and Loading	82
4.12	Utilities	82
4.13	Back-up Power System	86
4.13.1	Maintenance Testing	86
4.14	Plant and Equipment	87
PART 5: STATUTORY CONTEXT		88
5.1	Overview	88
5.2	Commonwealth Planning Context	88
5.3	Statutory Requirements	89
5.3.1	Other Approvals	91
5.3.2	Pre-conditions	94
5.3.3	Mandatory Matters for Consideration	96
PART 6: COMMUNITY ENGAGEMENT		102
6.1	Identified Stakeholders	102
6.2	Summary Of Community and Stakeholder Engagement Program	103
6.3	Summary of Engagement and Consultation Outcomes	103
6.4	Community Engagement – Sensitive Stakeholders in Bakers Lane	107



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

6.5	Community Engagement – Surrounding Industrial Estates and Businesses	108
6.6	Community Engagement – Community Groups and Associations	108
6.7	Community Engagement – Local Resident Feedback	109
6.8	Social Impacts Survey Results	109
6.9	Summary of Response to Issues Raised	111
6.10	Further/ Future Engagement	112
PART 7: ASSESSMENT AND MITIGATION OF IMPACTS		113
7.1	General Requirements	113
7.1.1	Estimated Development Cost	113
7.1.2	Employment	113
7.1.3	Power Consumption	113
7.1.4	Staging	113
7.1.5	Strategic and Statutory Context	113
7.1.6	Suitability of the site	114
7.1.7	Community and Stakeholder Engagement	114
7.1.8	Plant and Equipment Systems	114
7.1.9	Back-Up Power	114
7.1.10	Back-Up Generation System	116
7.1.11	Data Hall Cooling System	118
7.2	Noise and Vibrations	121
7.2.1	Existing Environment	121
7.2.2	Construction Noise	124
7.2.3	Operational Noise	129
7.2.4	Sleep Disturbance	132
7.2.5	Road Noise	133
7.2.6	Vibration	133
7.3	Air Quality	134
7.3.1	Existing Environment	135
7.3.2	Assessment of Impacts	138
7.3.3	Management and/or Mitigation Measures	145
7.4	Traffic and Transport	146
7.4.1	Existing Environment	146
7.4.2	Assessment of Impacts	146
7.5	Built Form and Urban Design	154
7.5.1	Design Quality	154
7.5.2	Design Option Analysis	158
7.5.3	Better Placed	160
7.5.4	Connecting with Country	161
7.5.5	Building Code of Australia	161
7.5.6	Accessibility	162
7.6	Visual Impact	162



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

7.6.1 Existing Environment.....	162
7.6.2 Assessment of Impacts.....	162
7.7 Hazards and Risk.....	172
7.7.1 Assessment of Impacts.....	172
7.7.2 Infrastructure Requirements.....	174
7.7.3 Existing Water Supply.....	174
7.7.4 Proposed Supply.....	174
7.7.5 Infrastructure Upgrade Works.....	176
7.8 Soils.....	177
7.8.1 Assessment of Impacts.....	177
7.8.2 Management and/ or Mitigation Measures.....	178
7.8.3 Water Management.....	178
7.8.4 Existing Environment.....	178
7.8.5 Assessment of Impacts.....	180
7.8.6 Management and/ or Mitigation Measures.....	183
7.9 Flooding.....	183
7.9.1 Existing Environment.....	183
7.9.2 Assessment of Impacts.....	184
7.9.3 Management and/ or Mitigation Measures.....	185
7.10 Contamination and Remediation.....	185
7.10.1 Management and/ or Mitigation Measures.....	187
7.11 Trees and Landscaping.....	187
7.11.1 Existing Environment.....	187
7.11.2 Assessment of Impacts.....	187
7.11.3 Management and/ or Mitigation Measures.....	188
7.12 Climate Change.....	188
7.12.1 GHG Emissions Assessment.....	188
7.12.2 Offset Strategy.....	190
7.13 Ecologically Sustainable Development.....	191
7.13.1 ESD Principles.....	191
7.13.2 ESD Design Initiatives.....	192
7.13.3 Power Usage Effectiveness.....	194
7.13.4 Water Usage Effectiveness.....	195
7.13.5 State Environmental Planning Policy (Sustainable Buildings) 2022.....	195
7.14 Aboriginal Cultural Heritage.....	196
7.14.1 Existing Environment.....	196
7.14.2 Assessment of Impacts.....	197
7.14.3 Consultation.....	199
7.14.4 Management and/ or Mitigation Measures.....	199
7.15 Non-Aboriginal Cultural Heritage.....	200
7.15.1 Existing Environment.....	200



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

7.15.2 Assessment of Impacts	201
7.15.3 Management and/ or Mitigation Measures	202
7.16 Biodiversity	202
7.16.1 Existing Environment	202
7.16.2 Assessment of Impacts	204
7.16.3 Management and/ or Mitigation Measures	215
7.17 Human Health	215
7.17.1 Existing Environment	216
7.17.2 Assessment of Human Health Impacts Associated with Air Quality	217
7.17.3 Assessment of Human Health Impacts Associated with Noise	221
7.17.4 Assessment of Urban Heat Island Impacts	231
7.17.5 Management and Mitigation Measures	232
7.18 Social	232
7.19 Airport Safeguarding	235
7.19.1 Assessment of Impacts	235
7.19.2 Management and Mitigation Measures	237
7.20 Bush Fire	238
7.20.1 Assessment of Impacts	240
7.21 Waste Management	241
7.21.1 Assessment of Impacts	241
7.21.2 Management and/ or Mitigation Measures	248
7.22 Cumulative Impacts	248
7.23 Planning Agreement and Development Contributions	249
PART 8: PROJECT JUSTIFICATION	250
8.1 Overview	250
8.1.1 Supports State, Regional and Local Planning Objectives	250
8.1.2 Demonstrates an Appropriate Use of a Permissible Development	250
8.1.3 Minimises Environmental Impacts	250
8.1.4 Addresses the Likely Impacts of Development	250
8.1.5 Delivers Ecologically Sustainable Development	251
8.1.5.1 The Precautionary Principle	251
8.1.5.2 Inter-Generational Equity	251
8.1.5.3 Conservation of Biological Diversity and Ecological Integrity	251
8.1.5.4 Improved Valuation, Pricing and Incentive Mechanisms	251
8.1.6 Investment into Australia's Digital Economy	251
8.1.7 Suitability of the site	251
8.1.8 Public Interest	252
APPENDIX A SEARS TABLE	253
APPENDIX B MITIGATION MEASURES	267
APPENDIX C STATUTORY COMPLIANCE TABLE	268



FIGURES

Figure 1: Proposed Development Stages / Phases	12
Figure 2: Photomontage of Mamre Road and Future SLR (15-year scenario)	13
Figure 3: Proposed ISPT Site Plan	19
Figure 4. Existing Development Applications in the MRP	22
Figure 5: General Arrangement for Aldington and Abbotts Road Upgrade	23
Figure 6. General Arrangement for Aldington and Mamre Road Upgrade	23
Figure 7. Mamre Road Upgrade between Erskine Park Road and Kerrs Road	25
Figure 8. General Arrangement for Aldington and Mamre Road Upgrade	26
Figure 9. Surrounding Data Centre Projects	27
Figure 10. Mamre Road Precinct Context	29
Figure 11. Site Context	30
Figure 12. Site Context and Zoning	31
Figure 13: Site Photograph Locations	32
Figure 14: View of the site from Mamre Anglican School on Bakers Lane	32
Figure 15: View of the site from Residential Properties at Bakers Lane	33
Figure 16: View of the site from Mamre Road	33
Figure 17: View of the site from 754 Mamre Road	34
Figure 18. Existing Site Topography	35
Figure 19. Aboriginal Sites	36
Figure 20: Western Sydney Aerotropolis Precinct Plan	38
Figure 21: Western City District Industrial and Urban Service Land and Freight Assets	39
Figure 22: Mamre Road Precinct Plan	43
Figure 23:. Campus Plan	48
Figure 24. Current Construction to the East & South of Site	50
Figure 25. COSH Building	53
Figure 26. Phase 1 Site Plan	54
Figure 27. Phase 2 Site Plan	55
Figure 28. Phase 3 Site Plan	55
Figure 29. Phase 4 Site Plan	56
Figure 30. Phase 5 Site Plan	56
Figure 31. Phase 6 Site Plan	57
Figure 32. Phase 1 & 2 (Includes sub-parcel A & B) Site Plan	58
Figure 33. Phase 3 & 4 (Includes sub-parcel C & D) Site Plan	59
Figure 34. Phase 5 & 6 (Includes sub-parcel E & F) Site Plan	60
Figure 35. Proposed Photomontage – Landscaping evolved over 15 years (VP2)	61
Figure 36. Proposed Photomontage from Emmaus Catholic College looking South (VP7a) Forecasted for 2035	61
Figure 37. Proposed Photomontage from Emmaus Catholic College look Southwest (VP7b) Forecasted for 2035	62
Figure 38. Proposed Photomontage from Bakers Lane Approach from East (VP8)	62



Figure 39. Proposed Photomontage from 845 Mamre Road looking Northeast (VP10)	63
Figure 40. Height Control Diagram	64
Figure 41. Northern Elevation (Sub parcel A and B)	64
Figure 42. Northern Elevation (Sub parcel C and D)	64
Figure 43. Northern Elevation (Sub parcel E and F)	65
Figure 44. Mamre Road Section AA	65
Figure 45. Mamre Road Section BB	66
Figure 46. Southern Link Road Section CC	66
Figure 47. Road 1 Section DD	66
Figure 48. Proposed Development Setbacks (northern boundary)	67
Figure 49. Proposed Development Setbacks (western boundary)	67
Figure 50. Proposed Photomontage Inclusive of Screening	68
Figure 51: Proposed Extent of Screening	69
Figure 52: Proposed Visual/Acoustic Screen	69
Figure 53. Proposed Envelope Sub Parcel Materials	70
Figure 54. Proposed Campus Operations and Support Hub Materials	71
Figure 55. Proposed Building Envelope Parcel Renders	71
Figure 56. Proposed Building Envelope Parcel Northern Elevation	72
Figure 57. Proposed Building Envelope Parcel Eastern Elevation	72
Figure 58. Proposed Building Envelope Parcel Western Elevation	72
Figure 59. Proposed External Finishes Schedule	73
Figure 60. Wayfinding Strategy	74
Figure 61. Landscape Master Plan	76
Figure 62. Bulk Earthworks Plan	78
Figure 63. Typical Retaining Wall Section Adjacent to Mamre Road	79
Figure 64. Site Access Strategy & Traffic Road Network	81
Figure 65. Bulk Supply Tank Locations	83
Figure 66. Day Tank Locations	84
Figure 67. Land Use Map (NSW Government, 2025)	99
Figure 68. Example of a typical containerised 2MW generator	117
Figure 69. Site Location, nearby noise sensitive receivers, land uses and NCSs	124
Figure 70: Minimum working distances (MWD) for cosmetic damage from the construction area extents (most vibration intensive plant)	134
Figure 71: Location of Sensitive Receptors Surrounding the Proposal Site and Population Density (Part 1)	136
Figure 72: Location of Sensitive Receptors Surrounding the Proposal Site and Population Density (Part 2)	137
Figure 73. Trip Rate Comparison	149
Figure 74. Construction Vehicle Routes	153
Figure 75: Campus sub parcel arrangement	155
Figure 76: Minimum Compliant Setback Scenario	158
Figure 77: Proposed Setback Scenario	158



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Figure 78: Visual Impact Assessment Viewpoint Locations	163
Figure 79: Magnitude of Change for VP 4	164
Figure 80: Magnitude of Change for VP 5	165
Figure 81: Magnitude of Change for VP 6	165
Figure 82: Magnitude of Change for VP 7	165
Figure 83: Magnitude of Change for VP 1	166
Figure 84: Magnitude of Change for VP 2	166
Figure 85: Magnitude of Change for VP 8	167
Figure 86: Magnitude of Change for VP 10	167
Figure 87: Magnitude of Change for VP 11	167
Figure 88: Magnitude of Change for VP 3	168
Figure 89: Magnitude of Change for VP 9	169
Figure 90: Magnitude of Change for VP 12	169
Figure 91: Magnitude of Change for VP 14	169
Figure 92: Magnitude of Change for VP 17	170
Figure 93: Magnitude of Change for VP 13	170
Figure 94: Magnitude of Change for VP 15	171
Figure 95: Magnitude of Change for VP 16	172
Figure 96: MRP Integrated Stormwater Plan	180
Figure 97: Site Flood Affection	184
Figure 98: Proposed Campus Operations and Support Hub Materials	186
Figure 99: Location of Aboriginal Sites	197
Figure 100: Archeological Potential Map	201
Figure 101: Vegetation Communities	203
Figure 102: Typical Summer Midday UTCI	232
Figure 103: Bush Fire Prone Land	239

TABLES

TABLE 1: DOCUMENT SCHEDULE	16
TABLE 2: PROPONENT DETAILS	18
TABLE 3: DEVELOPMENT HISTORY	20
TABLE 4: DATA CENTRE PROJECTS IN CLOSE PROXIMITY	26
TABLE 5: SITE CHARACTERISTICS	34
TABLE 6: PROPOSED DEVELOPMENT PARTICULARS	48
TABLE 7: EARTHWORKS, TREE REMOVAL AND ROAD WORKS BEYOND PRIMARY DEVELOPMENT SITE	49
TABLE 8: PROPOSED EMPLOYMENT	51
TABLE 9: PHASING DETAILS	53
TABLE 10: CUT & FILL QUANTITIES	78
TABLE 11: DIESEL FUEL TANKS	82



TABLE 12: INDUSTRIAL WATER TANKS	84
TABLE 13: INDUSTRIAL FIRE WATER TANKS.....	85
TABLE 14: GENERATOR QUANTITIES BY SUB-PARCEL AND LEVEL.....	86
TABLE 15: STATUTORY REQUIREMENTS OVERVIEW.....	90
TABLE 16: OTHER APPROVALS.....	91
TABLE 17: PRE-CONDITIONS OVERVIEW	94
TABLE 18: MATTERS FOR MANDATORY CONSIDERATION	97
TABLE 19: STAKEHOLDER GROUP	102
TABLE 20: ENGAGEMENT TOOLS	103
TABLE.21: AGENCY AND AUTHORITY ENGAGEMENT	104
TABLE 22: IDENTIFIED SENSITIVE STAKEHOLDERS IN BAKERS LANE.....	107
TABLE 23: SURROUNDING INDUSTRIAL ESTATES AND BUSINESSES	108
TABLE 24: COMMUNITY GROUPS AND ASSOCIATIONS	108
TABLE 25: RESPONSE TO ISSUES RAISED	111
TABLE 26: STATUTORY AND STRATEGIC CONTEXT REVIEW.....	113
TABLE 27. BACKUP POWER OPTIONS ANALYSIS SUMMARY	115
TABLE 28: MAXIMUM GENERATOR QUANTITIES ACROSS THE SITE	117
TABLE 29. MECHANICAL ROOF PLANT ASSESSMENT	119
TABLE 30: MEASURED RATING BACKGROUND NOISE LEVELS (RBL), dB(A)	122
TABLE 31: RECIEVER LOCATIONS.....	122
TABLE 32: APPROXIMATE CONSTRUCTION PHASES AND DURATION OF WORKS	125
TABLE 33: MRP AREA-BASED PRECINCT NOISE GOAL ADJUSTMENT.....	129
TABLE 34: RECEIVERS WITH IDENTIFIED RESIDUAL NOISE IMPACTS (WITHIN THE MRP – SHORT TERM RECEIVERS)	131
TABLE 35: SUMMARY OF MODELLING SCENARIOS	138
TABLE 36: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E1	141
TABLE 37: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E2.....	141
TABLE 38: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E3	142
TABLE 39: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E4	142
TABLE 40: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E5	143
TABLE 41: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE – SCENARIO E6	143
TABLE 42: BENCHMARKED SITES – PARKING RATES	147
TABLE 43: FUTURE INTERSECTION MODELLING CONDITIONS – OPENING YEAR (2031).....	150
TABLE 44: FUTURE INTERSECTION MODELLING CONDITIONS – PROJECT CASE (2036)	151
TABLE 45: CONSTRUCTION ACCESS ARRANGEMENTS	152
TABLE 46. TRAFFIC GENERATION THRESHOLDS	153
TABLE 47: SECTION 4.21 OBJECTIVES - MRP DCP	155
Table 48: SECTION 4.21 MRP DCP CONTROLS.....	157
TABLE 49: OPTIONS ASSESSMENT.....	159
TABLE 50. NORTHERN EDUCATIONAL AND AGED CARE RECEPTORS	164
TABLE 51. ROAD CORRIDOR AND IMMEDIATE APPROACH ROUTE RECEPTORS	166



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 52. WESTERN, NORTHERN AND DISTRICT-SCALE RESIDENTIAL RECEPTORS	168
TABLE 53. SOUTHERN DISTRICT-SCALE PUBLIC-DOMAIN RECEPTOR.....	170
TABLE 54. SOUTHEAST AND EASTERN INDUSTRIAL-TRANSITION RECEPTORS	171
TABLE 55. OVERVIEW OF DANGEROUS GOOD.....	172
TABLE 56. DIESEL STORAGE	173
TABLE 57. LOCATION FOR IDENTIFIED HAZARDS.....	173
TABLE 58. INFRASTRUCTURE STAGING SUMMARY	176
TABLE 59: PREFERRED REMEDIAL STRATEGY	186
TABLE 60. EMISSION ESTIMATES	189
TABLE 61. OPERATIONAL SCOPE 3 EMISSIONS (2032).....	189
TABLE 62. ILLUSTRATIVE CONSTRUCTION SCOPE 3 EMISSIONS (2025-2080).....	189
TABLE 63: ESD PRINCIPLES	191
TABLE 64. TOTAL WATER CONSUMPTION ESTIMATES	195
TABLE 65. SUMMARY OF POTENTIAL ARCHAEOLOGICAL IMPACTS.....	198
TABLE 66: ASSESSMENT OF INDIRECT IMPACTS	206
TABLE 67: IDENTIFICATION OF INDIRECT IMPACTS.....	213
TABLE 68: AIR QUALITY - HEALTH RISK ASSESSMENT	218
TABLE 69: NOISE- HEALTH RISK ASSESSMENT	222
TABLE 70: ASSESSMENT OF NASF GUIDELINES	236
TABLE 71: COMPLIANCE WITH PBP	240
TABLE 72: ESTIMATED DEMOLITION WASTE GENERATION	242
TABLE 73: ESTIMATED CONSTRUCTION WASTE GENERATION.....	243
TABLE 74: CAMPUS OFFICE WASTE GENERATION.....	246
TABLE 75: TECHNICAL OFFICE WASTE GENERATION.....	247
TABLE 76: CAMPUS OFFICE WASTE STORAGE.....	247
TABLE 77: DATA CENTRE WASTE STORAGE AND COLLECTION FREQUENCY	247
TABLE 78: SUMMARY OF CONTRIBUTION	249



APPENDICES LIST

Appendix 1	Secretary's Environmental Assessment Requirements
Appendix 2	Estimated Development Cost Report / Economic Impact Assessment
Appendix 3	Title Documents
Appendix 4	Architectural Drawings
Appendix 5	Architectural Design Report
Appendix 6	Survey Plan
Appendix 7	Building Code of Australia Compliance Report
Appendix 8	Accessibility Report
Appendix 9	Visual Impact Assessment
Appendix 10	Transport Management and Accessibility Plan (TMAP), Construction Traffic Management Plan (CTMP), Green Travel Plan (GTP)
Appendix 11	Landscape Plan
Appendix 12	Arboricultural Impact Assessment
Appendix 13	Ecologically Sustainable Development Report
Appendix 14	NABERS Embodied Emissions Materials Form
Appendix 15	Biodiversity Development Assessment Report
Appendix 16	Air Quality Impact Assessment
Appendix 17	Noise and Vibration Impact Assessment
Appendix 18	Geotechnical Assessment
Appendix 19	Surface Water & Groundwater Impact Assessment
Appendix 20	Flood Impact Risk Assessment
Appendix 21	Infrastructure Delivery Strategy Report and Civil Infrastructure Report / Drawings
Appendix 22	Preliminary Risk Screening Assessment
Appendix 23	Detailed Site Investigation
Appendix 24	Remediation Action Plan
Appendix 25	Waste and Resource Recovery Management Plan
Appendix 26	Aboriginal Cultural Heritage Assessment
Appendix 27	Addendum Aboriginal Cultural Heritage Assessment
Appendix 28	Statement of Heritage Impact
Appendix 29	Archaeological Assessment
Appendix 30	Social Impact Assessment
Appendix 31	Bushfire Assessment Report
Appendix 32	Community Engagement Report
Appendix 33	Mamre Road Precinct Development Control Plan 2021 Assessment
Appendix 34	Airport Safeguarding Assessment
Appendix 35	Plant and Equipment Systems Report
Appendix 36	GHG Assessment Report
Appendix 37	Water and Stormwater Management Plan
Appendix 38	Acid Sulfate Soils Assessment
Appendix 39	Earthworks Strategy Report
Appendix 40	Salinity Management Plan
Appendix 41	Sediment and Erosion Control Plan
Appendix 42	Vegetation Management Plan



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- Appendix 43** Aquatic & Riparian Impact Assessment
- Appendix 44** Weed Eradication and Management Plan
- Appendix 45** Human Health Assessment



ABBREVIATIONS AND GLOSSARY OF KEY TERMS

Acronym	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
AQIA	Air Quality Impact Assessment
BC Act	<i>Biodiversity Conservation Act 2016</i>
BCA	Building Code of Australia
BDAR	Biodiversity Development Assessment Report
Council	Penrith City Council
CEMP	Construction Environmental Management Plan
DA	Development Application
DP	Deposited Plan
DPHI	Department of Planning, Housing, and Infrastructure
EDC	Estimated Development Cost
EIS	Environmental Impact Statement
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
ESD	Ecologically Sustainable Development
FSR	Floor Space Ratio
GFA	Gross Floor Area
LGA	Local Government Area
MNES	Matter of National Environmental Significance
MRP	Mamre Road Precinct
MRP DCP 2021	<i>Mamre Road Precinct Development Control Plan 2021</i>
NCC	National Construction Code
NVIA	Noise and Vibration Impact Assessment
RL	Reduced level
SEARs	Secretary's Environmental Assessment Requirements
SECPP	Sydney Eastern City Planning Panel
SEPP	State Environmental Planning Policy
SSDA	State Significant Development Application
TIA	Transport Impact Statement
TPZ	Tree Protection Zone
VIA	Visual Impact Assessment
WM Act	Water Management Act 2000
WMP	Waste Management Plan
WSEA	Western Sydney Employment Area
WSUD	Water Sensitive Urban Design



PART 1: SUMMARY

1.1 Overview & Project Description

This State Significant Development Application (SSDA) is for the staged construction and operation of a 1.2-Gigawatt (GW) Data Centre Campus (the proposal) at 706-752 Mamre Road, Kemps Creek (the site). This Environmental Impact Statement (EIS) has been prepared by Willowtree Planning on behalf of Plan Project Management Pty Ltd (the Proponent) to support the proposed development and consider all relevant statutory and environmental matters. In short, the proposal involves the staged construction and operation of a Data Centre Campus, comprising:

- Site preparation works, including tree clearing;
- Dam dewatering;
- Site remediation;
- Bulk earthworks across the site and retaining structures;
- Battering to adjoining properties to the south and east;
- Infrastructure comprising civil works, stormwater, and utilities servicing, including:
 - Lead-in power infrastructure from TransGrid Sydney West Substation (three lead-in connections proposed).
 - Sediment basins and interim stormwater management measures in advance of connection to regional stormwater infrastructure.
- Construction of future local roads through the site, including:
 - North-south local road (Road 1);
 - East-west local road (Road 2);
 - Temporary access road from Mamre Road (for construction purposes); and
 - Roundabout at the southern site boundary;
- Land allocation for:
 - Mamre Road Stage 2 upgrade widening delivered by TfNSW; and
 - Southern Link Road (SLR) ultimate scenario delivered by TfNSW; and
 - Future automated vehicle route running north to south through the site;
- Staged construction and 24/7 operation of a Data Centre Campus containing the following:
 - 172,640m² of technical data hall floor space, designed to accommodate 26 shells spread across 6 purpose-built (buildings) sub parcels A-F (maximum building height of 40m measured from proposed ground level);
 - 54,854 m² of ancillary office & corridor floor space;
 - Plant equipment including 728 cooling units;
 - 846 backup generators
 - Fuel storage on Site is 18,056 kilolitres, per Shell configuration comprises of diesel storage via 5 x 132 kL Bulk Tanks and 34 x 1 kL Day Tanks, with additional 2 x 1 kL Day Tanks for shells with tech space ;
 - Total of 2,652,000 Kg of PTU Lithium-ion battery storage;
 - 2 x 433,800L water tanks for fire protection;
 - 619 at-grade car parking spaces;
 - Wayfinding signage;
 - One (1) incoming electrical switching station and campus electrical substation;
 - One (1) static synchronous compensator (STATCOM); and
 - Six (6) sub-parcel electrical substations.
- Acoustic and visual screening along the western and northern boundaries;
- Complementary landscaping and offset planting.
- Combined sprinkler and hydrant system with dual water supply meeting FM Global and Australian Standard requirements.
- Total estimated construction period of approximately 10 years from commencement, subject to market demand, tenant requirements, and regulatory approvals:



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The proposed development also incorporates land beyond the main development site to accommodate electrical infrastructure and earthworks, as discussed in **Section 4**.

The proposed development is to be constructed in the following phases:

- **Phase 0*** - Conduct western bulk earthworks within Stage 1 area, establish temporary construction access, and construct boundary retaining walls.
- **Phase 1** - Deliver core campus infrastructure, services, access roads, and full Parcel A facilities.
- **Phase 2** - Construct Parcel B comprising four data halls with associated support infrastructure and access.
- **Phase 3** - Develop Parcel C with data halls, support infrastructure, and a northern extension of the campus access road.
- **Phase 4** - Deliver Parcel D with data halls, utilities, an eastern road extension, and a temporary emergency access route.
- **Phase 5** - Complete eastern earthworks and construct Parcel E, Road 2, drainage works, perimeter access, and landscaping.
- **Phase 6** - Construct Parcel F with five data halls, support facilities, utilities, and access infrastructure.
- **Phase 7**** - Construct Road 1 from the roundabout to the Southern Link Road corridor with a temporary turning head.

*Phases 0 and 7 not shown on plan as these are civil related only

**Stage 3 shown is by others and not part of this proposal

Figure 1 below identifies the proposed phasing across the site and **Figure 2** shows the development as viewed from the corner of Mamre Road and the future SLR.

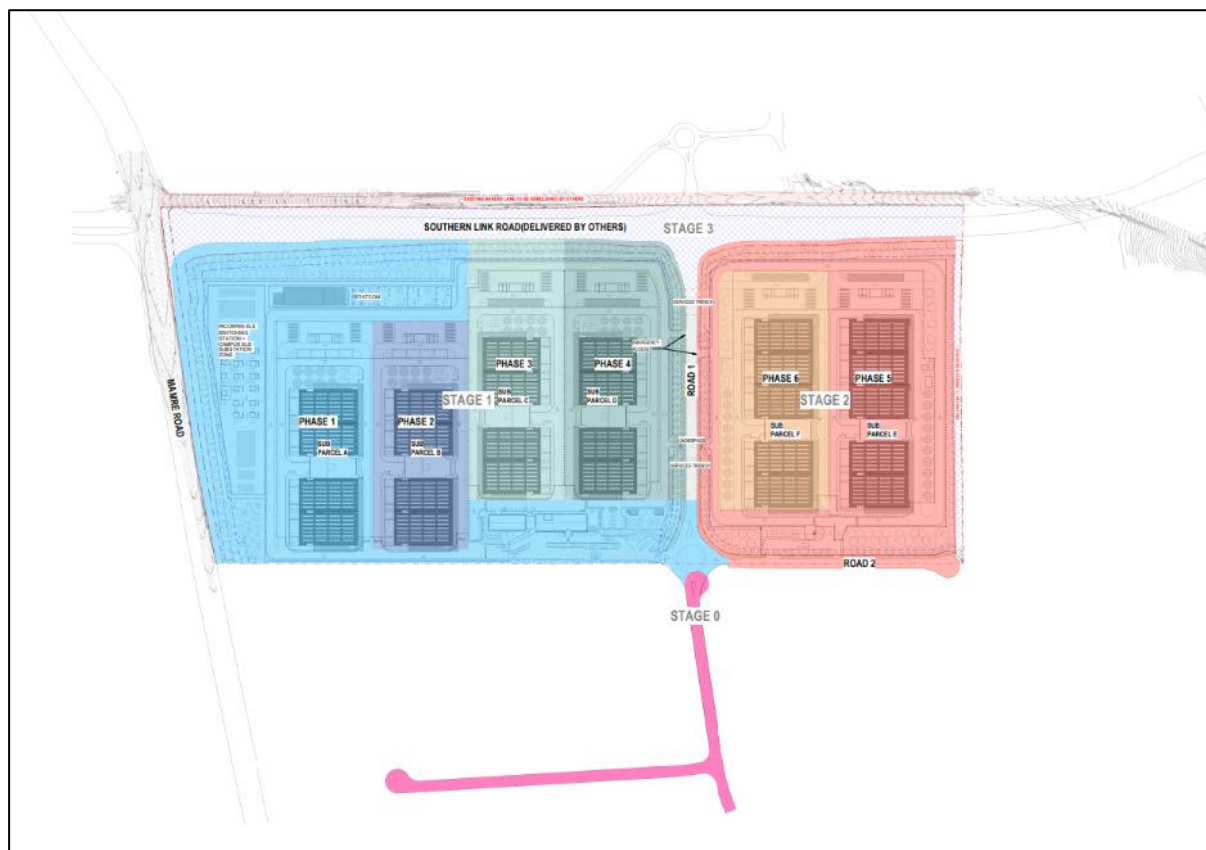


Figure 1: Proposed Development Stages / Phases

Source: Greenbox, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The proposed development is a State Significant Development (SSD) pursuant to Chapter 2, Schedule 1, Clause 25 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP), as it is development for the purpose of a data centre with a total power consumption of 1.2 GW, exceeding the 15-megawatt threshold. The Secretary of the Department of Planning, Housing and Infrastructure (DPHI) issued project-specific Secretary's Environmental Assessment Requirements (SEARs) (reference: SSD-92743706) on 30 September 2025, in accordance with Section 4.39 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).



Figure 2: Photomontage of Mamre Road and Future SLR (15-year scenario)

Source: Geoscapes, 2025

1.2 The Site

The site is legally described as Lot 10 Deposited Plan (DP) 1280592 and is located at 706-752 Mamre Road, Kemps Creek, within the Penrith Local Government Area (LGA). Notable attributes include:

- It forms part of the Mamre Road Precinct (MRP) within the Western Sydney Employment Area (WSEA), which was rezoned by the NSW Government in June 2020 to facilitate 850 hectares of industrial land.
- It is zoned IN1 General Industrial under *State Environmental Planning Policy (Industry and Employment) 2021* (Industry and Employment SEPP), with a portion of land adjoining Mamre Road zoned SP2 Infrastructure for future road acquisition and upgrades.
- The overall area is approximately 52 hectares, is located at the intersection of Mamre Road and Bakers Lane, with frontages of 1.1 kilometres to Bakers Lane (north) and 490 metres to Mamre Road (east). Bakers Lane and surrounding land areas have been identified for the future Southern Link Road to be delivered by Transport for NSW (TfNSW).
- The site is currently vacant and contains six dams, with predominantly cleared grassland and small patches of remnant native vegetation.
- Most of the site is classified as urban-capable certified land under the Cumberland Plain Conservation Plan, with only a small northeastern portion containing biodiversity values.
- The site slopes from northeast to southwest, falling approximately 43 metres across the site.
- The site is surrounded by industrial and employment land uses consistent with the precinct's character. Directly north across Bakers Lane are Mamre Anglican School, Trinity Catholic Primary School, Emmaus Catholic College, and Emmaus Retirement Village.
- Surrounding development includes warehouses, logistics facilities and emerging data centres, reflecting the precinct's evolution as a major industrial and technology hub. The site is located



approximately 8.5 kilometres northeast of Western Sydney Airport, with excellent connectivity to the M4 and M7 motorways via Mamre Road.

1.3 Planning and Legislative Framework

All relevant Federal and State legislation and Environmental Planning Instruments (EPIs) have been considered in the preparation of this EIS. The proposed development is satisfactory in terms of its legislative context, on the basis that:

- The proposed development is wholly permissible with consent in the IN1 General Industrial zone under *State Environmental Planning Policy (Industry and Employment) 2021* (Industry and Employment SEPP);
- The proposed development is considered consistent with the objectives of the zone by facilitating employment-generating development;
- All applicable State Environmental Planning Policies (SEPPs) have been considered and are satisfied;
- The Mamre Road Development Control Plan 2021 (MRP DCP 2021) has been considered, and the proposed development generally complies with the relevant controls, with detailed justification provided for any departures;
- Strategic policies that apply to the locality and wider region have been considered and the proposed development is consistent with the strategic context of the area, supporting NSW to become a leader in adoption and use of digital technology as envisaged by the State Infrastructure Strategy and the delivery of critical digital infrastructure for the Western Sydney Aerotropolis; and
- The proposed development can satisfy the relevant provisions of the National Construction Code (NCC) and applicable Australian Standards.

The proposed development has been assessed against the relevant statutory requirements, preconditions and mandatory considerations as addressed within **Section 2.2** of this EIS and the supporting technical reports. The matters identified in the SEARs issued for the proposed development have been assessed in detail, with specialist reports underpinning the key findings and recommendations to address the requirements (refer to **PART 7: ASSESSMENT AND MITIGATION OF IMPACTS** of this EIS for details).

1.4 Engagement

The Proponent and broader project team have undertaken extensive community and stakeholder engagement in the preparation of this EIS. This has included consultation with various stakeholders, including relevant government agencies (such as NSW EPA, Transport for NSW, and Penrith City Council), utility providers, Aboriginal community representatives, surrounding industrial landowners and businesses, and local residents.

Targeted and ongoing consultation has been carried out with sensitive receivers to the north of the site along Bakers Lane, including Mamre Anglican School, Emmaus Catholic College, Trinity Catholic Primary School, and Catholic Healthcare's Emmaus Retirement Village and Residential Aged Care Home. Initial meetings were held in October 2025 to brief these facilities on the proposed development and receive feedback, with follow-up meetings in November 2025 where a revised scheme was presented incorporating design changes in response to their concerns. Key design refinements included relocating buildings C and D to provide greater setbacks from the schools, and minimising construction traffic movements on Bakers Lane by shifting primary access to Berri-Werri Drive to the south. These consultations also informed the preparation of technical assessments, including noise and vibration, air quality, and visual impact studies specifically addressing impacts on these northern receivers.



The proposed development incorporates feedback received through community consultation, as detailed in **PART 6: COMMUNITY ENGAGEMENT** of this EIS and the Community Engagement Report located at **Appendix 32** Community Engagement Report.

1.5 Environmental Impact Assessment

An assessment of environmental impact has been undertaken against the relevant planning controls and policies in accordance with the requirements of the issued SEARs. Additionally, a number of expert consultants have been engaged to specifically consider relevant aspects of the proposal. The environmental impact assessment has found that the proposed development satisfies with the relevant controls, and it is considered that appropriate mitigation measures can be put in place to minimise any identified risks.

1.6 Justification for the Proposed Development

The proposed development is justified for the following reasons:

- The proposal represents \$9 billion investment in NSW's digital infrastructure. The proposed development responds to Australia's rapidly expanding technology sector and strengthening position as a critical digital hub within the APAC region.
- **During construction**, it is estimated to result in a significant (over a fixed period) increase in economic activity across Greater Sydney, through a mix of direct and indirect (flow-on) activity, including:
 - \$13.7 billion in output (including \$6.7 billion in direct activity).
 - \$5 billion in contributions to Gross Regional Product (GRP) (including \$1.6 billion in direct activity).
 - \$2.8 billion in incomes and salaries paid to households (including \$1 billion in direct income). 29,959 ongoing FTE jobs (including 10,569 FTE directly related to activity at the site).
- **When operational**, the proposal is estimated to result in an increase in economic activity across Greater Sydney:
 - \$1.4 billion in output (including \$661.2 million in direct activity).
 - \$633.8 million in contributions to GRP (including \$274.3 million in direct activity).
 - \$326.9 million in incomes and salaries paid to households (including \$135.1 million in direct income).
 - 2,775 ongoing FTE jobs (including 800 FTE directly related to activity at the Site).
- The proposed development is crucial component of the continued growth in Australia's data storage sector, which businesses, households, and public authorities are reliant on for day-to-day operation.
- Engagement with relevant community, government, and agency stakeholders has been undertaken and all comments have been carefully considered when designing the proposal.
- The EIS appropriately addresses all strategic and statutory considerations, including the items raised in the SEARs.
- The proposed development will not result in any unacceptable social, economic, or environmental impacts.
- Suitable mitigation measures and conditions of consent can be implemented during the construction and operation of the development.



PART 2: INTRODUCTION

2.1 Introduction

This EIS has been prepared by Willowtree Planning on behalf of Plan Project Management Pty Ltd (the Proponent) and is submitted to the NSW Department of Planning, Housing and Infrastructure (DPHI), in support of a State Significant Development Application (SSDA) for the Mamre Road Data Centre Campus, involving the staged construction and operation of a 1.2-GW Data Centre Campus at 706-752 Mamre Road, Kemps Creek.

This EIS describes the site and proposed development, responds to the SEARs, and assesses the proposed development against all relevant legislative requirements, EPIs, and planning policies.

2.2 Statutory Requirements

The relevant statutory requirements of the proposed development are suitably addressed in **Section 5.3** and **Appendix 33** Mamre Road Precinct Development Control Plan 2021 Assessment of this EIS.

2.3 Mandatory Considerations

Mandatory matters for consideration by the consent authority are outlined in **Section 5.3.3** of this EIS.

2.4 Supporting Project Documentation

Documents provided in support of the proposal are outlined in **TABLE 1**.

TABLE 1: DOCUMENT SCHEDULE		
Appendix	Document Title	Consultant
Appendix 1	Secretary's Environmental Assessment Requirements	N/A
Appendix 2	Estimated Development Cost / Economic Impact Assessment	Linesight / Atlas Economics
Appendix 3	Title Documents	N/A
Appendix 4	Architectural Drawings	Greenbox Architecture
Appendix 5	Architectural Design Report	Greenbox Architecture
Appendix 6	Survey Plan	Land Partners
Appendix 7	Building Code of Australia Compliance Report	MBC Group
Appendix 8	Accessibility Report	MBC Group
Appendix 9	Visual Impact Assessment	Geoscapes
Appendix 10	Transport Management and Accessibility Plan Construction Traffic Management Plan Green Travel Plan	Ason Group
Appendix 11	Landscape Plan	Geoscapes
Appendix 12	Arboricultural Impact Assessment	Creative Planning Solutions
Appendix 13	Ecologically Sustainable Development Report	E-Lab Consulting
Appendix 14	NABERS Embodied Emissions Materials Form	Linesight
Appendix 15	Biodiversity Development Assessment Report	Biosis



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Appendix 16	Air Quality Impact Assessment	Northstar
Appendix 17	Noise and Vibration Impact Assessment	Renzo Tonin & Associates
Appendix 18	Geotechnical Assessment	PSM
Appendix 19	Water Quality Report - Surface Water & Groundwater Impact Assessment	JBS&G
Appendix 20	Flood Impact Risk Assessment	AT&L
Appendix 21	Infrastructure Delivery Strategy Report and Civil Infrastructure Report	AT&L
Appendix 22	Preliminary Risk Screening Report	Core Engineering
Appendix 23	Detailed Site Investigation	JBS&G
Appendix 24	Remediation Action Plan	JBS&G
Appendix 25	Waste and Resource Recovery Management Plan	MRA Consulting Group
Appendix 26	Aboriginal Cultural Heritage Assessment	Biosis
Appendix 27	Addendum Aboriginal Cultural Heritage Assessment	Biosis
Appendix 28	Statement of Heritage Impact	Biosis
Appendix 29	Historical Archaeological Assessment	Biosis
Appendix 30	Social Impact Assessment	Willowtree Communications
Appendix 31	Bushfire Risk Assessment	Blackash Bushfire Consulting
Appendix 32	Community Engagement Report	Willowtree Communications
Appendix 33	Mamre Road Precinct Development Control Plan 2021 Assessment	Willowtree Planning
Appendix 34	Airport Safeguarding Assessment	L-R Airport Consulting
Appendix 35	Plant and Equipment Systems Report	Aurecon
Appendix 36	Green House Gas (GHG) Assessment Report	E-Lab Consulting
Appendix 37	Water and Stormwater Management Plan	AT&L
Appendix 38	Acid Sulfate Soils Assessment	JBS&G
Appendix 39	Earthworks Strategy Report	AT&L
Appendix 40	Salinity Management Plan	PSM
Appendix 41	Erosion and Sediment Control	AT&L
Appendix 42	Vegetation Management Plan	Biosis
Appendix 43	Aquatic & Riparian Impact Assessment	Biosis
Appendix 44	Weed Eradication and Management Plan	Biosis
Appendix 45	Human Health Assessment	E-Lab Consulting

2.5 Estimated Development Cost (EDC)

The EDC of the proposed development, in accordance with the definition under *the Environmental Planning & Assessment Regulation 2021* (EP&A Regulation), is estimated to be \$8,999,802,659.81 (ex



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus
706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

GST). An EDC Report, prepared by Linesight, is included in **Appendix 2** Estimated Development Cost Report.

It is expected that the proposal would generate approximately 10,569 direct construction jobs and approximately 800 operational jobs related to activity at the site.

2.6 Proponent

The proponent's details for the proposal are listed in the **TABLE 2** below.

TABLE 2: PROPONENT DETAILS	
Company Name	Plan Project Management Pty Ltd
ABN	21 624 589 779
Address	Shop 2, Level 1, 17 MacMahon Street, Hurstville NSW 220
Contact Name	Jeffry Kusnan
Position	Associate Director
Email Address	Jeffry@planpm.com.au

2.7 Secretary's Environmental Assessment Requirements

Proposed Development Specific SEARs were issued by NSW DPHI on 30 September 2025 and are addressed by this EIS.

The Proposed Development Specific SEARs are included in **Appendix 1** Secretary's Environmental Assessment Requirements, with a detailed compliance table demonstrating how each requirement has been addressed.

This EIS is also consistent with the minimum requirements for an EIS, as set out in Division 5 of the EP&A Regulation and has considered the *State significant development guidelines – preparing an environmental impact statement*.

2.8 Agreed Planning Approval Pathway

Pursuant to Chapter 2, Schedule 1, Clause 25 of the Planning Systems SEPP, as the proposed development is development for the purpose of a data centre that has a total power consumption of more than 15 megawatts, and therefore the proposed development is classified as SSD. The Secretary of NSW DPHI has issued project-specific SEARs (reference: SSD-92743706), in accordance with Section 4.39 of the EP&A Act.

2.9 Objectives of the Proposed Development

The objectives of the proposed development are to:

- Optimise proximity to existing power and telecommunications infrastructure to support NSW's digital economy growth and Australia's digital sovereignty and enable Western Sydney's transformation into a technology and innovation hub.
- Provide sovereign data storage capacity and low-latency data processing for Australian businesses and government, addressing data infrastructure gaps identified in the National Data Infrastructure Strategy.
- Deliver critical digital infrastructure that supports NSW to become a leader in adoption and use of digital technology, consistent with the State Infrastructure Strategy 2018-2028.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- Support Australia's digital sovereignty and data security priorities as recognised in the National Digital Economy Strategy, enabling compliance with data sovereignty requirements across financial services, healthcare, government and defence sectors.
- Deliver a state-of-the-art hyperscale data centre campus that provides enterprise and government cloud services with network redundancy and data backup capabilities.
- Leverage the strategic location within the Mamre Road Precinct to support the Western Sydney Employment Area transformation, contributing to the precinct's target of 17,000 jobs and catalysing broader digital economy growth.
- Achieve a high-quality design outcome appropriate to the evolving industrial context of the site, incorporating sustainability measures that minimise environmental and amenity impacts.
- Increase global resilience by distributing data within a stable location with minimal natural disaster risk and strong governance.
- Provide secure data storage in a suitable location, increasing digital access speed and reducing latency to Greater Sydney customers.
- To provide opportunities to support network redundancy and data backup requirements for enterprise and government cloud services while avoiding offshore hosting.

2.10 Development History

ISPT Summit

A Concept Masterplan (SSD-30628110) has been lodged by ISPT Pty for the development of eight (8) industrial warehouse buildings with ancillary office space and a café, totalling an indicative Gross Floor Area (GFA) of 244,413m². The proposal was publicly exhibited from 19 March 2024 to 15 April 2024 and subsequently re-exhibited from 11 February 2025 to 10 March 2025 following further amendments submitted in the first half of 2025. The application is currently at the second round of response to submissions stage, with the determination date unknown. The proposed Masterplan for the site is provided below. As approval has not been granted at the time this proposed development has been submitted, it does not rely on any aspects of the ISPT Summit proposal.

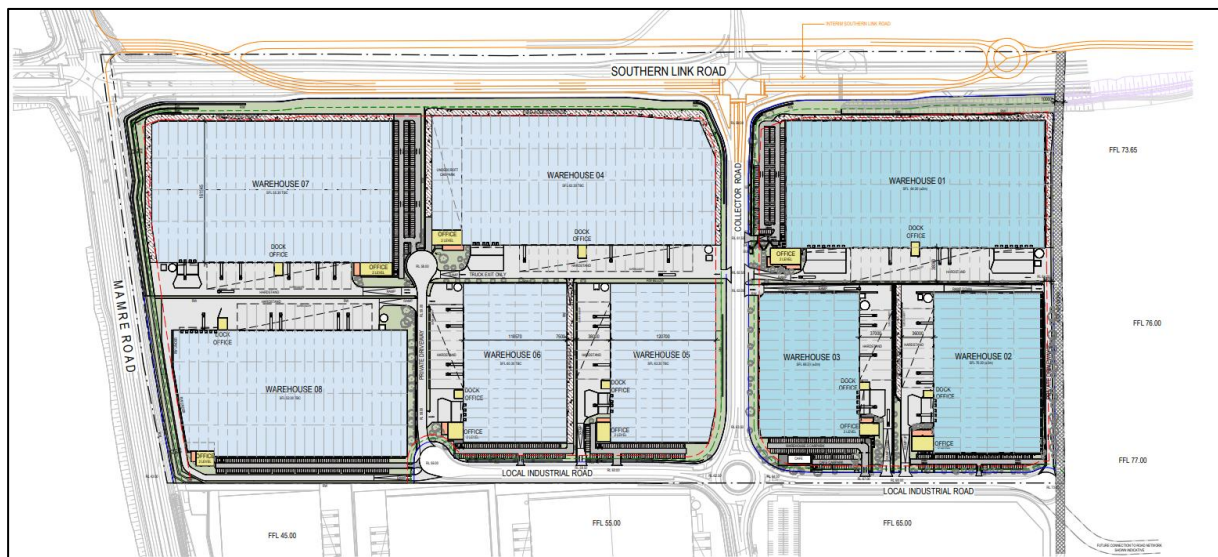


Figure 3: Proposed ISPT Site Plan

Source: Watson Young, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Other Industrial and Logistics Projects in the Mamre Road Precinct

A summary of other surrounding projects within the MRP is summarised in **TABLE 3** below:

TABLE 3. DEVELOPMENT HISTORY			
NO.	Da Reference	Summary	Status
1	200 Aldington Road Industrial Estate (SSD-10479)	Staged development including a Concept Proposal and Stage 1 Development Application comprising estate-wide earthworks, infrastructure and services, construction, fit-out and operation of Stage 1 warehouse building.	Approved
2	The Edge Estate (SSD-17552047)	Development of a warehouse and logistics hub, including construction and operation of eight warehouses with a total of 153,343 m ² of gross floor area, one collector road connecting, two estate roads, a 14-lot Torrens Title subdivision	Approved
3	Westgate Industrial Estate, 253-267 Aldington Road (SSD-23480429)	Construction and operation of three warehouse buildings with a total floor area of 45,530m ² . Site preparation works, including demolition, bulk earthworks, road construction, site servicing, on-site detention, landscaping, and subdivision.	Approved
4	Kemps Creek Warehouse Logistics and Industrial Facilities Hub (SSD-9522)	Development of a warehouse, logistics and industrial facilities hub including construction and operation of eight warehouses comprising 162,355m ² of floor space, 744 parking spaces and 21-lot Torrens Title Subdivision (over two stages).	Approved
5	Cardboard Manufacturing - 200 Aldington Road Lot F (SSD-79300218)	Fit out and use of the Stage 1 building on Lot F in the 200 Aldington Road Industrial Estate for the purposes of manufacturing and distribution of cardboard packaging.	SSD Lodged
6	Summit at Kemps Creek (SSD-30628110)	Concept masterplan for an industrial estate comprising eight buildings for warehouse and distribution, and general industrial use. Subdivision of the site into three (3) lots and detailed Stage 1 consent is sought for site preparation, earthworks, infrastructure works and construction of three of the buildings, and the associated site road network and access infrastructure	SSD Lodged
7	1-51 Aldington Road Estate (SSD-74784709)	Site preparation works including demolition of all existing structures and bulk earthworks in development areas, subdivision of the site into three development lots and an environmental conservation lot, construction, and use of a warehouse of approximately 24,710m ² within Lot 1 and construction and use of a warehouse of approximately 18,600m ² within Lot 2.	SSD Lodged
8	Yiribana Industrial Estate (SSD-10272349)	Concept plan and stage 1 DA for an industrial estate. Stage 1 comprises two warehouses, site-wide bulk earthworks and retaining walls, an internal road	Approved



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

		network, storm water works, car parking, signage, and landscaping.	
9	805 Mamre Road Kemps Creek Logistics (SSD-30871587)	Construction of an industrial logistics and distribution warehouse facility with 25,310m ² of floor space, with associated office space (970m ²), vehicle loading and parking areas, road access and internal roads for use by a single operator.	SSD Lodged
10	Aspect Industrial Estate (SSD-10448)	Development seeks approval for earthworks, infrastructure and roads across the entire site, and the staged construction of warehouse and logistics facilities with associated car parking across 11 developable lots.	Approved
11	Dexus Warehouse and Distribution Centre - 113- 153 Aldington Road (SSD-32722834)	Concept proposal for an industrial estate comprising five (5) warehouse buildings and a stage 1 development comprising the construction of two (2) warehouses, demolition, bulk earthworks, internal roads, signage, stormwater infrastructure and subdivision.	Approved
12	Access Logistic Park (SSD-17647189)	Demolition and bulk earthworks, 13-lot Torrens Title subdivision, construction of internal roads, infrastructure and utilities, construction, and operation of warehouse 1 (27,800m ²) with associated offices, car parks, hardstands, and landscaping.	Approved
13	Westlink Industrial Estate - Stage 1 (SSD-9138102)	Staged construction of two (2) warehouse buildings with ancillary office space with a total floor area of approximately 81,642m ² , demolition, bulk earthworks, road construction, site servicing and stormwater works, landscaping and subdivision.	Approved
14	Westlink Industrial Estate - Stage 2 (SSD-46983729)	Site preparatory works, subdivision of the site into five individual lots with two being residual lots for future development, Construction of a new industrial estate at the site comprising two industrial allotments and a total gross floor area of approximately 40,720m ² , including two new industrial warehousing buildings with ancillary offices across the two allotments.	Approved
15	771-797 Mamre Road, Kemps Creek (DA23/0067)	Construction and operation of 2 warehouses and associated earthworks	Approved
16	859-917 Mamre Road, Kemps Creek (DA25/0034)	Integrated Development for Bulk Earthworks, Including Cut and Fill with New Retaining Walls, New Roads, Civil Works and Services, and Torrens Title Subdivision to Create Eight (8) Lots and Four (4) Residue Environmental Lots.	Approved



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

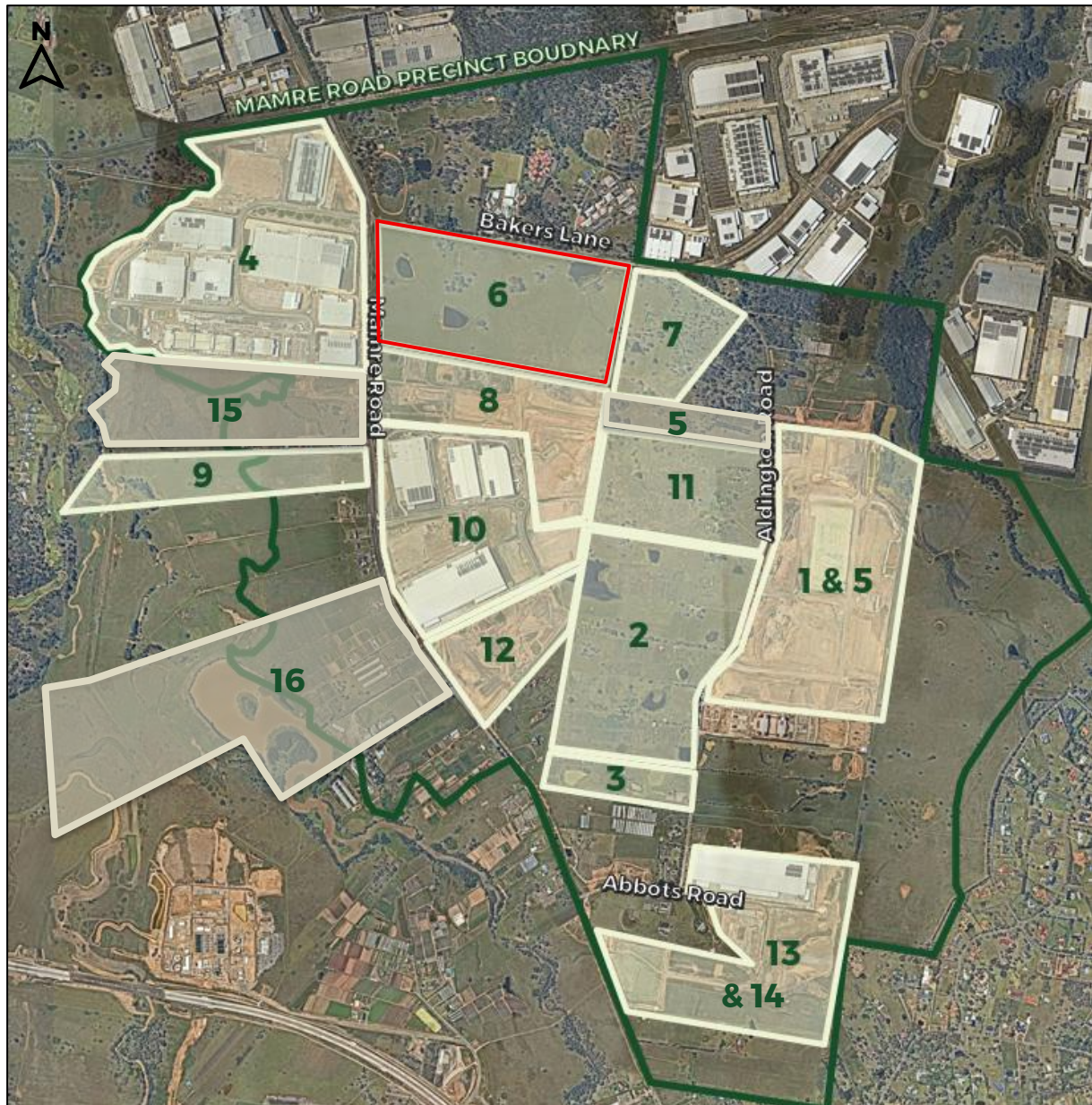


Figure 4. Existing Development Applications in the MRP

Source: Willowtree Planning, 2025

Aldington Road Upgrade

A Modification Application to SSD-10479 at 200 Aldington Road was approved by NSW DPHI on 27 February 2025 to include road widening and upgrade works to Aldington and Abbotts Road, and the upgrade of the Mamre Road and Abbotts Road intersection. Details of the general arrangement are provided in **Figure 5** and **Figure 6** below.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

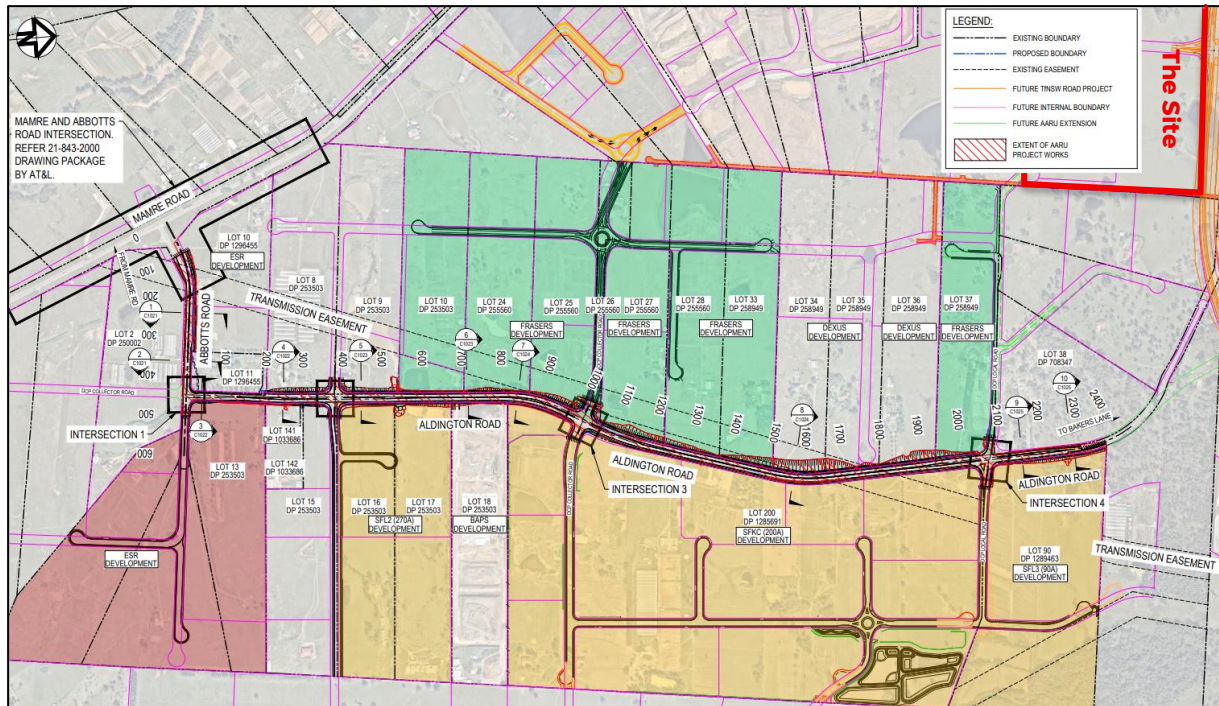


Figure 5: General Arrangement for Aldington and Abbots Road Upgrade

Source: AT&L, 2025

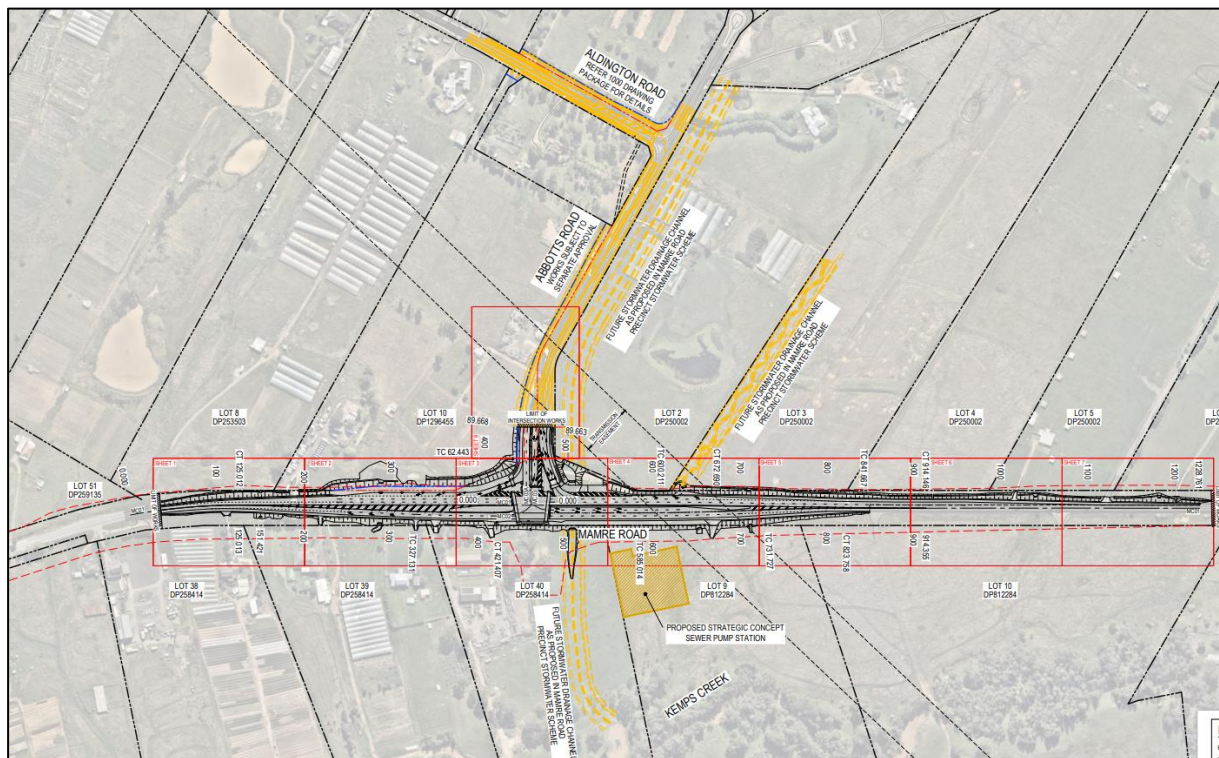


Figure 6: General Arrangement for Aldington and Mamre Road Upgrade

Source: AT&L, 2025

Mamre Road Upgrade Stage 2

Transport for NSW (TfNSW) exhibited the Review of Environmental Factors (REF) for the Mamre Road Stage 2 Upgrade in October 2025, proposing to upgrade the 6.1 kilometre corridor between Erskine Park Road and Kerrs Road. Stage 2 continues from Stage 1 (M4 Motorway to Erskine Park Road), which commenced construction in 2024 and will be completed by 2028. The proposed development

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

addresses current traffic congestion, poor crash history, and anticipated traffic demand from future development in the Western Sydney Employment Area and Western Sydney Aerotropolis.

The Interim Phase, with construction anticipated to start in 2026 and be completed in 2029, includes upgrading Mamre Road to a continuous four-lane divided road with two lanes in each direction between Erskine Park Road and Darrabarra Avenue, and a four-lane divided road with wide shoulders between Darrabarra Avenue and Kerrs Road to allow for future six-lane expansion, as identified below.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

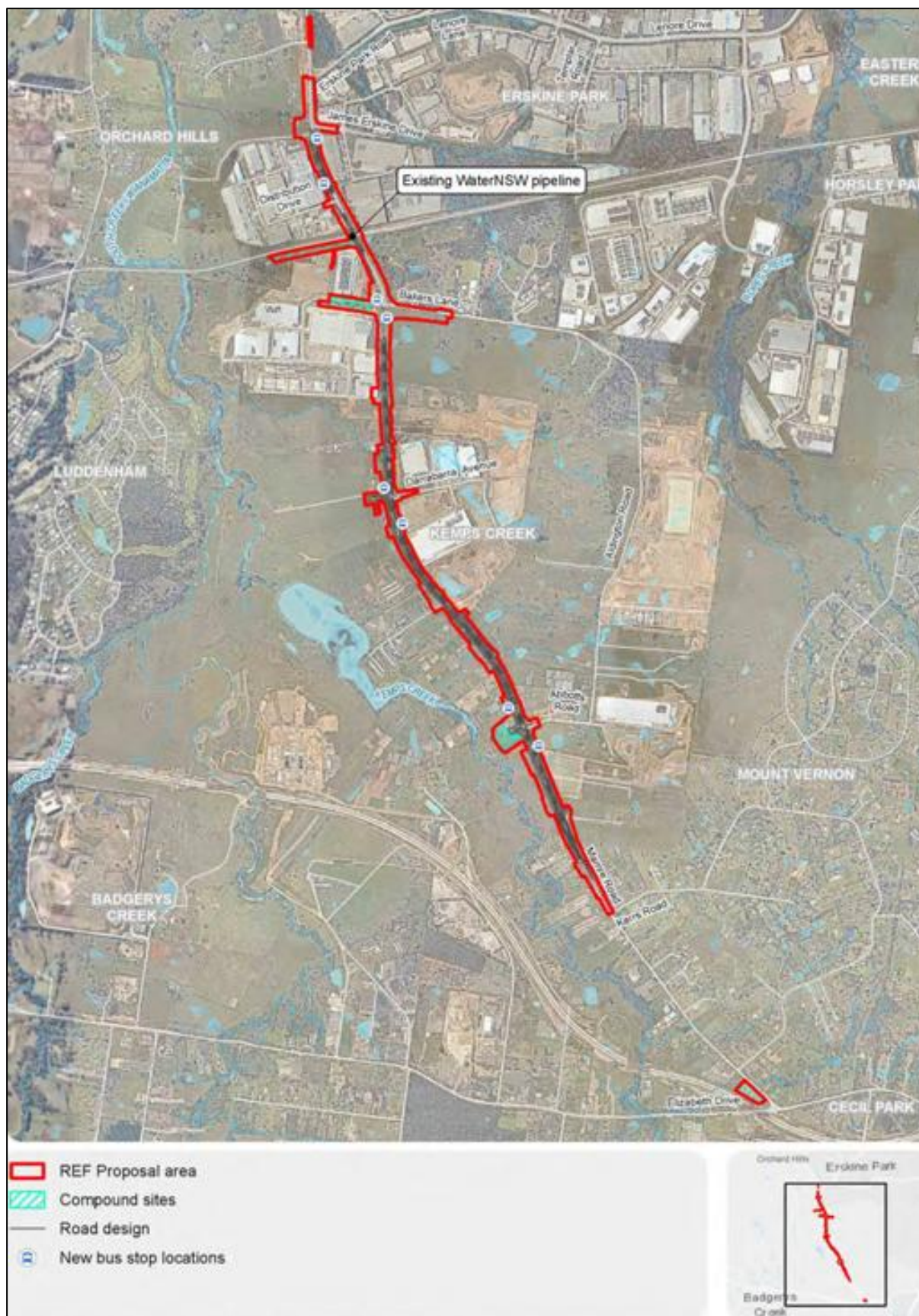


Figure 7. Mamre Road Upgrade between Erskine Park Road and Kerrs Road

Source: Aurecon, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Key intersection upgrades include signalised intersections at Darrabarra Avenue and Abbots Road upgraded to three through lanes in each direction with bus jump start facilities, an additional right turn lane northbound into Bakers Lane from Mamre Road, revised pedestrian and cyclist crossings at Distribution Drive and James Erskine Drive intersections, new left-in/left-out intersections at 931 Mamre Road and Access Logistics Park (884-928 Mamre Road), and a new left-out intersection approximately 600 metres south of Abbots Road. Active transport improvements include new shared paths and footpaths along Mamre Road, new bus stop facilities at key intersections, stormwater drainage infrastructure upgrades, and Intelligent Transport Systems infrastructure.

The Ultimate Phase includes completing the upgrade to a six-lane divided road with three lanes in each direction from Erskine Park Road to Darrabarra Avenue, upgrading intersections at Bakers Lane and James Erskine Drive (adding a 4th leg to James Erskine Drive intersection), reconstructing Distribution Drive intersection to left-in/left-out only, new twin bridge structures spanning the WaterNSW pipeline corridor and future Western Sydney Freight Line corridor, extended active transport links, permanent retaining walls, and drainage infrastructure upgrades.

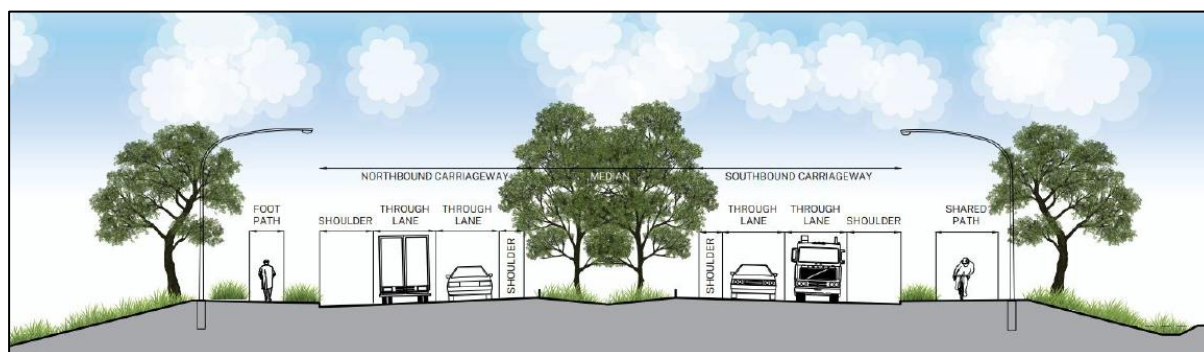


Figure 8. General Arrangement for Aldington and Mamre Road Upgrade

Source: Ason Group, 2025

Other Data Centre Projects in the WSEA

There are a total of four data centre proposals in proximity to the site including two which have been approved, and two for which SSD applications have been submitted:

TABLE 4. DATA CENTRE PROJECTS IN CLOSE PROXIMITY			
No.	Address & Reference	Summary	Status
1.	16 Johnston Crescent, Horsley Park (NEXTDC S4 Data Centre Horsley Park) SSD-63741210	A 250MW data centre on an 8.2-hectare site comprising four-storey buildings reaching 38 metres in height.	Submitted SSD
2.	78 Lockwood Road, Erskine Park (Stack SYD01 Data Centre) SSD-82211208	A 450MW data centre on a 7.7-hectare site with buildings up to 24 metres in height, application submitted April 2025.	Submitted SSD
3.	10 Eastern Creek Drive, Eastern Creek (Echidna Data Centre)	A 35.2MW data centre with two-storey buildings up to 21.1 metres in height, approved April 2024.	Approved

	SSD-47320208		
4.	706-709 Mamre Road, Kemps Creek (Kemps Creek Data Centre) SSD-10101987	The SSD application was exhibited in November 2021 and approved following submission of a Response to A 190MW data centre with two-storey buildings up to 21.31 metres in height, approved July 2023.	Approved



Figure 9. Surrounding Data Centre Projects
Source: Google Earth, 2025

2.11 Easements, Restrictions and Covenants

Following a review of the Title Search and Deposited Plan at **Appendix 3** Title Documents, no easements, restrictions, or covenants are located on the Site.

PART 3: STRATEGIC CONTEXT

This section of the EIS identifies the key issues that are relevant to the proposal's locational and strategic context and provides a justification based on the key strategic themes, guidelines and directions that are relevant to the locality. This section also provides an analysis of alternatives considered.

3.1 Site Description and Context

The site is located at 706-752 Mamre Road, Kemps Creek and is legally described as Lot 10 in DP 1280592 and comprises a total area of approximately 522,477m² (52.2ha) and is rectangular in shape. The site has a primary frontage to Bakers Lane at the northern boundary, spanning approximately 1.1km. A secondary frontage to Mamre Road is located along the western boundary, spanning approximately 495m.

The site is undeveloped rural land, one residential dwelling, interspersed vegetation, livestock, and a number of farm dams. The site is characterised by undulating topography, with natural ground levels ranging from RL 85.5 AHD at the highest point in the southeastern corner, to RL 42.5 AHD at the lowest point in the southwestern corner. A ridgeline runs across the site, generally aligned from southeast to northwest, with ground slopes either side of the ridgeline generally between 6% and 15%. Elsewhere across the site, the ground slope is generally 2-3%.

The site is generally urban capable and includes 13.24ha of native vegetation, with the remainder classified as exotic vegetation, cleared land and dams. The native vegetation comprises two Plant Community Types (PCTs): Grey Box – Forest Red Gum grassy woodland on shale of the southern Cumberland Plain (PCT 850, covering 13.02ha) and Swamp Oak open forest on riverflats of the Cumberland Plain and Hunter Valley (PCT 1800, covering 0.22ha).

The entirety of the site is identified as 'Vegetation Category 3' bushfire prone land under the Penrith Bush Fire Prone Land map. There are no state or local heritage items located on or in close proximity to the site.

The site is located within the MRP, which sits within both the Western Sydney Aerotropolis and the Western Sydney Employment Area (WSEA) Structure Plan. The site is surrounded by industrial development to the north (refer to the site context map in **Figure 11**. Surrounding land uses in the immediate vicinity of the site include:

- **North** – To the north of the site, is:
 - The Mamre Anglican School
 - Trinity Catholic Primary School
 - Emmaus Catholic College
 - Emmaus Retirement Village.
 - Erskine Park Industrial Area
- **South** – The site's southern surrounds comprise the GPT Yiribana West estate which has substantially progressed construction of initial warehouses and Mirvac Aspect estate, with operational warehouses and further warehouses under construction.
- **East** – Industrial estates under construction, including Stockland/Fife with Oakdale West and South Industrial estates, approximately 1-2km of the site.
- **West** – The Yards Estate (approved in 202 and approximately 70% occupied) is directly opposite the site on the adjacent side of Mamre Road, with rural agricultural land also located in the broader vicinity.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The Western Sydney International (Nancy-Bird Walton) Airport site is located approximately 8km to the southwest of the site.

Figure 10 shows the extent of the Mamre Road Precinct, with the site centrally located within the emerging industrial precinct where surrounding developments are undergoing pre-construction or development processes.

Figures 13-17 depict the site's current condition from various perspectives.

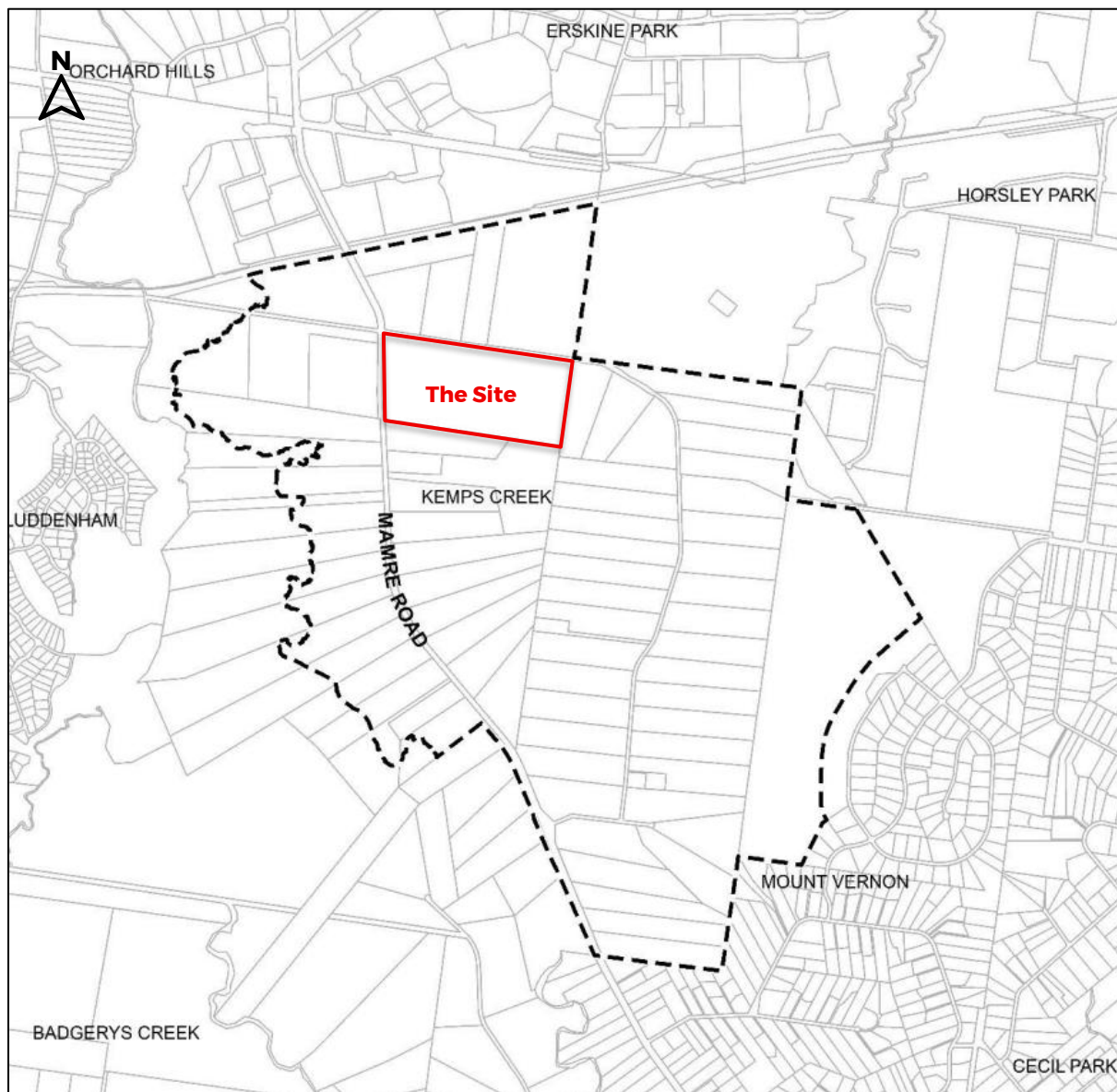


Figure 10. Mamre Road Precinct Context

Source: NSW Government/ Willowtree Planning, 2025





ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

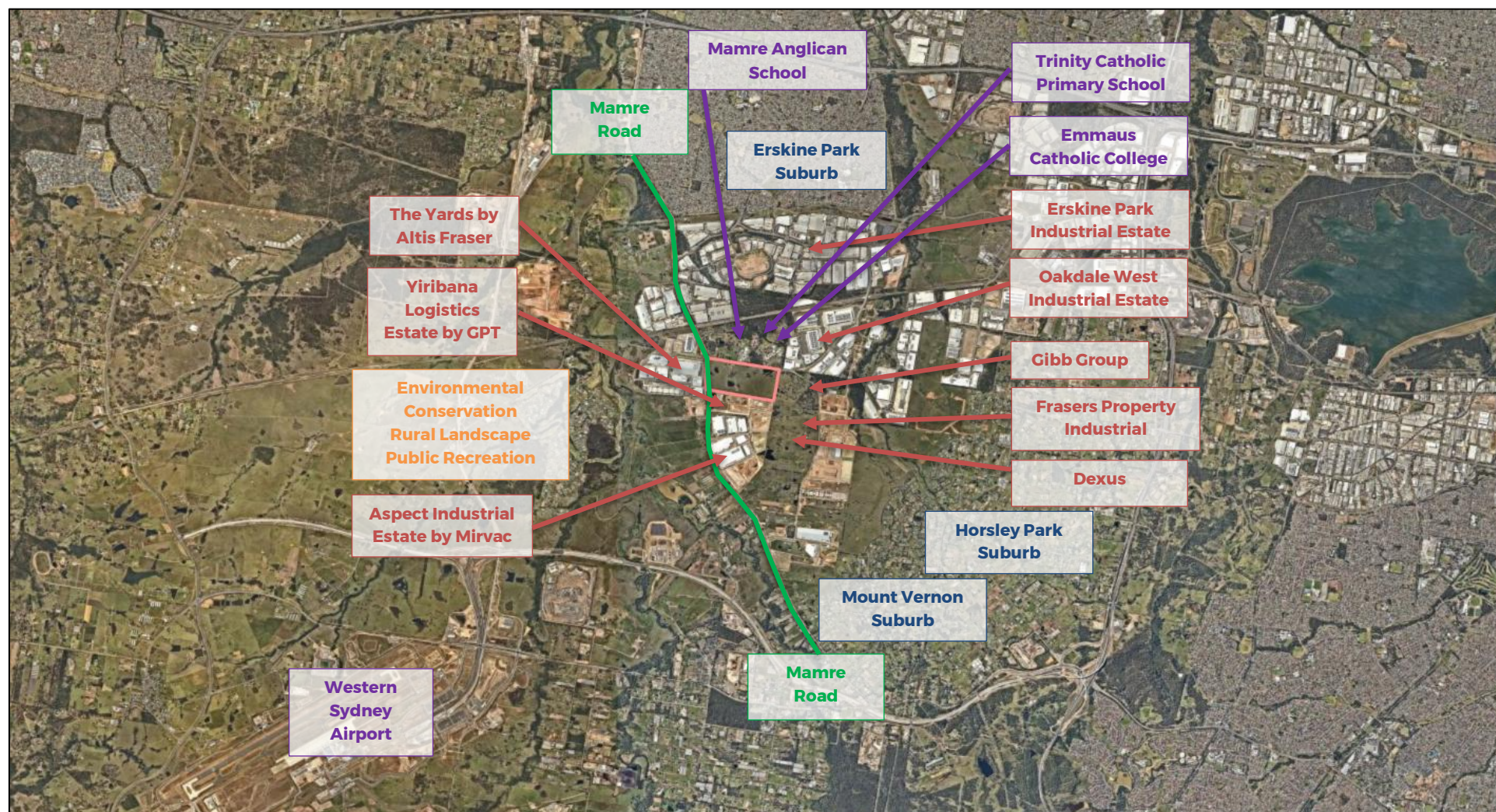


Figure 12. Site Context and Zoning

Source: Willowtree Planning, 2025





Figure 13: Site Photograph Locations

Source: Nearmap, 2025



Figure 14: View of the site from Mamre Anglican School on Bakers Lane

Source: Willowtree Planning, July 2025



Figure 15: View of the site from Residential Properties at Bakers Lane

Source: Willowtree Planning, July 2025



Figure 16: View of the site from Mamre Road

Source: Willowtree Planning, July 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)



Figure 17: View of the site from 754 Mamre Road

Source: Willowtree Planning, July 2025

An overview of the site characteristics is provided in **TABLE 5**, as follows.

TABLE 5: SITE CHARACTERISTICS	
Component	Description
Address	706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)
Site Area	52 hectares
Current Use	The site is currently vacant and contains six dams, with vegetation comprising predominantly cleared grassland and small patches of remnant native vegetation.
Topography	The site exhibits a natural fall from northeast to southwest, with existing levels ranging from RL 85.5 AHD at the highest point in the southeastern corner, to RL 42.5 AHD at the lowest point in the southwestern corner near the intersection of Mamre Road and the western boundary. This represents an overall fall of approximately 43 metres across the site. The topography generally slopes in a south-westerly direction toward Mamre Road, with intermediate levels of approximately RL 81.49 AHD recorded across the central and northern portions of the site along the Bakers Lane frontage.



TABLE 5: SITE CHARACTERISTICS

Component	Description
	 Figure 18. Existing Site Topography Source: Greenbox Architecture, 2025
Access	The site has a primary frontage to Bakers Lane of approximately 1.1 kilometres along the northern boundary and a secondary frontage to Mamre Road of approximately 490 metres along the eastern boundary. TfNSW has proposed a new Southern Link road which will occupy Bakers Lane and a portion of the site providing an east-west connection between Mamre Road, Kemps Creek and Wallgrove Road, Horsley Park.
Biodiversity	Much of the site is classified as urban-capable certified land under the Cumberland Plain Conservation Plan, with only a small portion at the northeastern boundary identified as containing biodiversity values requiring management. The site contains fragmented native vegetation including two Plant Community Types: PCT 3320 (Cumberland Shale Plains Woodland) and PCT 3975 (Southern Lower Floodplain Freshwater Wetland), representing two Threatened Ecological Communities (TEC) under the BC Act. Cumberland Plain Woodland is also listed as a Critically Endangered Ecological Community under the EPBC Act and meets Serious and Irreversible Impact principles. Direct impacts include the removal of 1.36 hectares of fragmented, disturbed native vegetation within non-certified land, including 0.94 hectares of Cumberland Plain Woodland CEEC. As outlined in the Biodiversity Development Assessment Report (Appendix 15 Biodiversity Development Assessment Report) the proposal is not likely to impact an ecological MNES and therefore a referral to the Commonwealth is not required.
Geology	The site is underlain by Quaternary deposits comprising fine-grained sand, silt and clay. The north-western and south-western portions of the site are mapped in the Bringelly Shale outcrop zone, consisting of shale, carbonaceous claystone, claystone, laminate, fine to medium grained lithic sandstone and rare coal and tuff.
Salinity Potential	Soils are classified as non-saline to slightly saline with electrical conductivity below AS3600-2018 A2 exposure classification limits.
Acid Sulfate Soils	The site has low acid sulfate soil risk, being above 40m elevation with Bringelly Shale geology and not mapped on NSW Acid Sulfate Soil Risk Maps.
Bushfire	The site is mapped as Category 3 Vegetation and Vegetation Buffer bushfire prone land.
Watercourses	The site contains six existing dams requiring dewatering as part of site preparation works. The site is located outside the extent of mainstream flooding from Kemps Creek and Wianamatta-South Creek, above Probable Maximum Flood levels, and outside the Penrith Local Environmental Plan 2010 (PLEP) flood planning area.
Wetlands	The site contains Southern Lower Floodplain Freshwater Wetland (PCT 3975) vegetation community, classified as a Threatened Ecological Community under the BC Act.
Aboriginal Heritage	There are six recorded Aboriginal Heritage Information Management System (AHIMSs) on the southern portion of the subject site.

TABLE 5: SITE CHARACTERISTICS

Component	Description
	 Figure 19. Aboriginal Sites Source: Biosis, 2025
Built Heritage	No heritage items or heritage conservation areas listed under the Industry and Employment SEPP or PLEP2010 are located on the site or in its immediate vicinity.

3.2 Strategic Planning Context

A summary of the proposal's consistency with the relevant strategic context, as established by government plans, policies and guidelines set out below:

3.2.1 National Data Infrastructure Strategy & National Digital Economy Strategy

The National Digital Economy Strategy identifies data centres as critical digital infrastructure and prioritises meeting the rapidly growing demand for domestic data processing capacity to support digital sovereignty and data security. The National Data Infrastructure Strategy further emphasises Australia's data infrastructure gaps and the need for sovereign data storage capacity, low-latency data processing for Australian businesses and government, and enhanced support for cloud computing and digital services.

The proposed development directly aligns with this national policy guidance by providing essential digital infrastructure to support Australia's growing data processing requirements and strengthening the nation's digital sovereignty and economic resilience.

3.2.2 National AI Plan 2025

The National AI Plan 2025 establishes the Australian Government's strategic framework for artificial intelligence development, adoption and governance across the economy. The Plan identifies AI as a transformative technology reshaping how Australians work, learn and connect, with the ambition to create a fairer, stronger Australia where every person benefits from technological change.

The Plan is structured around three core goals that guide government action:

- **Capturing the opportunities** – fostering investment in world-class digital and physical infrastructure, supporting local AI capability and attracting global partnerships to position Australia as a leader in AI innovation and applications.



- **Spreading the benefits** – ensuring all Australians, regardless of background or location, share in AI advantages through support for small and medium enterprises, regional communities, digital skills development, workforce transitions and improved public services.
- **Keeping Australians safe** – establishing robust legal, regulatory and ethical frameworks that protect rights and build trust, including the establishment of an AI Safety Institute, ongoing review and adaptation of laws, and engagement with international partners to manage risks and promote responsible innovation.

The proposed development directly aligns with this national policy guidance by providing essential digital infrastructure to support Australia's AI ecosystem. Data centres are explicitly identified in the Plan as critical infrastructure for realising AI opportunities, with Australia attracting over \$10 billion in data centre investment during 2024 and plans announced for investments that could scale to more than \$100 billion. The proposed development would contribute to the Plan's objectives by enabling local AI capability, supporting sovereign data processing capacity, and positioning Australia as a leading destination for AI investment in the Indo-Pacific region.

3.2.3 Greater Sydney Region Plan – A Metropolis of Three Cities

The *Greater Sydney Region Plan – A Metropolis of Three Cities* (A Metropolis of Three Cities) established the strategic framework focusing on three (3) interconnected cities within the greater Sydney metropolitan area. This strategic framework was further strengthened by the Western Sydney City Deal, signed on 4 March 2021, which established a partnership between the Australian and NSW governments and eight local councils that made up the Western Parkland City to drive transformative change over 20 years.

The Metropolis of Three Cities aims to anticipate the housing and employment needs of a growing and vastly changing population. The overall vision pursues an objective of transforming 'Greater Sydney' into A Metropolis of Three Cities, including:

- The Western Parkland City;
- The Central River City; and
- The Eastern Harbour City.

The proposal contributes to the four (4) standardised elements as follows:

- **Infrastructure and collaboration** – the proposal would facilitate the provision of services to support the wider locality and region.
- **Liveability** – the proposal encourages employment-generating opportunities and economic prosperity, which has positive influences on the wider locality and supports the growth of the Western Parkland City.
- **Productivity** – the proposal provides critical digital infrastructure that underpins Australia's AI-enabled economy, supporting national productivity gains and enabling businesses across all sectors to leverage AI technologies as outlined in the National AI Plan 2025.
- **Sustainability** – the proposal will provide sustainable design measures that align with the principles established for the precinct.

The proposed development contributes to the objectives set out by promoting sustainable development and economic opportunities to the wider locality and community, positioned within the strategically important Mamre Road Precinct of the Western Sydney Aerotropolis precinct plan in **Figure 20**.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

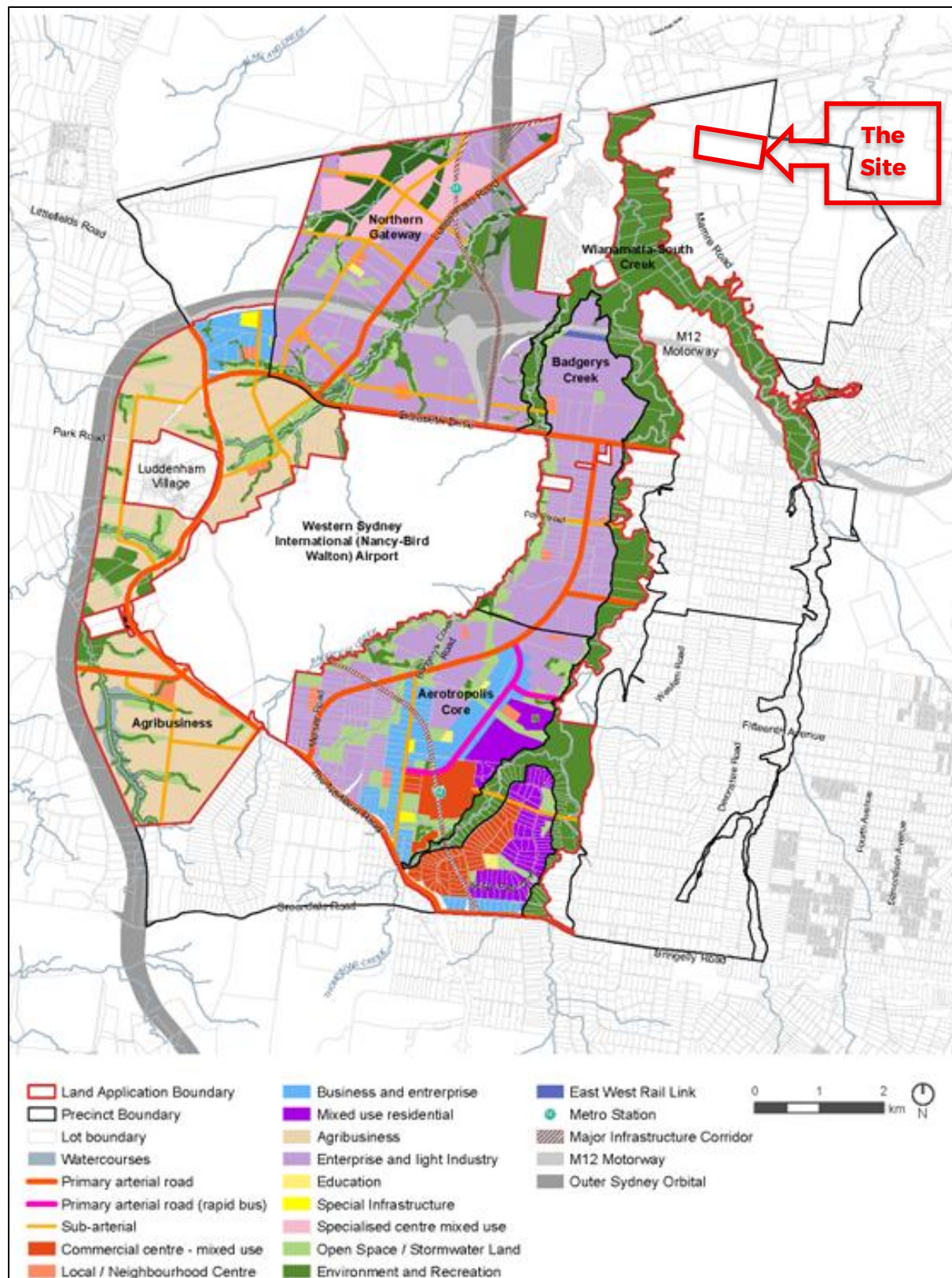


Figure 20: Western Sydney Aerotropolis Precinct Plan

Source: Western Sydney Aerotropolis Precinct Plan, 2024

3.2.4 Western City District Plan

The site is located within the Western City District, which forms the majority of the Western Parkland City. The Western City District Plan (the District Plan) provides a 20-year strategic framework to manage growth and achieve the 40-year vision for Greater Sydney established in A Metropolis of Three Cities. As outlined in **Figure 21**, the volume of released land for 'Potential Future Industrial/ Employment Land' is vast and encircles the site.

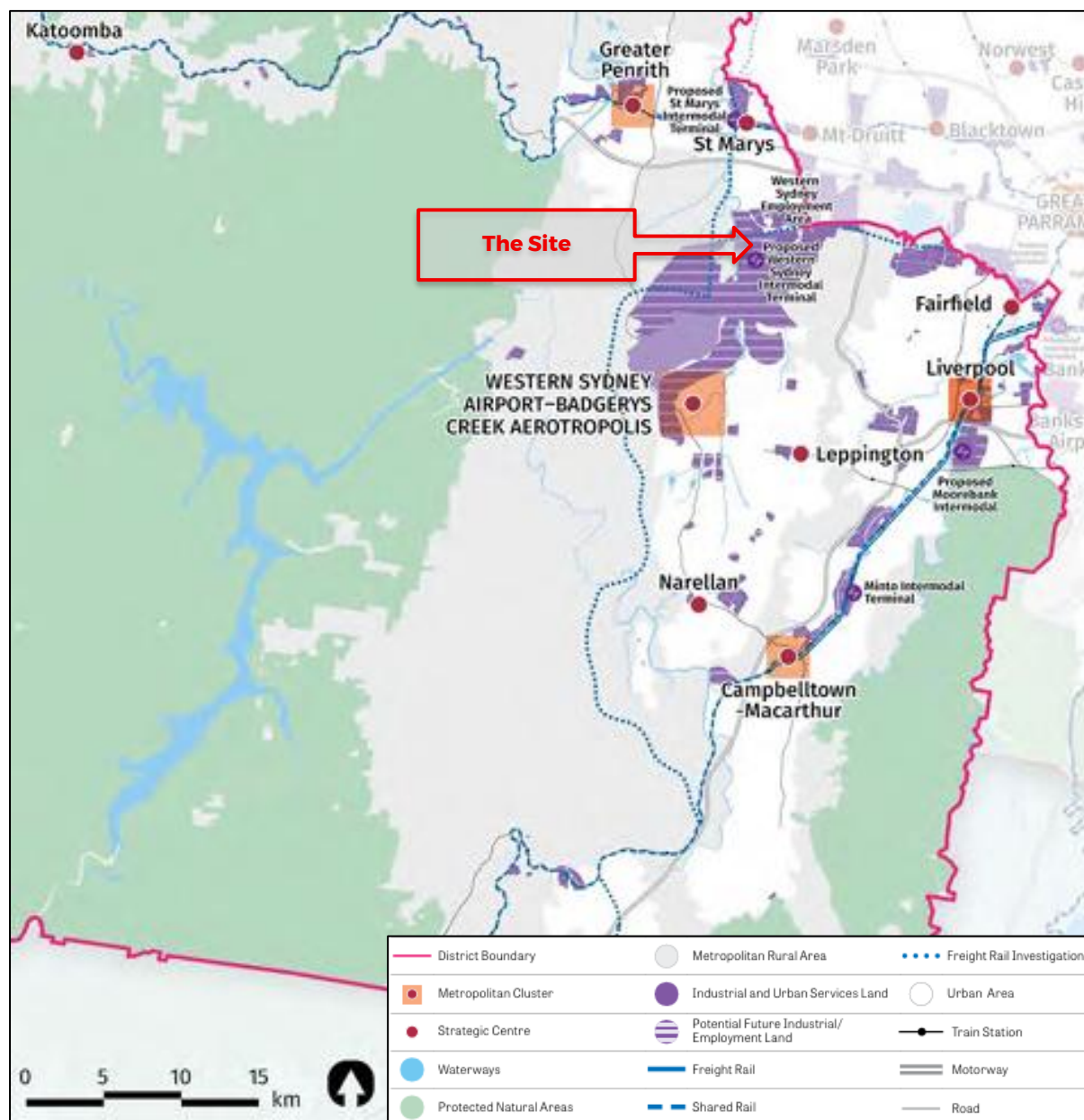


Figure 21: Western City District Industrial and Urban Service Land and Freight Assets

Source: Greater Sydney Commission, March 2018

Central to the District Plan is the transformation of Western Sydney through the Western Sydney Airport and Badgerys Creek Aerotropolis, supported by the first stage of the North South Rail Link. This infrastructure investment is designed to create a Western Economic Corridor, a spine of knowledge-intensive employment that will diversify the economy and attract a skilled workforce. The District Plan identifies that at full operation, the airport will create at least 60,000 jobs across logistics, trade, aerospace and defence, advanced manufacturing, and tourism, with this agglomeration of knowledge jobs anchoring the Western Economic Corridor's development.

The Mamre Road Precinct, where the site is located, plays a critical role in this transformation. Rezoned on 11 June 2020, the precinct is envisioned as a world-class industrial area providing approximately 850 hectares of industrial land with capacity for around 17,000 jobs. The precinct is strategically positioned to support the Western Sydney Airport through warehousing, logistics, and industrial uses, with planned access to the Western Sydney Freight Line, intermodal terminal, M12 Motorway, and Elizabeth Drive.

The District Plan establishes Planning Priorities that guide development outcomes. The following priorities are directly relevant to the proposed development:

- **Planning Priority W1:** *Planning for a city supported by infrastructure.*

Response: Data centres represent critical enabling infrastructure for the digital economy, supporting all sectors identified in the District Plan including health and education, aerospace and defence, advanced manufacturing, logistics, and knowledge-intensive services. The proposed development provides essential infrastructure capacity that must be delivered to meet demand to enable continued business investment and employment growth.

- **Planning Priority W2:** *Working through collaboration.*

Response: The proposal demonstrates commitment to collaborative planning through engagement with Council, state agencies, and infrastructure providers to ensure integration with precinct-wide planning for the Mamre Road area and the broader Western Sydney Employment Area.

- **Planning Priority W7:** *Establishing the Land Use and Transport Structure to Deliver a Liveable, Productive and Sustainable Western Parkland City*

Response: The site's location within the Mamre Road Precinct provides direct access to committed road infrastructure. The proposed developments compatibility with 24/7 operations and freight-oriented transport infrastructure positions it as an enabling use within the industrial precinct, supporting rather than competing with traditional logistics and warehousing functions.

- **Planning Priority W8:** *Leveraging industry opportunities from the Western Sydney Airport and Badgerys Creek Aerotropolis.*

Response: The proposed data centre represents critical digital infrastructure that enables the knowledge-intensive industries targeted by the District Plan. By providing secure, low-latency data processing capacity, the proposed development has the potential to directly supports the aerospace, defence, advanced manufacturing, and logistics sectors identified as priorities. The \$9 billion capital investment and 800 operational jobs contribute to the employment diversification objectives for Western Sydney.

- **Planning Priority W11:** *Growing investment, business opportunities and jobs in strategic centres.*

Response: The data centre development represents substantial private sector investment (\$9 billion) in critical infrastructure that will support business operations across all strategic centres in the District. By providing world-class digital infrastructure, the proposal enhances the competitiveness and attractiveness of the Western Parkland City for knowledge-intensive businesses, professional services, health and education institutions, and advanced manufacturing enterprises. The proposed development creates the digital foundation necessary for Liverpool, Greater Penrith, and Campbelltown-Macarthur to function as globally competitive metropolitan centres while supporting the industrial and logistics precincts that serve them.

- **Planning Priority W15:** *Increasing urban tree canopy covering and delivering Green Grid connections.*

Response: The landscape masterplan for proposal will deliver tree canopy cover in accordance with the Mamre Road Precinct DCP requirements and green infrastructure across the site. These initiatives directly respond to the District Plan and contribute to the expansion of urban tree canopy in this industrial precinct. The proposal demonstrates that industrial development can deliver landscape outcomes that support the District's sustainability and liveability objectives.

- **Planning Priority W19:** *Reducing carbon emissions and managing energy, water and waste efficiency.*

Response: The proposal commits to sustainability leadership through, energy efficiency in data centre design, water recycling initiatives, and waste heat recovery opportunities. These commitments align with the District Plan's emphasis on precinct-based approaches to sustainability and support the broader objective of transitioning Western Sydney toward net-zero emissions.

The proposed development delivers a development outcome that advances the Western City District Plan's objectives for the Western Parkland City and provides significant economic, environmental, and social benefits to the region.

3.2.5 Future Transport Strategy 2056

The Future Transport Strategy 2056 is a 40-year strategic framework supported by complementary plans for regional NSW and Greater Sydney. The Strategy delivers integrated movement and place outcomes by aligning land use and transport planning to achieve productive economic growth, liveable communities, and sustainable transport solutions.

The Strategy specifically prioritises the development of the Western Parkland City, including the Western Sydney Aerotropolis and surrounding employment lands where the site is located. This strategic focus supports the transformational economic and social opportunities generated by Western Sydney International Airport and the emerging Aerotropolis, positioning the region as a key growth area for Greater Sydney's future development.

The Strategy recognises that an efficient transport system results in greater economic performance by enabling businesses to reach new markets, attract investment, and access job opportunities. Transport infrastructure that supports economic growth is prioritised, particularly where it reduces network inefficiency and supports productivity and have committed to delivering the following transport corridors:

Future Transport 2056 promotes technology-enabled mobility services and data-driven transport models that respond flexibly to demand. The Strategy emphasises the role of transport in unlocking new commercial developments and supporting economic investment through long-term, place-based planning that provides certainty for industry location and investment decisions.

The proposal aligns with the strategies and objectives of the Future Transport Strategy 2056 on the following basis:

- The site has access to regular public transport services, supporting worker accessibility and reducing reliance on private vehicles;
- The site is accessible by active transport modes and provides adequate bicycle parking facilities to encourage sustainable transport choices;
- Vehicle parking provision is appropriate for the proposed development type and meets relevant requirements as identified in the Traffic Management and Accessibility Plan

(TMAP) at **Appendix 10** Transport Management and Accessibility Plan (TMAP), Construction Traffic Management Plan (CTMP), Green Travel Plan (GTP of this EIS;

- Access, servicing, and internal layout are designed in accordance with Australian Standards AS2890.1-2004 and AS2890.2-2018, ensuring efficient and safe vehicle movements;
- The surrounding road network and intersections have adequate capacity to accommodate traffic generated by the proposal, as demonstrated in the TMAP; and
- The proposed development supports economic productivity by providing critical digital infrastructure that enables businesses to operate efficiently and supports NSW's technology-enabled economy.

3.2.6 State Infrastructure Plan 2025-26

The State Infrastructure Plan 2025-26, produced by Infrastructure NSW, outlines a \$118.3 billion infrastructure pipeline. Key allocations include \$55.6 billion for public transport and roads, and \$4.2 billion for energy, environment and water infrastructure, encompassing transformational projects such as Sydney Metro West, the Western Harbour Tunnel, and Western Sydney International Airport. The Plan aligns with government priorities and strategic directions established in the State Infrastructure Strategy 2022-2042: Staying Ahead.

The concentration of key infrastructure projects in Western Sydney demonstrates the NSW Government's commitment to the region's transformation, directly supporting strategic objectives to boost economy-wide productivity and competitiveness, and harness the power of data and digital technology.

The proposed development, located within this priority Western Sydney growth corridor, aligns with and supports the State Infrastructure Plan 2025-26. The proposal contributes to the region's considerable investment pipeline of over \$9 billion, supporting local employment generation and encouraging further investment in NSW's foundational infrastructure network.

3.2.7 State Infrastructure Strategy 2022-2042

The proposal is consistent with Infrastructure NSW's long-term strategic objectives and infrastructure planning framework.

The proposal directly supports the Strategy's core objectives by boosting economy-wide productivity and competitiveness through enhanced industrial output within the Mamre Road Precinct, contributing to the Western Economic Corridor's competitiveness and the 17,000 jobs target. The proposed development provides critical employment-generating infrastructure that services growing communities across the Western Parkland City, supporting the airport's projected creation of up to 60,000 jobs at full operation. Furthermore, the proposal demonstrates integrated infrastructure, land use and service planning within a strategically rezoned precinct with coordinated access to planned infrastructure, including the Western Sydney Freight Line, M12 Motorway, and intermodal terminal.

The proposal aligns with the NSW Government's infrastructure priorities as outlined in the 2025-26 State Infrastructure Plan by supporting the Western Sydney Aerotropolis Growth Area, which is backed by over \$25 billion in enabling infrastructure investment. The proposed development contributes to the coordinated delivery of transport and freight connections critical to the precinct's function as a globally significant industrial area, while leveraging existing and planned infrastructure to maximise productivity outcomes and support sustainable economic development.

The proposal capitalises on strategic infrastructure investments identified in the Aerotropolis Sector Plan (February 2025), including proximity to Western Sydney International Airport, the Western Sydney Freight Line, and major road corridors that enable freight movement and workforce access. This proposal therefore satisfies the strategic directions established in the State Infrastructure Strategy



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

2022-2042 and supports Infrastructure NSW's vision for integrated, productive infrastructure delivery in Western Sydney.

3.2.8 Mamre Road Precinct Plan

The proposed development is consistent with the strategic vision and planning framework established under the Mamre Road Precinct Plan. The precinct was rezoned on 11 June 2020 to provide approximately 850 hectares of industrial land with capacity for around 17,000 jobs, positioning the area as a world-class industrial precinct to meet Greater Sydney's long-term freight, logistics and industrial needs.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

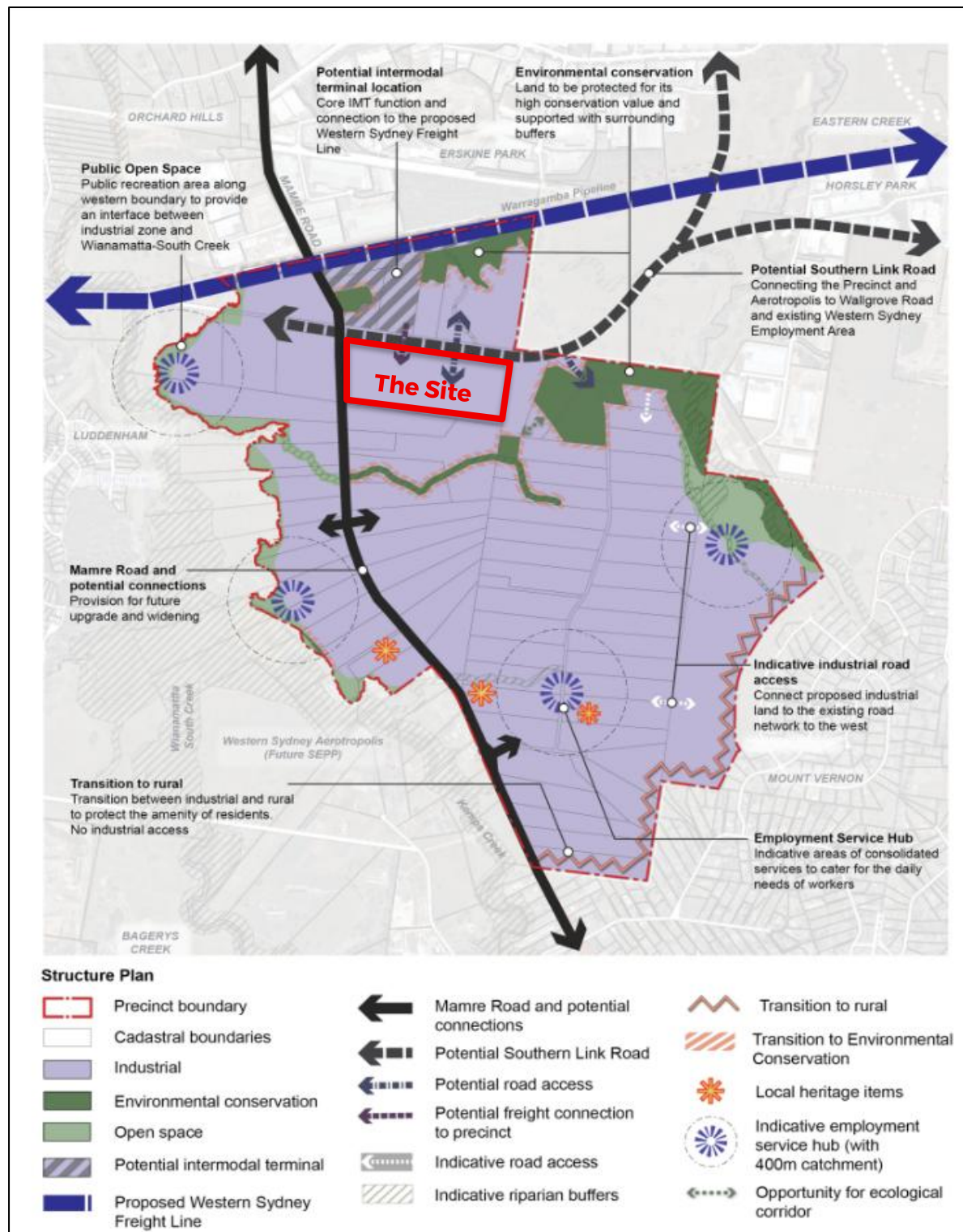


Figure 22: Mamre Road Precinct Plan

Source: Mamre Road Precinct Plan, 2020

The proposed development aligns with the Precinct Plan's promotion of a diverse range of industrial, manufacturing, commercial and clean industrial uses that provide varied employment opportunities. The proposal incorporates the Precinct Plan's emphasis on environmental sustainability and liveability outcomes, including protection of Wianamatta-South Creek and its tributaries, implementation of Western Parkland City blue and green grid principles, and ambitious landscaping requirements contributing to the Greater Sydney Region Plan target of 40% tree canopy across Metropolitan Sydney. The proposed development supports healthy waterways, and deliver high quality development with infrastructure services and amenities that create a pleasant, safe, and efficient working environment.

3.2.9 Mamre Road Development Control Plan (2021)

The Mamre Road Precinct Development Control Plan 2021 was adopted on 17 November 2021 and commenced on 19 November 2021. The DCP provides the framework for coordinated and orderly planning and delivery of infrastructure, land uses, supporting facilities and environmental protection within the Precinct. The proposed development is consistent with the relevant controls across the DCP's five chapters, including:

- Chapter 2 Precinct Planning Outcomes (biodiversity conservation, integrated water cycle management, flood prone land, heritage, aviation safeguarding and utilities services);
- Chapter 3 Precinct and Subdivision Design (subdivision design, views and visual impacts, interface considerations, and transport network); and
- Chapter 4 General Requirements for Industrial Development (building height, setbacks, landscaping, building design, amenity considerations, earthworks, waste management, and access and parking).

The proposal demonstrates consistency with the DCP's overarching objectives to ensure development occurs in an orderly manner with sufficient infrastructure, services and amenities to support growth while protecting environmental, heritage and amenity values.

The proposed height of the built form of the proposed development is required due to the nature of data centre operations as is evident in the approved design (including height) of other data centres in the precinct. This proposal demonstrates that the proposed built form would not create unacceptable solar, wind and visual impacts on surrounding sensitive uses, including the nearby schools and retirement village.

A full and comprehensive assessment of the DCP provisions is contained at **Appendix 33** Mamre Road Precinct Development Control Plan 2021 Assessment.

3.3 Site Suitability

The site is considered suitable for the proposed hyperscale data centre due to its permissible IN1 zoning, strategic location within the Mamre Road Precinct, access to essential power and telecommunications infrastructure, proximity to end users and skilled labour, and appropriate management of environmental constraints. In summary, the site characteristics and location are suitable because:

- The site is strategically located to serve Greater Sydney and the emerging Western Parkland City, within optimal distance to major business and employment centres including Parramatta, Liverpool, Penrith, Norwest Business Park, and the future Western Sydney Aerotropolis including Bradfield City Centre. The benefit of being located close to major markets is improved response times and reduced latency to the end user, which is an important success factor for any hyperscale data centre facility.
- The site is positioned to serve customer demand within a 10km radius while contributing to the geographic distribution of critical digital infrastructure across the Sydney Metropolitan area.
- The site is well supported by the high-power outputs and water infrastructure provided by Sydney Water required to operate a successful hyperscale data centre campus.
- High-voltage transmission infrastructure is available via the TransGrid planning network augmentation.
- No off-site road upgrades required for the proposed development to operate.
- Due to the size of the site, visual impacts can be suitably managed by way of building setbacks, materiality, landscaping zones with substantial tree plantings reaching heights similar to the built form and finished building pad levels.



- The overall character of the proposed development is consistent with that intended for the 850ha Mamre Road Precinct and broader Western Sydney Aerotropolis, that will also include an intermodal opposite the site in the future.

3.4 Consideration of Feasible Alternatives

Section 192 of the EP&A Regulation requires an analysis of any feasible alternatives to the proposed development, including the consequences of not carrying out the development. The Proponent identified project alternatives with respect to the need for data centre infrastructure that maximises economic and social benefits. Design options were considered to address the strategic need, project objectives, and site constraints and opportunities. Each of the options considered and the analysis that led to the preferred concept are summarised below.

Option 1 - Do Nothing

'Doing nothing' would be inconsistent with the envisaged outcomes for the site in accordance with the Western Sydney Employment Area and Mamre Road Precinct planning priorities. Not carrying out the proposal would result in a missed opportunity to realise the vision for the site and implement an internationally competitive data centre campus. 'Doing nothing' would result in minimal economic benefit, reduced employment generation, and would not support the growing data centre sector in Greater Sydney or contribute to the precinct's target of 17,000 jobs.

Option 2 - Design Alternatives

A master planning process was conducted to assess the feasibility of a data centre campus with a maximum building height of 20 metres. Given the significantly lower IT capacity achieved, this outcome would not optimise colocation of data storage facilities and was not considered an efficient use of the site. Hyperscale data centres are significantly more efficient than smaller-scale enterprises and public sector organisations, using less energy to perform the same unit of work, with hyperscale facilities being up to five times more efficient than on-premises servers and smaller-scale data centres. If an alternative design was pursued at a lower scale, the proposed development would not achieve colocation efficiencies and instead would result in multiple data centre buildings having to be built at other sites in Western Sydney, consuming valuable and strategically identified employment lands. This is considered an inferior outcome as it does not allow for efficiencies of colocation within a single campus.

Option 3 - The Proposal

Following consideration of the alternatives, the proposed design was determined to be the most successful in facilitating the best built form and amenity outcome for the site. The proposal is the outcome of extensive planning, urban design, and environmental considerations by the Proponent and lead design team, informed by consultation with key stakeholders detailed at **Section 6.1** of this EIS.

The proposal demonstrates suitability as:

- It is strategically located within the Mamre Road Precinct that is rapidly transitioning to accommodate a range of large scale warehousing and industrial land uses that define the emerging character; thus the proposed development will be consistent with the desired future character of the precinct;
- It can be mitigated in terms of traffic, biodiversity, noise, visual amenity or air quality ,subject to standard management and mitigation measures;
- It can accommodate all planned road infrastructure corridor (SLR and Stage 2 Mamre Road) along with the internal local road network.



The selected option reflects the key strategic objectives of the locality and best utilises the site to its available capacity, being the most viable outcome.

3.5 Project Need

The proposal is for a data centre campus which would provide secure, reliable and scalable solutions for cloud, content and large enterprise customers to house their high and rapidly growing volumes of data and information, while also providing opportunities for AI. Increasing the capacity and capability of secure data storage and cloud infrastructure is of regional and national significance, as is the need to provide AI training.

The proposal is a 'new economy' use which facilitates a rapidly growing demand for data storage and processing. The Australian Government has identified cyber security as one of the key growth industry sectors. The cyber security sector is forecast to have an annual cyber security revenue growth of 5.5% by 2026. Cyber Security Growth Centre, AustCyber, has prepared *Australia's Cyber Security Sector Competitiveness Plan 2022* (Sector Competitiveness Plan). The Sector Competitiveness Plan notes three key actions to grow revenue for the Australian cyber security sector. The proposed development is aligned with Key Action 2: *Bolster domestic procurement and export capacity*. The proposed development would assist in growing the domestic cyber security market and facilitating increased export capacity.

Data centres are critical infrastructure for supporting secure regional and national government and business. The proposed development is aligned with the Greater Sydney Commission's standardised elements, objectives, and priorities.

Additionally, the proposed development would generate the following benefits:

- **Supporting Australia's digital sovereignty** – the proposed development addresses critical national infrastructure gaps identified in the National Data Infrastructure Strategy and National AI Plan 2025 by providing sovereign data storage capacity and low-latency data processing essential for Australian businesses and government operations.
- **Enabling AI capabilities** – the proposed development provides essential digital infrastructure to support Australia's AI ecosystem, facilitating AI model training, deployment and innovation identified as national priorities in the National AI Plan 2025.
- **Strengthening digital connectivity** – the proposed development contributes to the digital backbone necessary for businesses across Western Sydney to access cloud computing and data processing services that underpin modern business operations and economic competitiveness.
- **Job creation and economic impacts** – construction and operational employment, combined with the enabling effect of digital infrastructure on other industries, creates direct and indirect economic benefits that strengthen the local and regional economy.



PART 4: PROJECT DESCRIPTION

4.1 Detailed Description of Development

The proposed Data Centre Campus serves as a critical hub for storing, processing, and managing large volumes of digital information. It consists of multiple interconnected data shell buildings housing technical data halls, support infrastructure, and operational facilities. The Campus comprises separable portions east to west, divided by the future Road 1, however will be under single operation and management.

The proposed development particulars are as follows:

- Site preparation works, including tree clearing;
- Dam dewatering;
- Site remediation;
- Bulk earthworks across the site and retaining structures;
- Battering to adjoining properties to the south and east;
- Infrastructure comprising civil works, stormwater, and utilities servicing, including:
 - Lead-in power infrastructure from TransGrid Sydney West Substation.
 - Sediment basins and interim stormwater management measures in advance of connection to regional stormwater infrastructure.
- Construction of future local roads through the site, including:
 - North-south local road (Road 1);
 - East-west local road (Road 2);
 - Temporary access road from Mamre Road (for construction purposes); and
 - Roundabout at the southern site boundary;
- Land allocation for:
 - Mamre Road Stage 2 upgrade widening delivered by TfNSW;
 - Southern Link Road (SLR) ultimate scenario delivered by TfNSW; and
 - Future automated vehicle route running north to south through the site;
- Staged construction and 24/7 operation of a Data Centre Campus containing the following:
 - 172,640m² of technical data hall floor space, designed to accommodate 26 shells spread across 6 purpose-built buildings referred to as sub parcels A-F (maximum building height of 40m measured from proposed ground level);
 - 54,944 m² of ancillary office & corridor floor space;
 - Plant equipment including 728 cooling units;
 - 846 backup generators;
 - Fuel storage on Site is 18,056 kilolitres, per Shell configuration comprises of diesel storage via 5 x 132 kL Bulk Tanks and 34 x 1 kL Day Tanks, with additional 2 x 1 kL Day Tanks for shells with tech space ;
 - Total of 2,652,000 Kg of PTU Lithium-Iron battery storage;
 - 2 x 433,800L water tanks for fire protection;
 - 619 at-grade car parking spaces;
 - Wayfinding signage;
 - One (1) incoming electrical switching station and campus electrical substation;
 - One (1) static synchronous compensator (STATCOM); and
 - Six (6) sub-parcel electrical substations.
- Acoustic and visual screening along the western and northern boundaries;
- Complementary landscaping and offset planting including substantial planted buffer areas at the boundaries of the site to screen built form and create shade and habitat.
- Combined sprinkler and hydrant system, with dual water supply meeting FM Global and Australian Standard requirements.
- Total estimated construction period of approximately 10 years from commencement, subject to market demand, tenant requirements, and regulatory approvals:



The proposed development is further discussed in the following sections and detailed in the architectural drawings prepared by Greenbox Architecture (**Appendix 4** Architectural Drawings).

The campus plan is provided below.

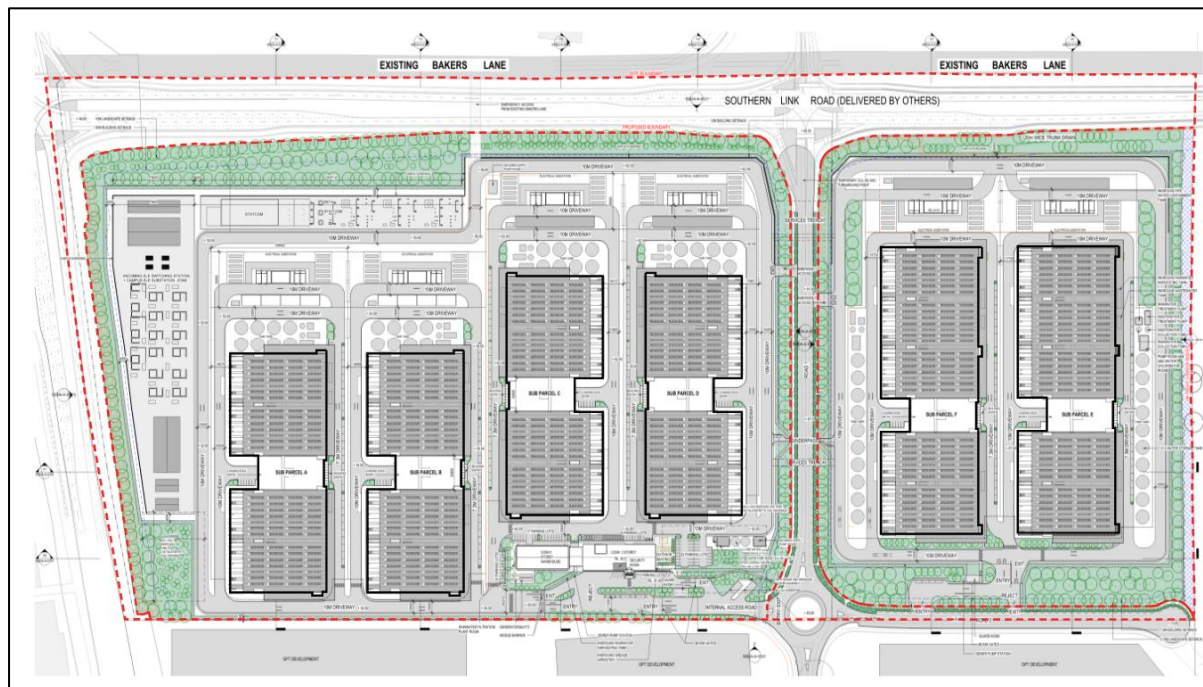


Figure 23:. Campus Plan

Source: Greenbox Architecture, 2025

4.2 Key Project Details

The proposal includes key elements as identified in **TABLE 6** below.

TABLE 6: PROPOSED DEVELOPMENT PARTICULARS						
Project Component	Development Particular					
Site Area	52 hectares					
Primary Land Use	Data Centre					
Ancillary Land Uses	Office premises and electricity generating works					
GFA	Sub parcel A	Sub parcel B	Sub parcel C	Sub parcel D	Sub parcel E	Sub parcel F
	34,528	34,528	34,528	34,528	42,628	42,628
	Total: 227,584m ²					
Maximum Building Height	40 metres from proposed pad level; a maximum height of 53.5m from the lowest point of the existing ground level, noting there is an existing 43m variation in topography across the site.					
Tree Removal	215 trees					
Proposed Trees	846 trees					
Landscaped Area	West Campus = 45,540m ² East Campus = 32,223m ² Total = 77,763m ² (18%)					
Canopy Cover	West Campus = 27,247m ² East Campus = 18,859m ²					

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

	Total = 46,106m ² (10.7%)
Car Parking	619 (including 124 EV parking)
Motorcycle Parking	6
Employees	800 FTE
EDC	\$8,999,802,659.81
Total Power Consumption	1.2 GW
IT Capacity	1.04 GW of IT compute capacity
Estimated Jobs	800 operational jobs; 10,056 construction jobs
Car Parking	619
Dangerous Goods	652,000 Kg of PTU Lithium-Iron storage Diesel fuel storage – 18,056 kilolitres
Generators	846 (2 MW Generators)
Distribution Transformers	5 x HV Transformers 1 Network Substation
Hours of Operation	24 hours, 7 days per week

4.3 Project Area

The primary project area relates to 706-756 Mamre Road, Kemps Creek, being 52ha in area. Due to the need to carry out incidental earthworks and roadworks land outside the main development site will be affected.

TABLE 7: EARTHWORKS, TREE REMOVAL AND ROAD WORKS BEYOND PRIMARY DEVELOPMENT SITE

Address/Lot & Deposited Plan (DP) No.	Scope
754 Mamre Road, Lot 108 in DP 1290397	Battering of earthworks, roundabout construction
1-23 Aldington Road, Lot 40 in DP 708347	Battering of earthworks and tree removal

Lead in power works will be required also, however will be addressed at the Response to Submissions stage. It is noted that detailed environmental assessments of the land affected by lead in power works has not been completed yet, however the Proponent intends to provide this information at the Response to Submissions stage, unless an alternative planning approval pathway becomes available under Part 5 of the EP&A Act.

The primary development site and affected land adjoining to the east and south is shown below.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)



Figure 24. Current Construction to the East & South of Site

Source: Greenbox Architecture, 2025

4.4 Use and Operations

Hours of Operation

The site will operate for 24-hours a day, seven days a week. This allows for the critical nature of their operations and includes loading and unloading, data centre and office operations. Typical operations during the day and night include:

Typical Daytime Activities:

- **Facility Operations & Monitoring:** Continuous monitoring of IT systems, cooling, and power infrastructure by operations teams.
- **Maintenance & Servicing:** Scheduled preventive maintenance on electrical, mechanical, and IT equipment.
- **Customer Access & Support:** Client representatives may visit for equipment installation, audits, or technical consultations.
- **Logistics & Deliveries:** Movement of hardware, spare parts, and consumables into secure areas.
- **Administrative Functions:** Staff meetings, compliance checks, and reporting activities.

Typical Nighttime Activities:

- **24/7 System Monitoring:** Network operations and security teams oversee system performance and respond to alerts.
- **Critical Updates & Backups:** Software patches, data replication, and backup processes often occur during off-peak hours.
- **Reduced On-Site Staff:** Skeleton crews manage essential operations, supported by remote monitoring.
- **Emergency Response:** Teams remain on standby for power, cooling, or security incidents.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

Employment

The Data Centre Campus will generate approximately 800 operational jobs upon buildout, based on 24-hour operations and two daily typical shifts.

These staff will comprise the following roles:

- Executive
- Security / SOC / Concierge
- Technical Operations
- Assets & Maintenance
- Café & Canteen Staff
- Site Operations
- Central Campus Support Staff (Based in COSH)
- Building Technicians
- Maintenance Contractors & Trades
- Customers & Customer Staff

Several of the roles listed above will operate on shift basis to support 24/7 activities. Consequently, it is anticipated that the maximum total staff on-site at any given time will be circa 550 (inclusive of all roles specified above). Detailed staff per shift and customers visiting numbers are outlined in the Transport Management and Accessibility Plan (TMAP) with a summary provided below.

TABLE 8: PROPOSED EMPLOYMENT			
Role	Total Staff	Normal Office hours or Shift Based	Max on Site at anytime
Executive	7	Shift	5
Security / SOC / Concierge	52	Shift	36
Technical Operations	19	Shift	13
Assets & Maintenance	19	Shift	13
Café & Canteen Staff	12	Shift	8
Site Operations	77	Shift	53
Central Campus Support Staff (Based in COSH)	156	Shift	50
Building Technicians	72	12 Per Building, Shift	87
Maintenance Contractors & Trades	126	As required	107
Customers & Customer Staff	260	Shift	179
Total	800		550

Data Centre Buildings

The proposal includes 172,640m² of technical data hall floor space, designed to accommodate 26 shells spread across six purpose-built buildings. Each building is made up of server data halls, plant and equipment areas, operations spaces, offices, and storage to support the efficient functioning of the building. The proposed development is staged to deliver the six purpose-built buildings and associated support facilities and infrastructure in phases.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

The buildings are engineered to accommodate up to 1.04 GW of IT compute capacity, providing significant scalability to meet future demand. The modular configuration allows adaptable fit-out and phased deployment, ensuring rapid response to evolving technology requirements and customer specifications. Server hardware will be installed progressively by tenants and is expected to include a combination of cloud and AI compute, with final configurations determined by the operational needs of individual hyperscale tenants. This design approach ensures the facility remains adaptable, resilient, and capable of supporting next-generation digital infrastructure.

COSH and Technology Building (Technical Offices)

The proposal includes an additional 54,944m² of ancillary office & corridor floor space. This is split with a range of 7,968m² to 9,428m² in each sub-parcel technology buildings, including corridors and 4,126 m² as the Central Operations and Support Hub (COSH).

The technology buildings in each sub-parcel will include a variety of open plan office space inclusive of meeting rooms, security operations rooms, network operations rooms, building and technical storage, loading docks and amenities for staff and visitors. These technology buildings will be used as the primary personnel entry for the data centres on each sub-parcel and provides a comfortable ergonomic workplace for staff, contract personnel, customers and visitors alike, engaged the operations and maintenance of the data centre buildings on each sub-parcel. Each technology building will have a high level of material finish quality and maintain views for passive surveillance to the front and rear of the data centres in each sub-parcel.

The COSH building will be located centrally within the campus and co-located with the entry and exit roads. This building will provide a comfortable, high-quality workplace with high levels of natural daylight and views across campus for staff, customers, operational contract staff and authorised visitors.

The COSH includes the primary campus check-in point for our security team vetting personnel in and out of the campus as well as providing a range of other primary security functions. On ground floor a series of meeting and board rooms, work points, end of trip facilities, campus central first aid point, food and beverage and pedestrian entry are all provided for campus staff. A warehouse for storage of critical spares and outdoor dining for those using the F&B offerings. Further up the building, emergency accommodation, additional office workspace with a range of flexible work settings alongside high quality staff amenities provide high grade within the industry and market office accommodation for the campus centrally managed functions to be run from.



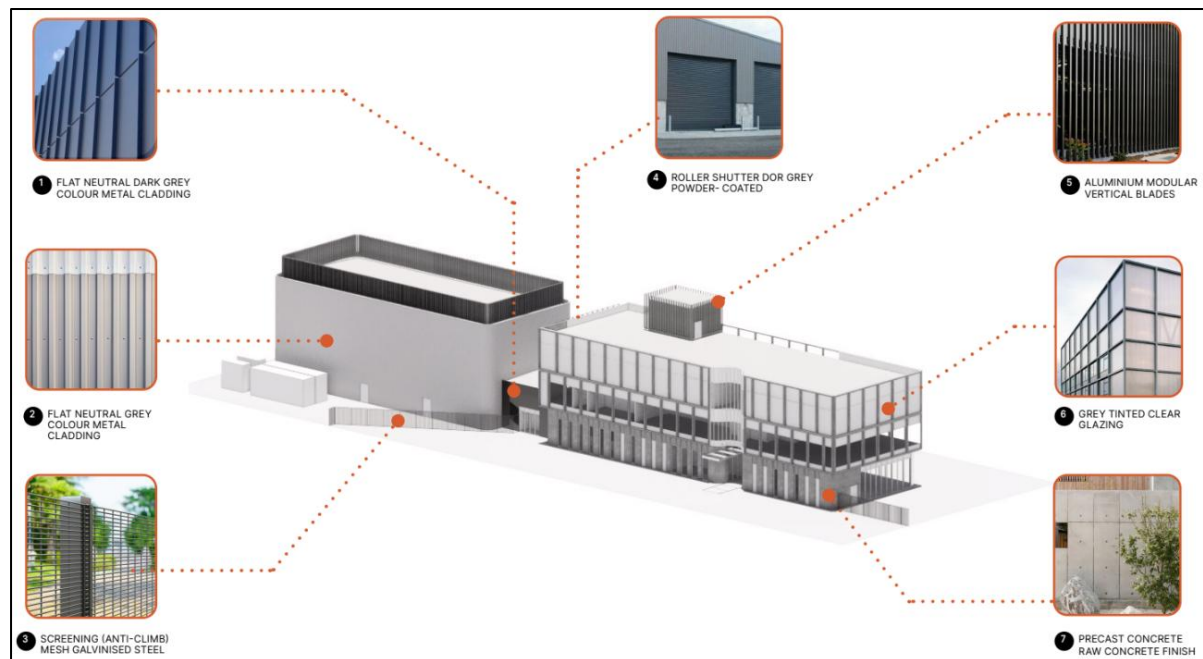


Figure 25. COSH Building

Source: Greenbox Architecture, 202

Canteen and Café

A dual food and beverage offering integrated into the ground floor of the COSH is set to be provided for the benefit of all personnel on campus. This consists of a café and a canteen with 288m² front of house areas and 450m² in total, including back of house. The café and the canteen provide different offerings to customers, catering for a different level of service time and food offering, where the café is a traditional 'grab & go' and canteen offering both dine in and take out offerings. Outdoor and indoor settings for a variety of group sizes provided across both giving customers an opportunity to relax, dine and break from the regular rhythm of the working campus.

4.5 Phasing Details

The proposed development would be constructed in across phases 0-7, over a 10 year period as detailed within **TABLE 9** below:

TABLE 9: PHASING DETAILS	
Phase	Details
Phase 0	▪ Bulk earthworks across the western portion of the site, between Mamre Road and proposed Road 1. ▪ Construction of temporary left in left out (LILO) access to the site off Mamre Road (for construction traffic only). ▪ Construction of a temporary turning head off the North-South Collector Road within Yiribana Logistics Estate (under construction as of October 2025) to provide vehicular access to the site off Mamre Road via Darrabarra Avenue (Access Logistics Estate). ▪ Retaining walls adjacent to the western boundary of the site (fronting Mamre Road) and the southern boundary of the site (Yiribana Logistics Estate).
Phase 1	▪ Construction of campus-wide electrical substation (approx. 1.9 ha) adjacent to Mamre Road. ▪ Construction of a Statcom building (approx. 7,500m²) adjacent to the future Southern Link Road. ▪ Construction of a site entry including security office and carparking.



TABLE 9: PHASING DETAILS

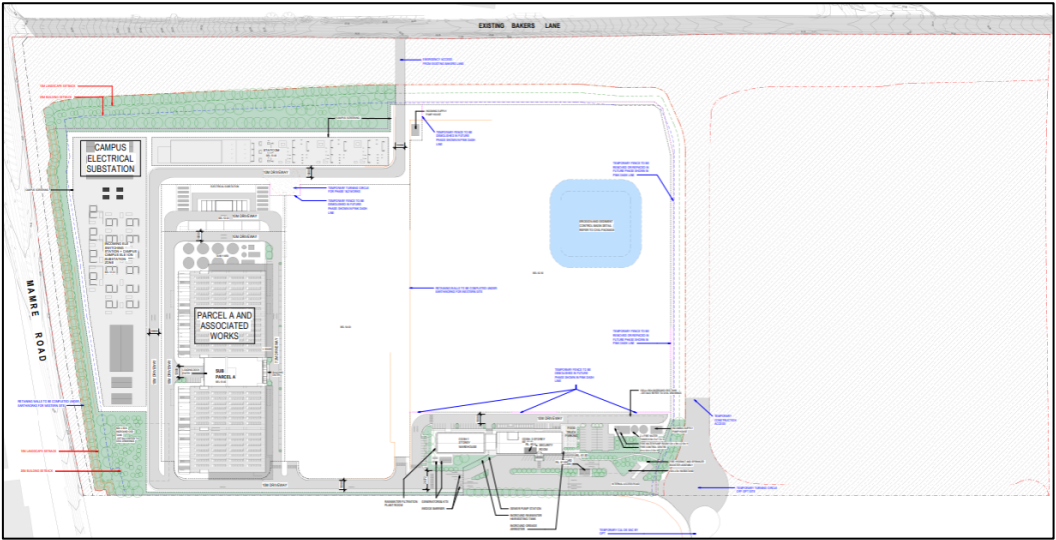
Phase	Details
	- Construction of a Central Operations and Support Hub (COSH) building near the security office. - Construction of Parcel A, consisting of four (4) data hall shells, a technical support building for data hall customers, 130 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking. - Construction of campus access roads to provide vehicular access to and from Parcel A, as well as the substation and Statcom building. - Installation of campus-wide stormwater drainage, including two (2) on-site stormwater detention (OSD) tanks that will ultimately service full development of the Data Centre Campus. - Landscaping within the south-western portion of the site, the northern portion of the site adjacent to the substation and Statcom building and along the frontage of the site to Mamre Road.  Figure 26. Phase 1 Site Plan Source: Greenbox Architecture, 2025
Phase 2	Construction of Parcel B, consisting of four (4) data hall shells, a technical support building for data hall customers, 130 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking.



TABLE 9: PHASING DETAILS

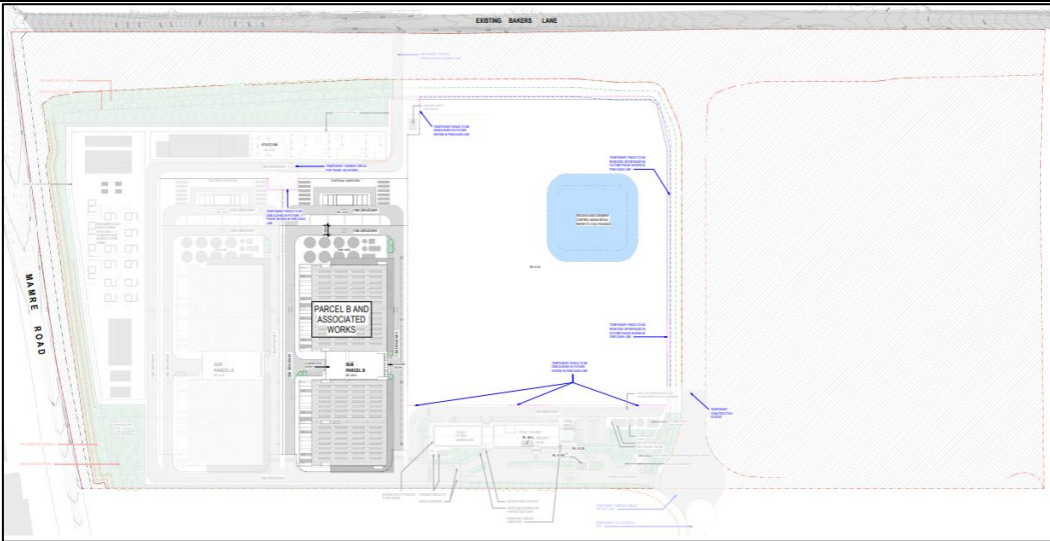
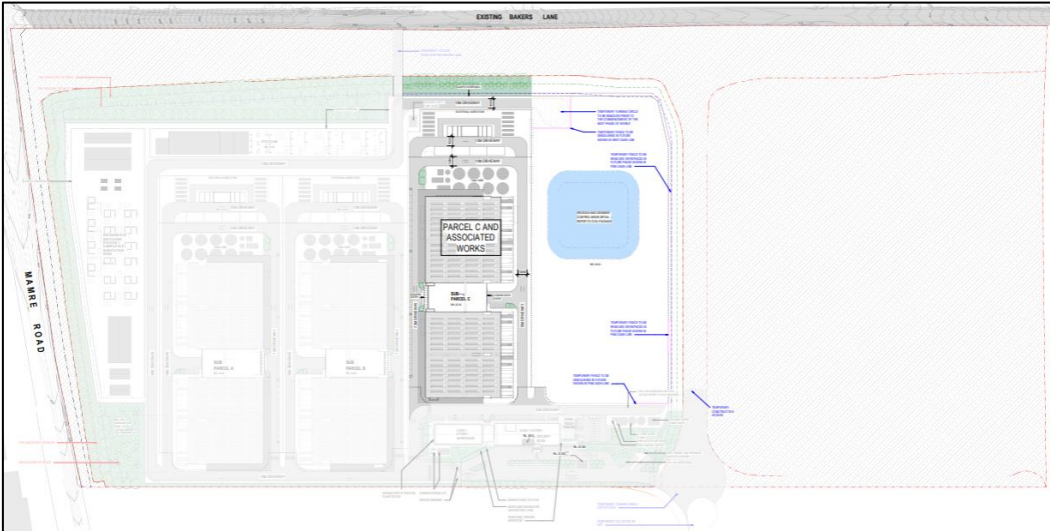
Phase	Details
	 Figure 27. Phase 2 Site Plan Source: Greenbox Architecture, 2025
Phase 3	- Construction of Parcel C, consisting of four (4) data hall shells, a technical support building for data hall customers, 130 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking. - Extension of the campus access road to provide access to the northern side of Parcel C  Figure 28. Phase 3 Site Plan Source: Greenbox Architecture, 2025
Phase 4	- Construction of Parcel D, consisting of four (4) data hall shells, a technical support building for data hall customers, 130 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking. - Extension of the campus access road to provide access along the eastern side of Parcel D. - Construction of a temporary road within the ultimate Road 1 corridor to provide emergency access out of the site.



TABLE 9: PHASING DETAILS

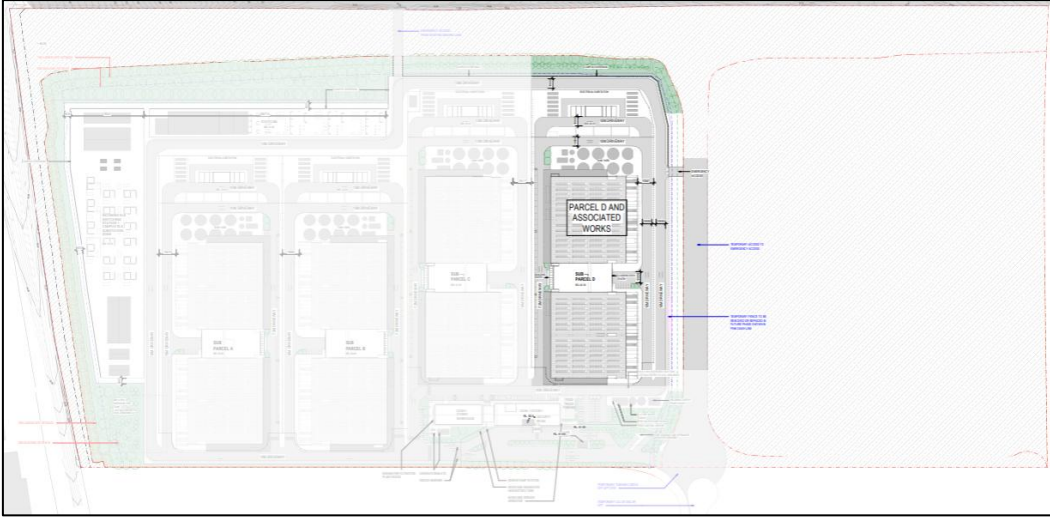
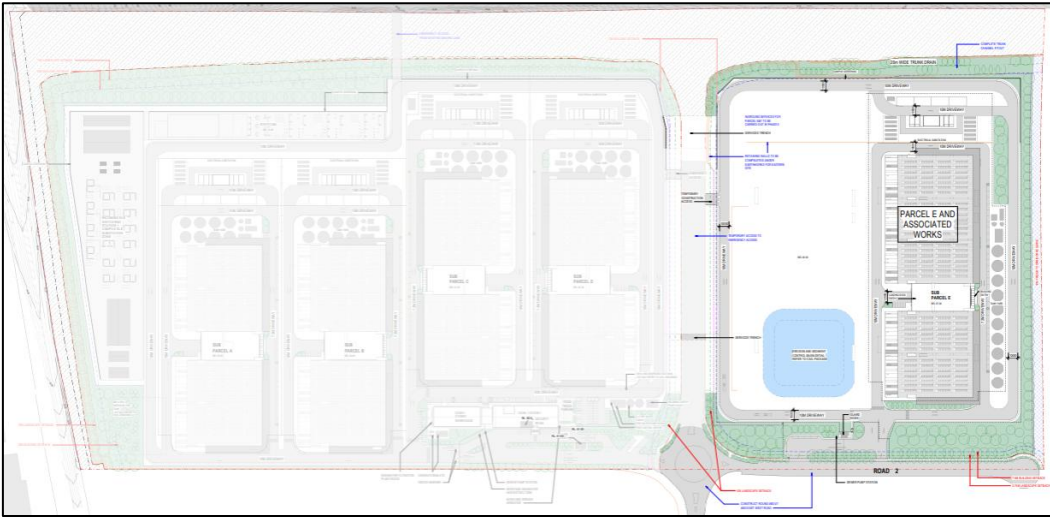
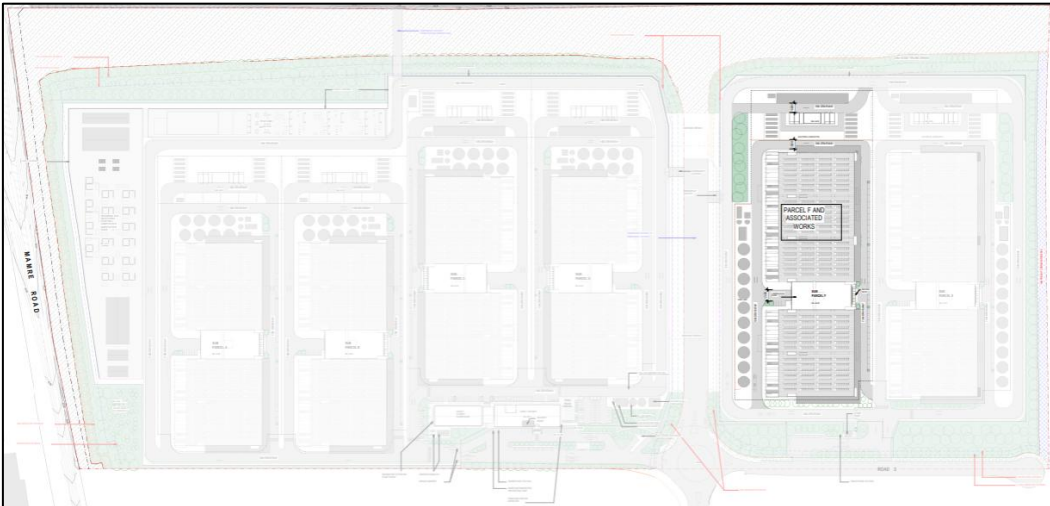
Phase	Details
	Note: development of the site beyond Phase 4 will rely on the delivery of and connection to the Sydney Water Regional Stormwater Infrastructure.  Figure 29. Phase 4 Site Plan Source: Greenbox Architecture, 2025
Phase 5	▪ Bulk earthworks across the eastern portion of the site, between Road 1 and the property to the east. ▪ Construction of Parcel E, consisting of five (5) data hall shells, a technical support building for data hall customers, 162 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking. ▪ Construction of Road 2 between the roundabout and the eastern boundary of the site, including a temporary turning head at the eastern end of the road. ▪ (NB: the southern half of the road will be situated on the adjacent Yiribana Logistics Estate). ▪ Construction of the naturalised trunk drainage channel adjacent to Parcels E and F (part of the Mamre Road Precinct Stormwater Scheme Plan). ▪ Construction of a perimeter road around the eastern campus, including secure site entry off Road 2 and guard kiosk. ▪ Landscaping adjacent to Road 2 and the future Road 1.  Figure 30. Phase 5 Site Plan Source: Greenbox Architecture, 2025



TABLE 9: PHASING DETAILS

Phase	Details
Phase 6	Construction of Parcel F, consisting of five (5) data hall shells, a technical support building for data hall customers, 162 generators and associated infrastructure including electrical substation, water and fuel storage tanks, loading dock, access road and car parking.  Figure 31. Phase 6 Site Plan Source: Greenbox Architecture, 2025
Phase 7	Construction of Road 1 between the roundabout and the corridor dedicated to the future Southern Link Road (delivered by others), including a temporary turning head at the northern end of Road 1.

4.6 Physical Design and Layout

The proposal seeks development consent for the construction and operation of a Data Centre Campus with a total power consumption of up to 1.2 GW and a maximum building height of 40 metres from finished ground level, supported by ancillary office space, electrical substations, back-up generators, diesel storage, lithium-ion batteries, bulk earthworks, associated supporting infrastructure (including road construction), car parking and landscaping.

It is noted that the site comprises six (6) sub-parcels, identified as Parcels A-F, which collectively accommodate each building. Each parcel will contain either four or five data centre 'shells' together with a shared technical building. The size and configuration of the proposed data centre parcels are based on an optimised 'kit-of-parts' design, developed to enhance construction and operational efficiency and to maximise spatial utilisation for data generation and storage within each shell.



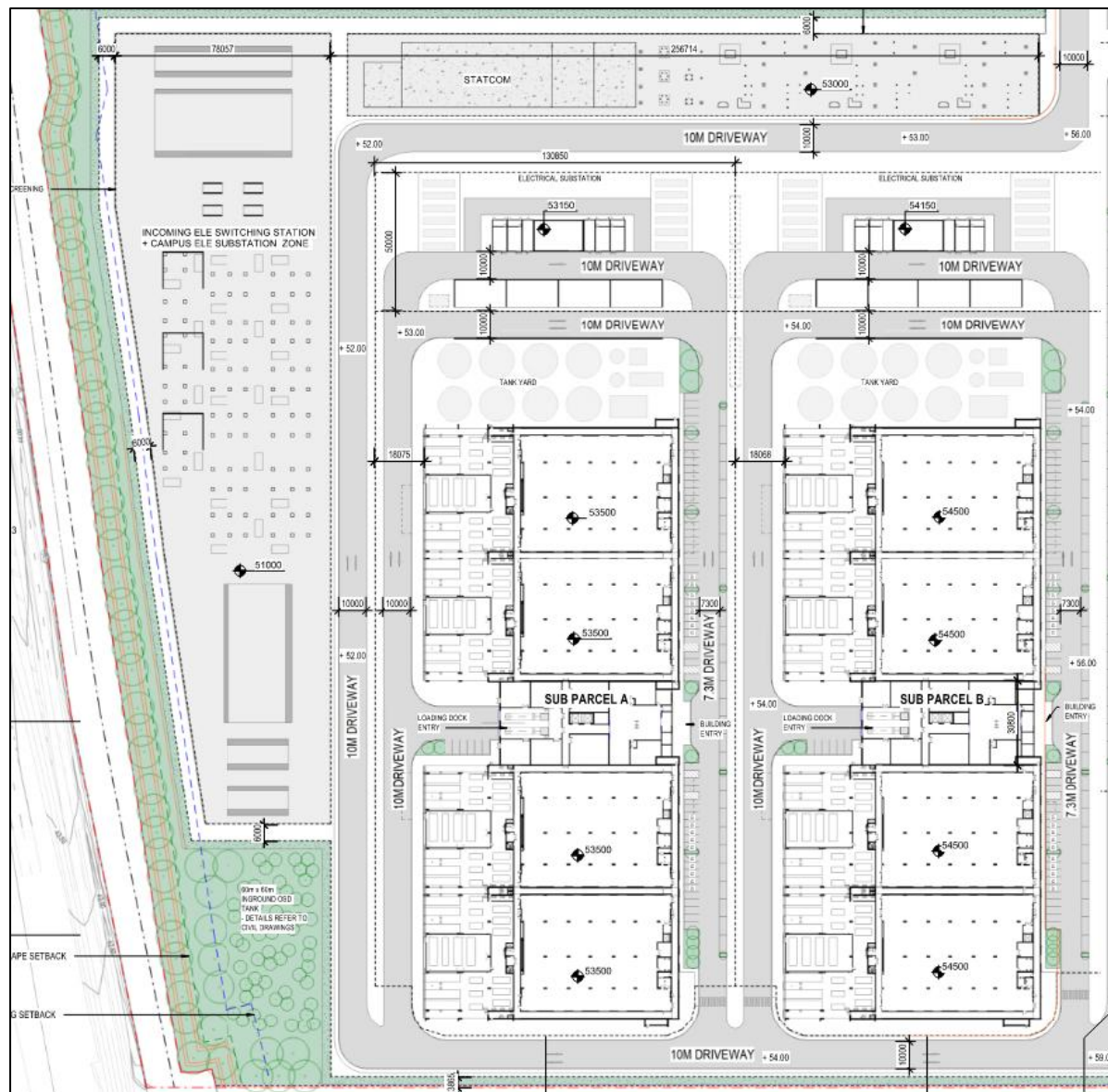


Figure 32. Phase 1 & 2 (Includes sub-parcel A & B) Site Plan

Source: Greenbox Architecture, 2025



Figure 33. Phase 3 & 4 (Includes sub-parcel C & D) Site Plan

Source: Greenbox Architecture, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

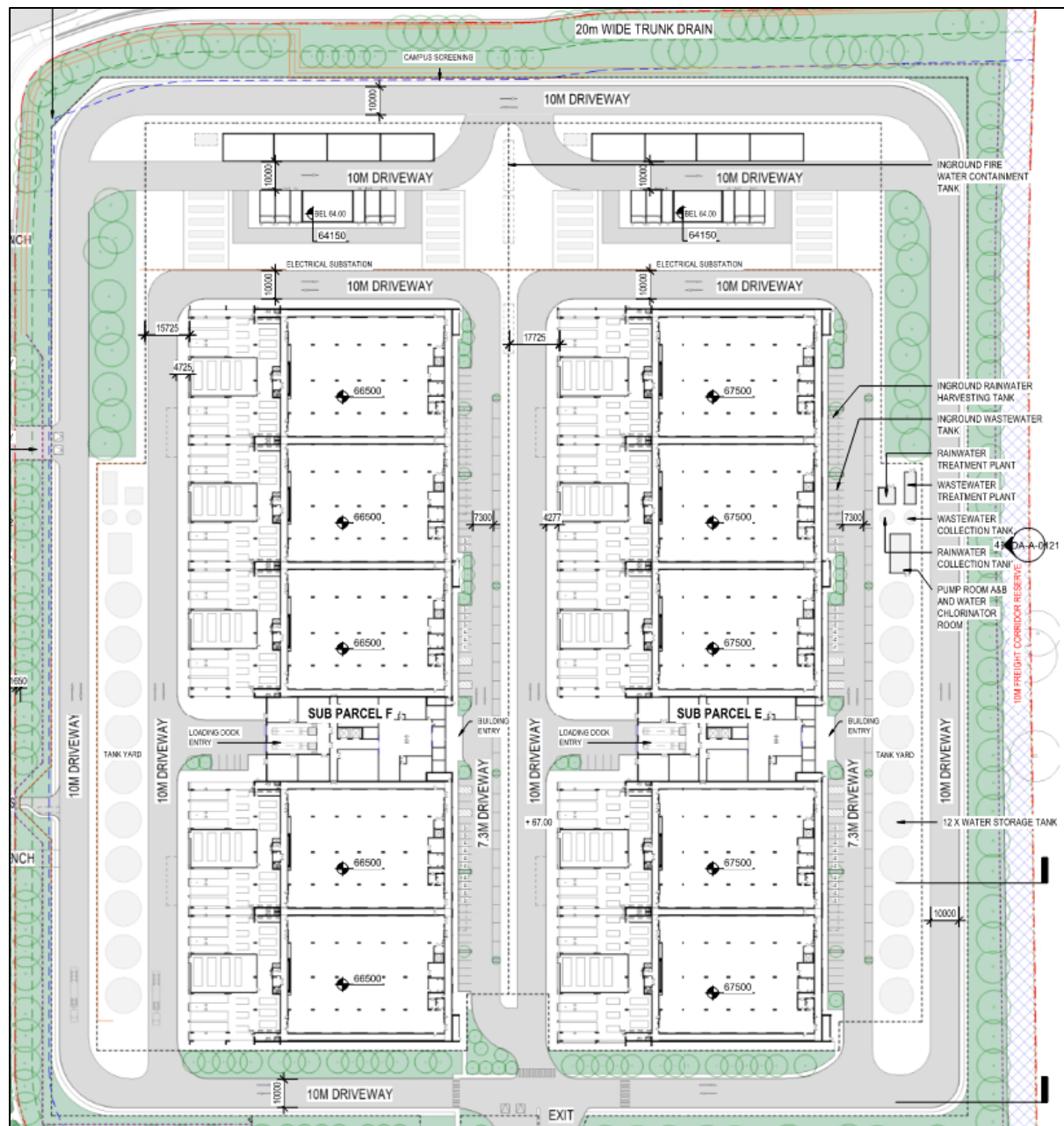


Figure 34. Phase 5 & 6 (Includes sub-parcel E & F) Site Plan

Source: Greenbox Architecture, 2025

4.7 Built Form

The proposal comprises six (6) shells spread across six (6) purpose-built buildings with associated external plant and equipment, security fencing, internal access roads, carparking, infrastructure and landscaping. The proposed development is organised into an east and west campus containing sub-parcels A-F, with sub-parcel A positioned at the western extent of the site and sub-parcel E at the eastern extent. Road 1, running north to south through the site, delineates the boundary between the east and west campus areas.

Each of the six (6) buildings comprises four storeys with a maximum building height of 40 metres from proposed ground level, inclusive of mechanical roof plant and lift overruns. The internal configuration provides front of house administration and office areas at ground floor level, with data halls, plant and services areas distributed across all floors. Generators are strategically positioned at the corners of each building, accompanied by steel flues for ventilation and exhaust purposes.

Montages of the proposed development are shown below in **Figure 35** to **Figure 39**.

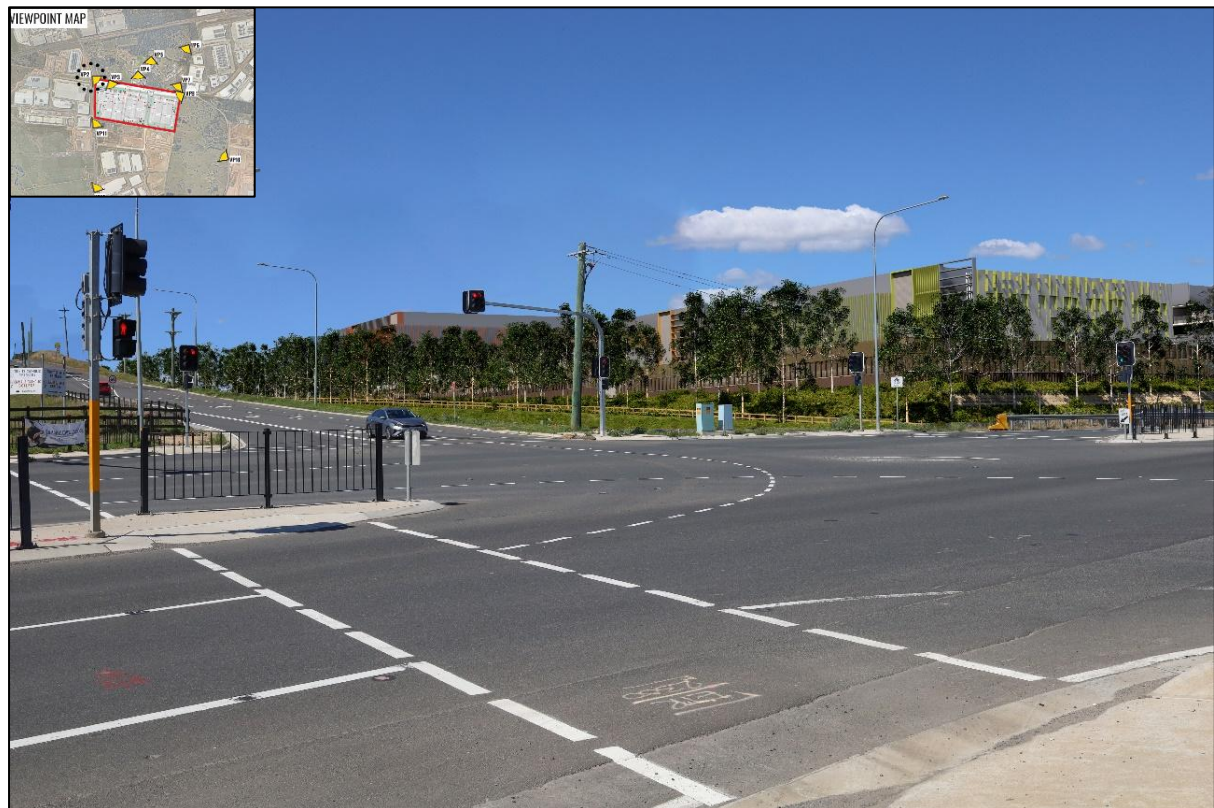


Figure 35. Proposed Photomontage - Landscaping evolved over 15 years (VP2)

Source: Greenbox Architecture, 2025



Figure 36. Proposed Photomontage from Emmaus Catholic College looking South (VP7a) Forecasted for 2035

Source: Greenbox Architecture, 2025



**Figure 37. Proposed Photomontage from Emmaus Catholic College look Southwest (VP7b)
Forecasted for 2035**

Source: Greenbox Architecture, 2025

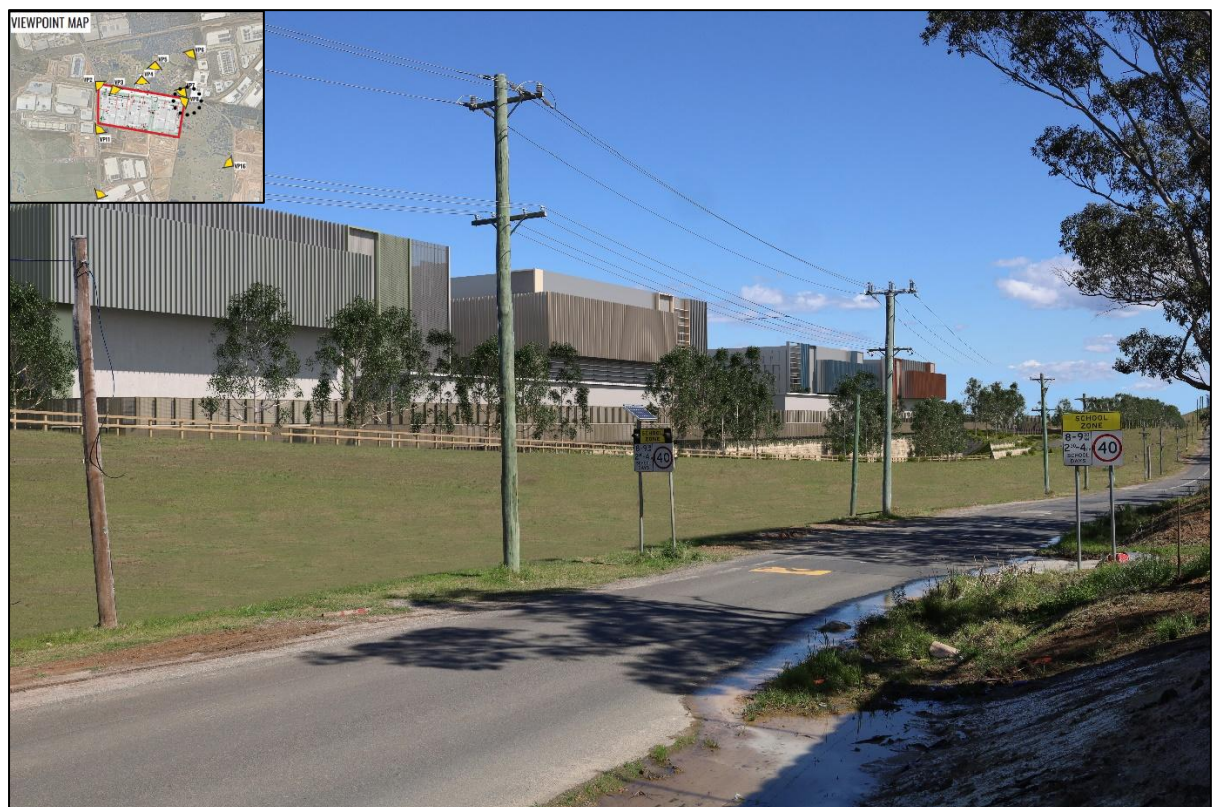


**Figure 38. Proposed Photomontage from Bakers Lane Approach from East (VP8)
Forecasted for 2035**

Source: Greenbox Architecture, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)



**Figure 39. Proposed Photomontage from 845 Mamre Road looking Northeast (VP10)
Forecasted for 2035**

Source: Greenbox Architecture, 2025

4.7.1 Building Height

The site is subject to a maximum (non-statutory) height of 20m in accordance with the MRP DCP 2021 which is sought to be varied given that the proposed development is seeking a maximum building height of 40 metres from the proposed pad level (53.5m from the lowest point of the sites existing ground level). This exceedance is due to the site's natural landform, the operational needs to provide slender buildings that optimise energy usage and cooling and the opportunity to increase setbacks to the northern boundary to minimise interface impacts with the schools and aged care facility.

The maximum finished roof level (RL) of Building E in the eastern portion of the site is RL 107.5 metres, whilst Sub-parcel A in the western portion achieves a maximum level of RL 93.5 metres. This 14 metre variation reflects the site's existing gradient and allows the built form to respond sympathetically to topography, minimising unnecessary earthworks and retaining a stepped profile when viewed externally, thereby reducing the visual impact of the proposed development through integration with the landscape and surrounding topography.

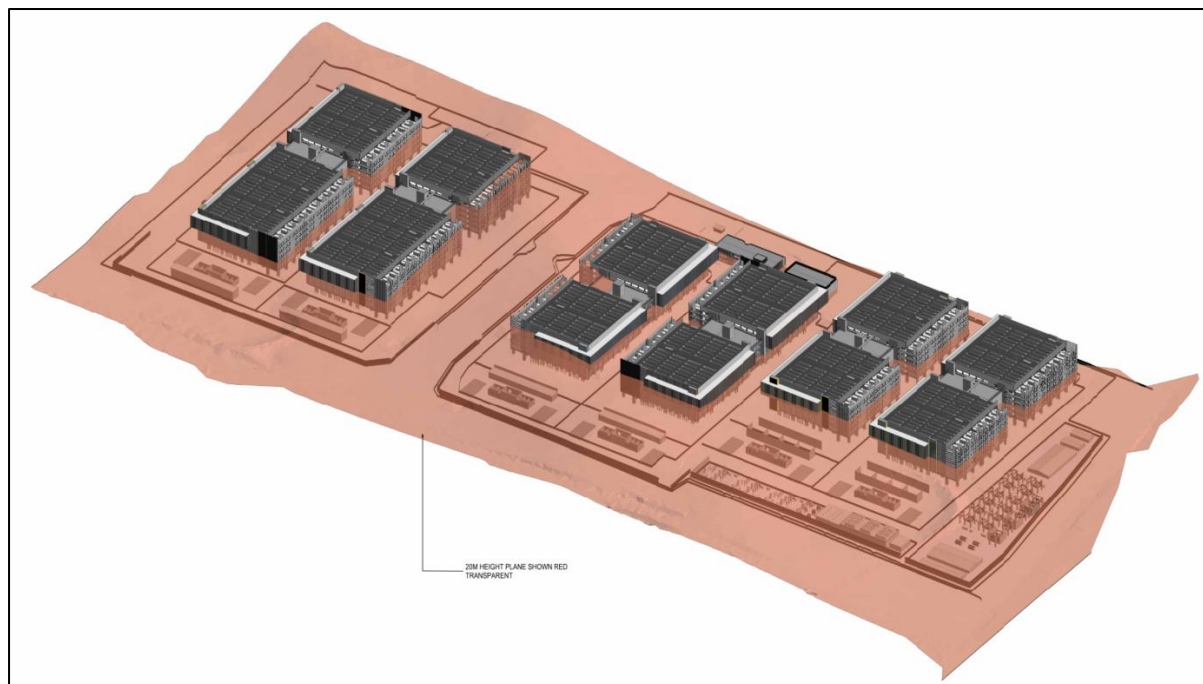


Figure 40. Height Control Diagram

Source: Greenbox Architecture, 2025

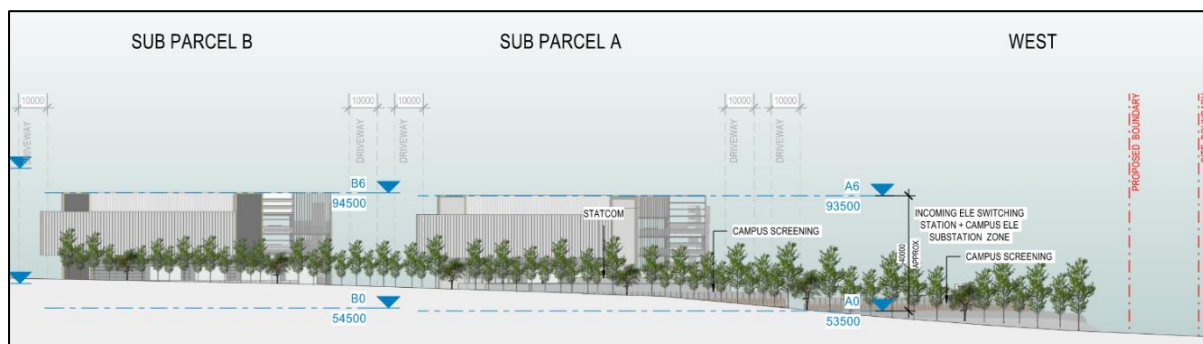


Figure 41. Northern Elevation (Sub parcel A and B)

Source: Greenbox Architecture, 2025

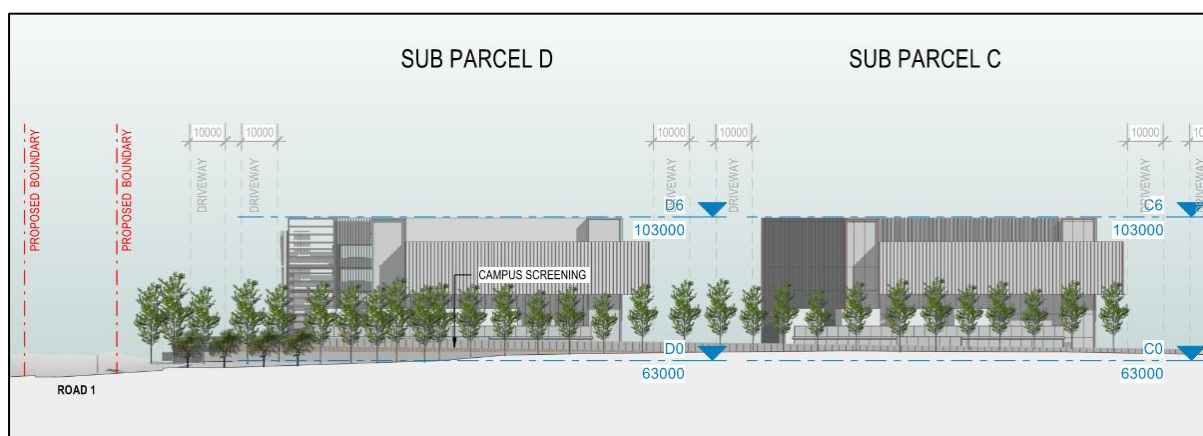


Figure 42. Northern Elevation (Sub parcel C and D)

Source: Greenbox Architecture, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

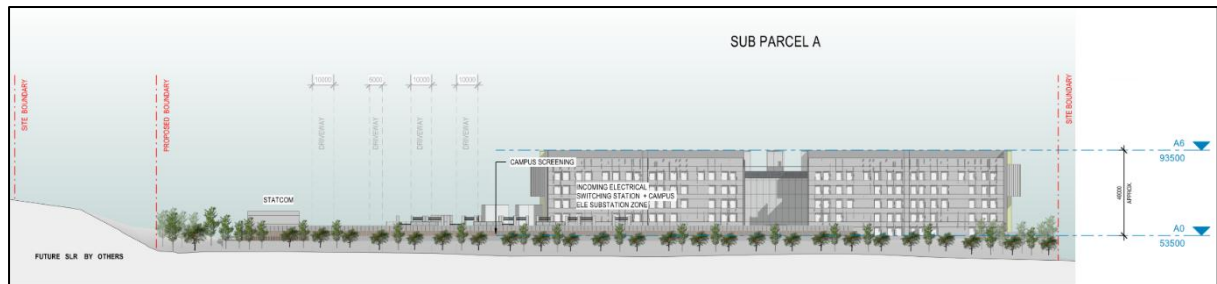


Figure 43. Northern Elevation (Sub parcel E and F)

Source: Greenbox Architecture, 2025

4.7.2 Building and Landscape Setbacks

Building setbacks are proposed for each data centre building range from:

- **North** - 100m to 199m
- **South** - 25m to 99m
- **East** - 72m
- **West** - 116m

Primarily, the proposal seeks to maximise setbacks to the northern and western boundaries to create a visual perception of separation and ensure meaningful landscape zones can be provided to screen the bulk and scale of the proposed development. Within the setbacks to these frontages, there will be various forms of incidental related development such as roads, electrical infrastructure and some plant and equipment.

The following sections show the interface to the northern and southern boundaries of the site.

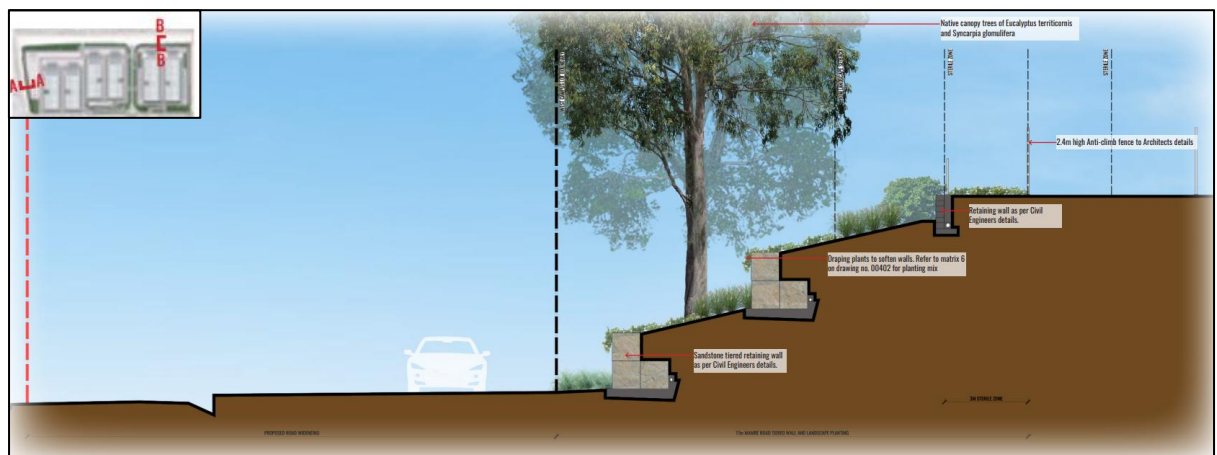


Figure 44. Mamre Road Section AA

Source: Geoscapes, 2025

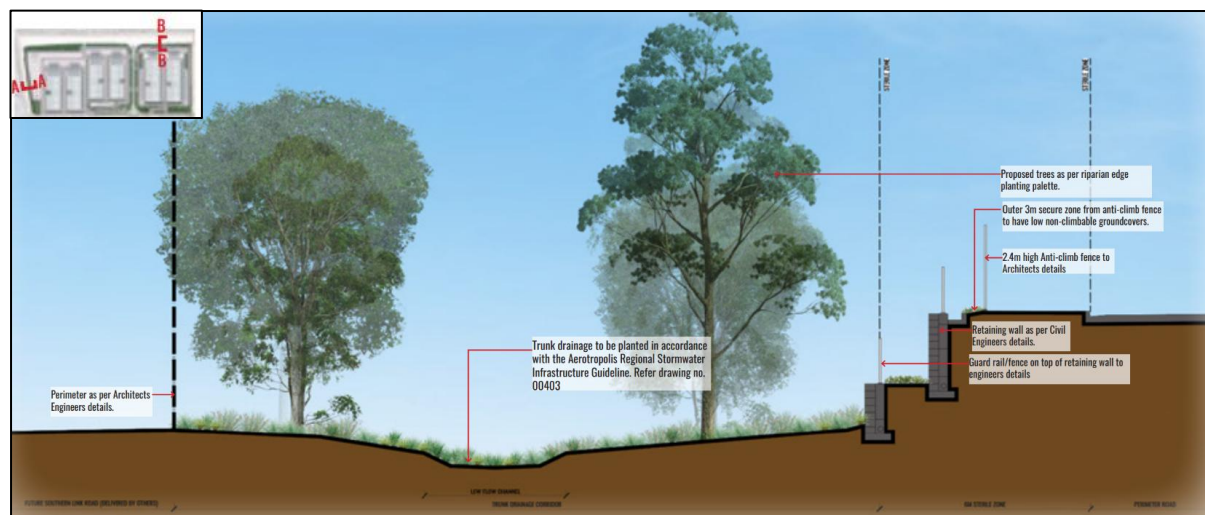


Figure 45. Mamre Road Section BB

Source: Geoscapes, 2025



Figure 46. Southern Link Road Section CC

Source: Geoscapes, 2025



Figure 47. Road 1 Section DD

Source: Geoscapes, 2025

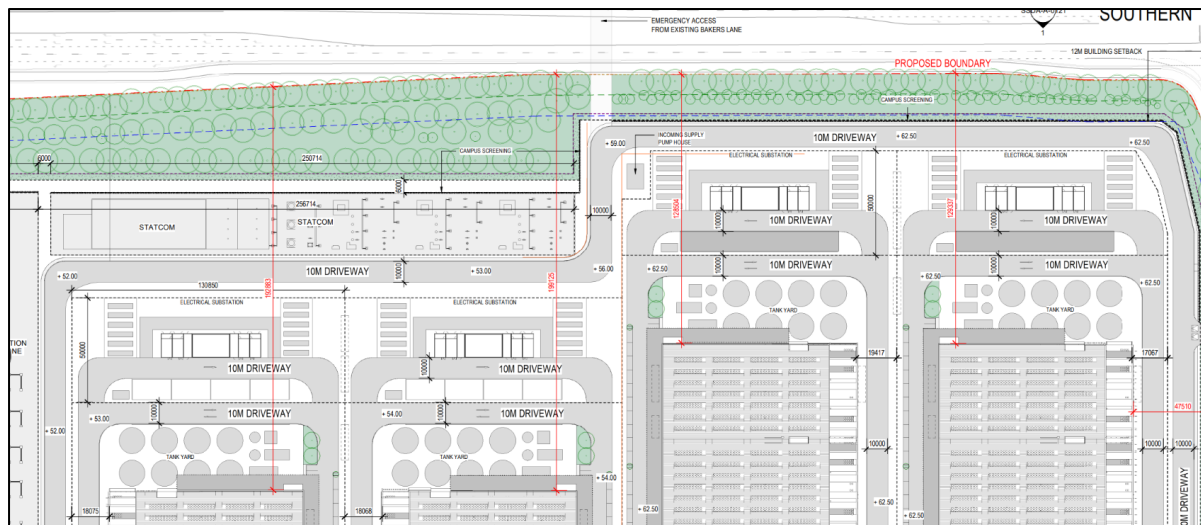


Figure 48. Proposed Development Setbacks (northern boundary)

Source: Greenbox, 2025

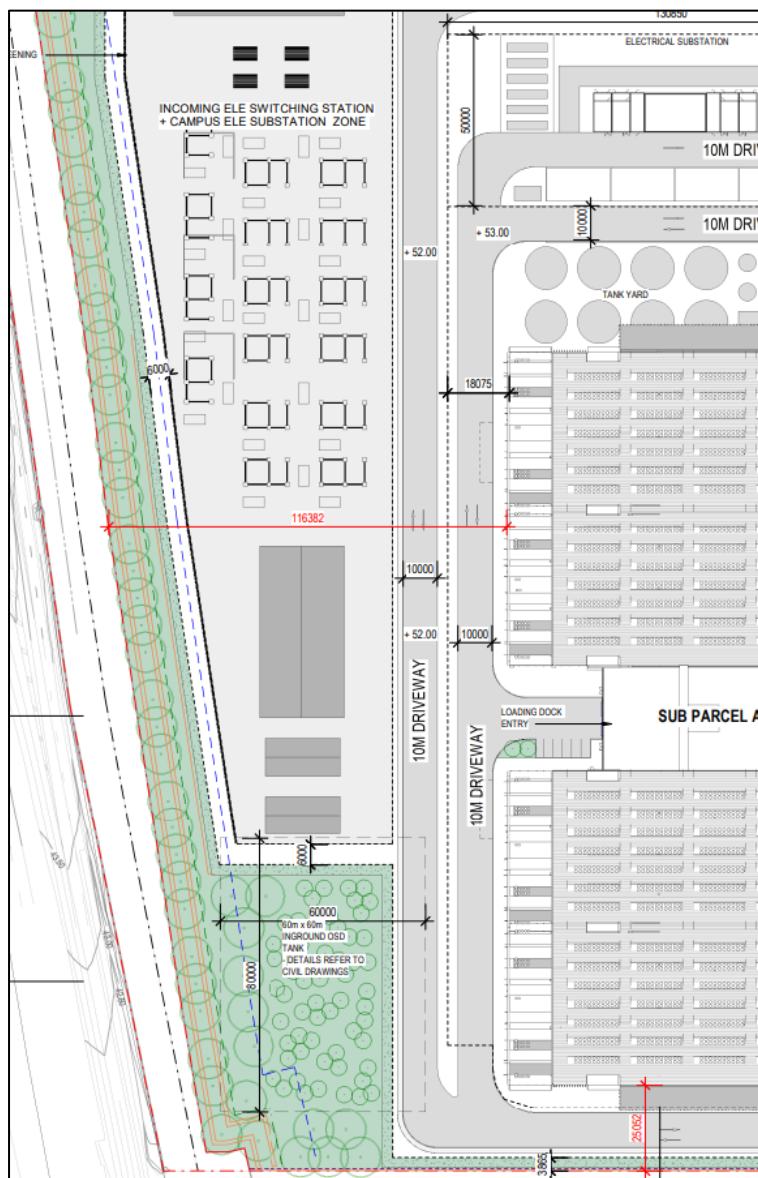


Figure 49. Proposed Development Setbacks (western boundary)

Source: Greenbox, 2025

4.8 Visual and Acoustic Screening

Consideration has been given to how the proposed development will appear to visual receivers in both the public and private domains, especially during the early establishment phase of landscape planting. Each building has been designed to present a distinct yet cohesive architectural expression, responding to the surrounding landscape through the use of natural tones, muted colours, and low-reflectivity materials. Façade modulation, horizontal and vertical articulation, and varied cladding textures are employed to visually break down the apparent bulk and mass of the structures. These design treatments aim to reduce perceived scale, improve integration with the evolving industrial-technological character of the Mamre Road Precinct, and maintain visual harmony with future adjoining developments.

The design team recognised early that building form, façade treatment and material selection would be key considerations in addressing potential visual impacts on surrounding receivers. Façades facing north and west, which are most visible from the public domain and nearby educational facilities, incorporate articulation and variation in tone and texture to provide visual interest and reduce perceived bulk. Combined with the site's generous setbacks and landscape buffers, these treatments will contribute to a visually balanced, contemporary industrial form that sits comfortably within the wider Mamre Road Precinct setting.

A 7m high screen is proposed along northern and western boundaries shown in the below. The screen is to be constructed of perforated metal, allowing partial transparency and will allow for reduction of visual glare and wind load. The design of the screen allows for partial air flow and also reduces the visual exposure of buildings and ancillary structures and infrastructure.



Figure 50. Proposed Photomontage Inclusive of Screening

Source: Greenbox Architecture, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

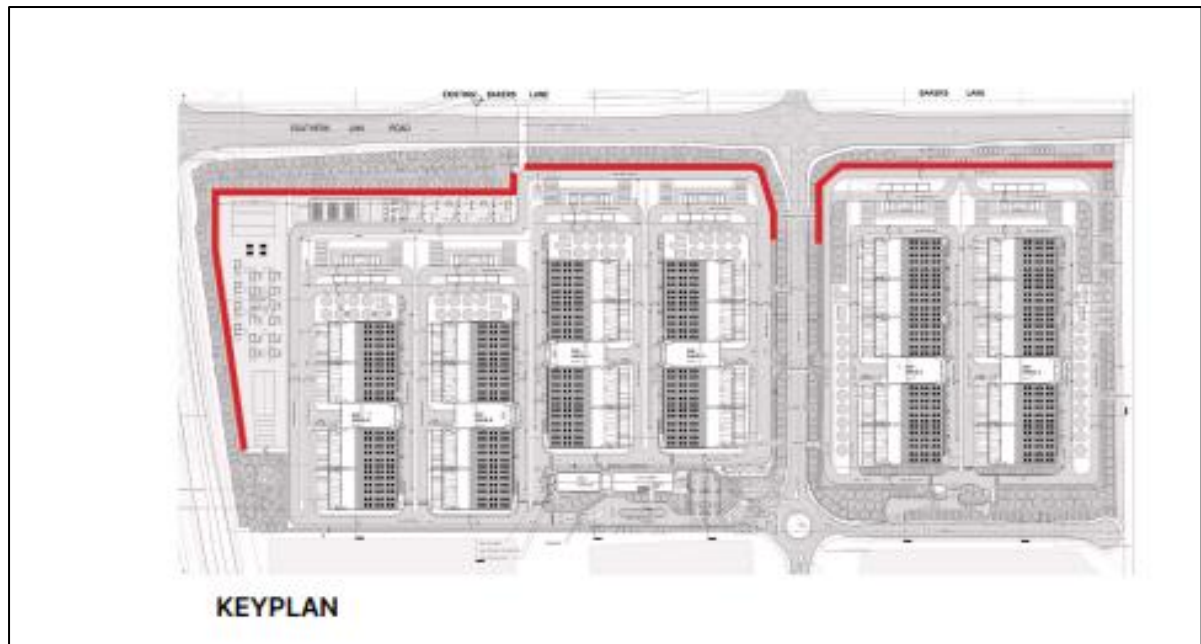


Figure 51: Proposed Extent of Screening

Source: Greenbox Architecture, 2025



Figure 52: Proposed Visual/Acoustic Screen

Source: Greenbox Architecture, 2025

4.8.1 Materials and Finishes

The architectural language of the facility emerges from a dialogue between durability and contextual harmony. Neutral grey metal cladding wraps the structure like a protective shell, grounding it against the industrial backdrop while reflecting the muted tones of the surrounding landscape. Ribbed precast concrete panels, left in their raw finish, introduce a tactile honesty that speaks to permanence and resilience, anchoring the building to its site. Vertical and horizontal aluminium modular blades articulate the façades, creating rhythmic shadows that shift with the sun, a subtle nod to the dynamic nature of the environment.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

Perforated aluminium cladding punctuates key elevations, allowing light and air to permeate while softening the building's mass. Grey-tinted glazing offers transparency without glare, balancing openness with privacy. Around the perimeter, galvanized steel anti-climb mesh and a 2.4-meter-high fence ensure security without compromising visual continuity.

Stainless steel flues rise like sculptural elements, their polished surfaces catching the sky, while metal blades in parcel-matched hues weave a sense of cohesion across the site. Together, these materials narrate a story of strength and adaptability—an architecture that respects its industrial setting yet aspires to refinement through detail and texture.

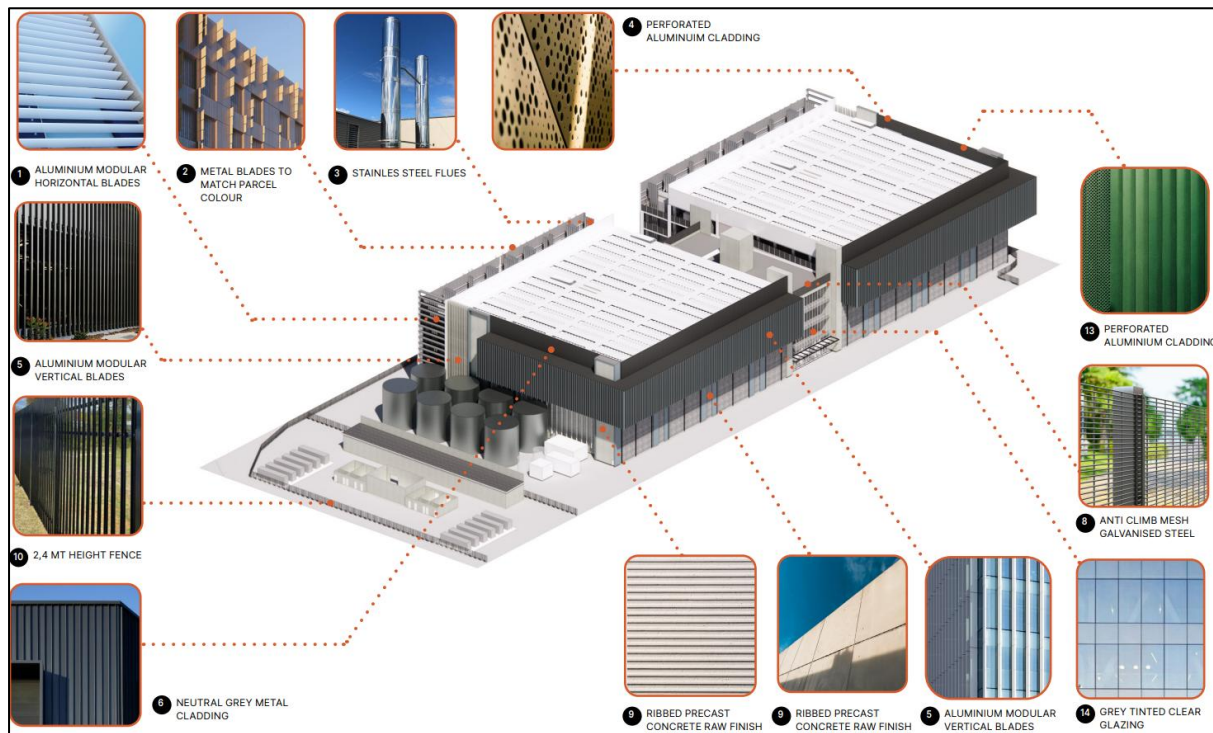


Figure 53. Proposed Envelope Sub Parcel Materials

Source: Greenbox Architecture, 2025

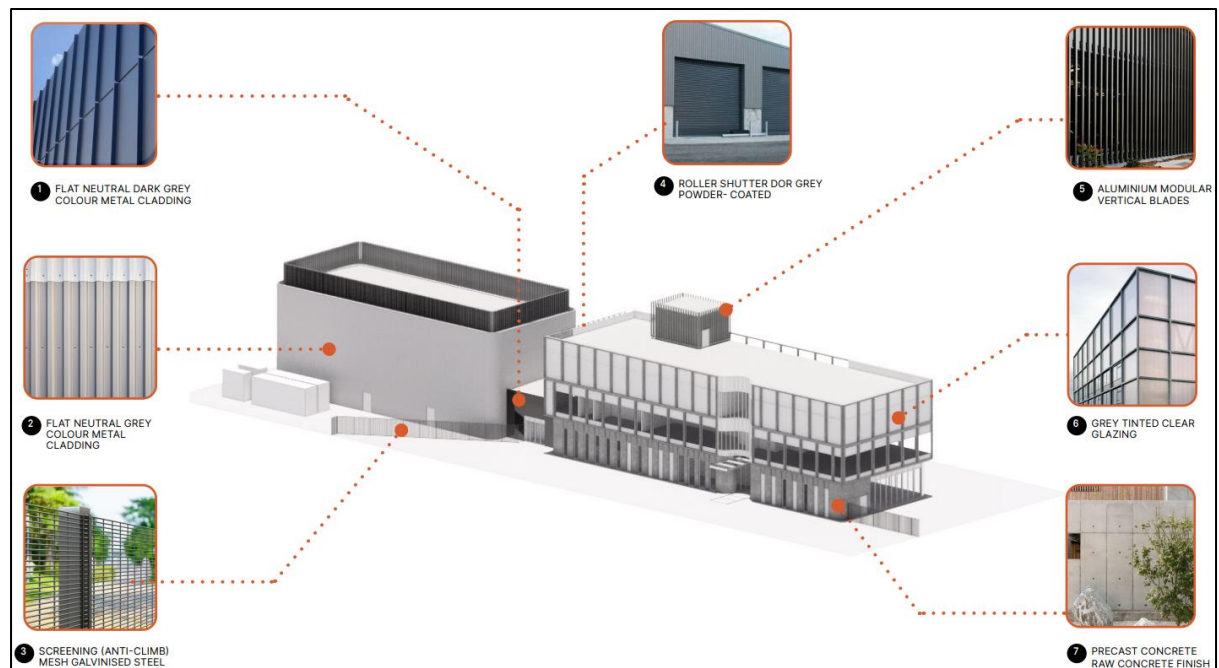


Figure 54. Proposed Campus Operations and Support Hub Materials

Source: Greenbox Architecture, 2025



Figure 55. Proposed Building Envelope Parcel Renders

Source: Greenbox Architecture, 2025



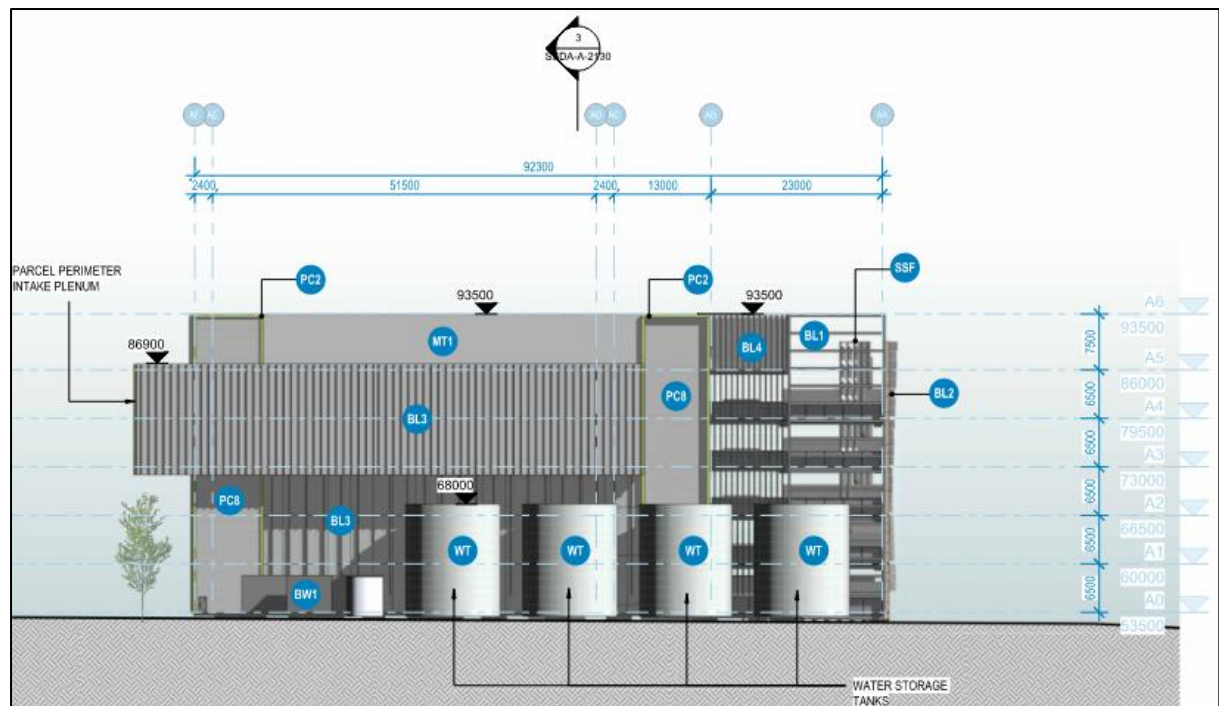


Figure 56. Proposed Building Envelope Parcel Northern Elevation

Source: Greenbox Architecture, 2025

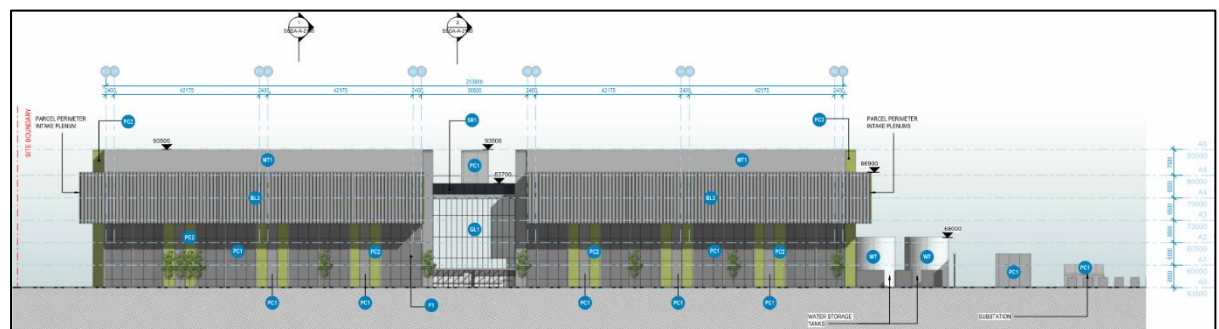


Figure 57. Proposed Building Envelope Parcel Eastern Elevation

Source: Greenbox Architecture, 2025

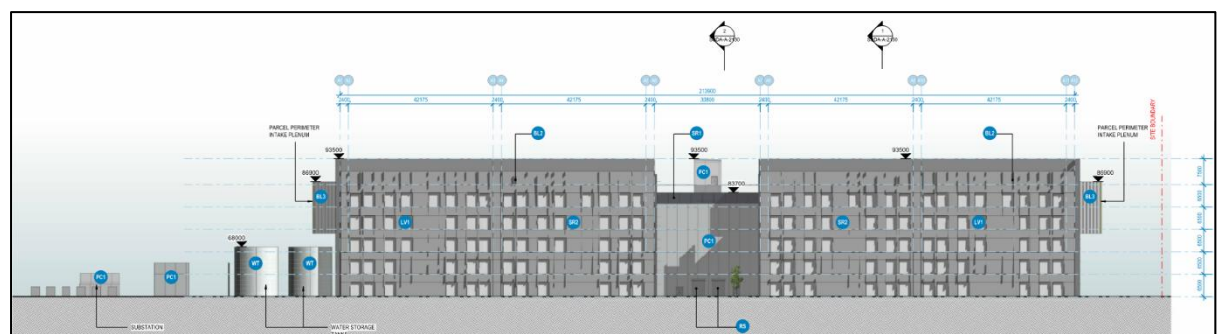


Figure 58. Proposed Building Envelope Parcel Western Elevation

Source: Greenbox Architecture, 2025

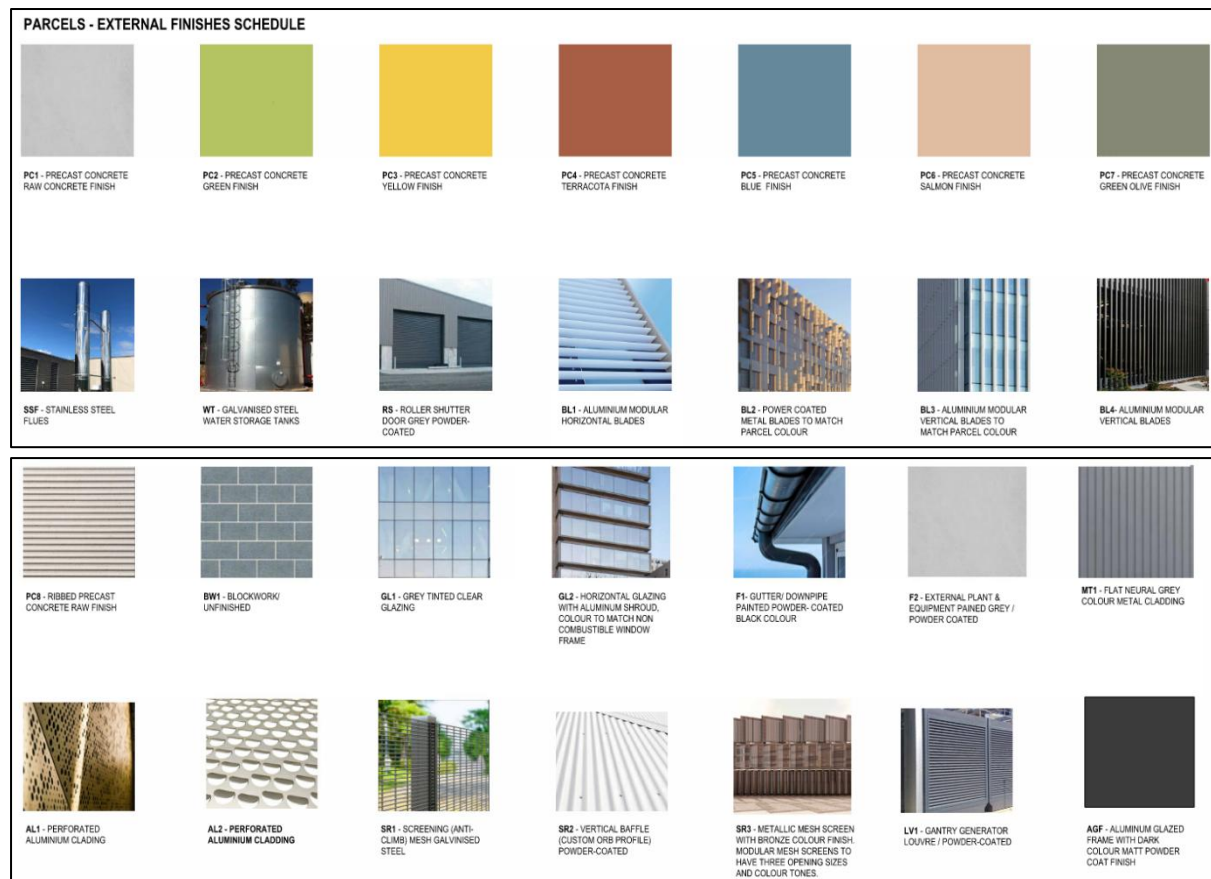


Figure 59. Proposed External Finishes Schedule

Source: Greenbox Architecture, 2025

4.8.2 Signage

External wayfinding plays a vital role in guiding visitors and staff across large campuses efficiently and safely. For this project, signage will remain neutral, focusing on clarity and functionality. Each campus will be identified with simple markers such as “Campus A” and “Campus B” at main entry points. Key areas like visitor parking, delivery zones, and security checkpoints will feature clear directional signs with universal icons, ensuring visibility for both vehicles and pedestrians.

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

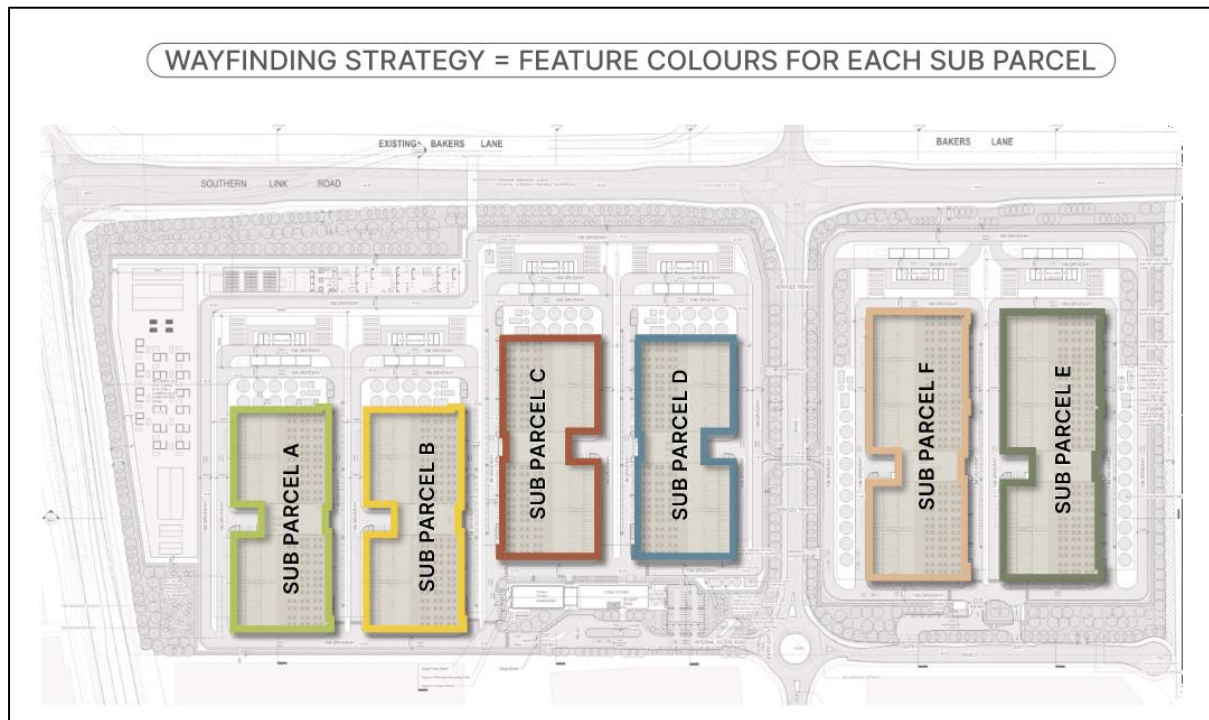


Figure 60. Wayfinding Strategy

Source: Greenbox Architecture, 2025

Traffic flow will be managed through reflective vehicle signage indicating internal roads, loading docks, and speed limits, while pedestrian pathways will be marked with arrows and zone indicators. Safety reminders will be placed at intersections to reduce risks. To enhance navigation, buildings will be distinguished using a color-coded system applied consistently across façades, external signs, and campus maps.

- **Campus Identification:**
 - Neutral markers (e.g., “Campus A” / “Campus B”) at entrances
 - Directional signs for visitor parking, delivery zones, and security checkpoints
- **Traffic Flow:**
 - Vehicle directional signs (arrows, speed limits, loading dock directions)
 - Pedestrian pathways clearly marked
- **Building Identification:**
 - External facade colour finishes differentiate each building and help campus users to orient themselves within the site

The application of distinct external façade colour finishes across individual buildings serves a dual purpose: it visually differentiates structures and enhances wayfinding for campus users. This approach minimizes reliance on additional signage by embedding orientation cues within the architectural language itself. At this stage of development, the façade design strategy is intended to establish a coherent and legible narrative for external identification, ensuring clarity and consistency throughout the site.



4.8.3 Landscape Design

External wayfinding plays a vital role in guiding visitors and staff across large campuses efficiently and safely. For this project, signage will remain neutral, focusing on clarity and functionality. Each campus will be identified with simple markers such as “Campus A” and “Campus B” at main entry points. Key areas like visitor parking, delivery zones, and security checkpoints will feature clear directional signs with universal icons, ensuring visibility for both vehicles and pedestrians.

The proposed landscaping for Mamre Road Data Centre Campus creates a cohesive, resilient, and locally responsive environment that integrates ecological planting with functional and security requirements across the proposed development. Overall, the design provides 77,637m² (17.8%) of permeable area on lot and achieves a projected canopy cover of 45,668m² (10.4%), supporting both environmental performance and visual amenity.

The landscape treatment features tiered sandstone retaining walls complemented by carefully selected planting. Cascading greenery will drape over the walls to soften their appearance while allowing the natural sandstone to remain visible through strategic gaps.

On the first tier, tall Eucalyptus trees are proposed to provide visual screening without impacting the secure zones adjacent to the security fence. To meet bushfire requirements, tree planting will occur in grouped formations with adequate separation, and no large shrubs will be planted beneath tree canopies.

In compliance with security requirements, no trees will overhang the 3-metre offset on either side of the anti-climb fence. Despite these restrictions, canopy trees are still proposed along the major north, east, and west boundaries to provide effective visual screening—particularly towards the sensitive receivers to the north.

The planting palette focuses on species characteristic of the Cumberland Plain Woodland plant community, which is indigenous to the area. Species have been selected in accordance with the Mamre Road Development Control Plan appendix. This approach supports local biodiversity and creates habitat for non-human kin, aligning with the proposed development’s intent as a non-public access development.

An outdoor amenity area is also proposed adjacent to the COSH building, providing a pleasant space for future workers. Planting in this area will include ornamental species to enhance visual appeal and assist with wayfinding throughout the site.

Street trees are proposed in line with the Mamre Road Penrith Council’s Street Tree Masterplan, creating a leafy outlook to the public domain. Trunk drainage corridors will be enhanced with native grasses and trees, consistent with the Aerotropolis Regional Stormwater Infrastructure Guideline, contributing to a cohesive and ecologically responsive landscape character.

Landscaping plans propose a mixture of large and medium evergreen indigenous and native trees, shrubs, and groundcovers consistent with the Mamre Road DCP 2021. Specifically, the proposal includes:

- A landscape setback to Mamre Road and Bakers Lane with a typical width of 10m. This comprises planting of new native trees capable of growing to between 20-25m in height.
- Along to the eastern and southern boundaries, it is proposed to provide landscaping to interface with the future and planned industrial estates.
- The area surrounding the proposed switching station and STATCOM in the north-west corner of the site is afforded a higher density of landscaping with substantial landscaped setback zones of 35m provided. In combination with the setbacks provided, this area equates to 77,637m² of landscaping that serves to provide a visual buffer and enhance the natural setting of the site.



- It is proposed to provide landscaping that varies in height at maturity, ranging from 0.3m to 25m. Species will typically comprise natives that are adaptive to the climatic conditions of the locality.

The resulting landscape characteristics of the proposed development include:

- A landscaped area of 77,637m², representing 17.8% site coverage and comprising:
 - Landscaped area of 45,597m² for the West Campus
 - Landscaped area of 32,040m² for the East Campus
- A total of 846 new trees to be planted; and
- A total tree canopy cover of 45,668m², representing 10.4% site coverage and comprising:
 - Canopy cover of 27,233m² for the West Campus;
 - Canopy cover of 18,382m² for the East Campus

The Landscape Plans are attached as **Appendix 11** Landscape Plan.

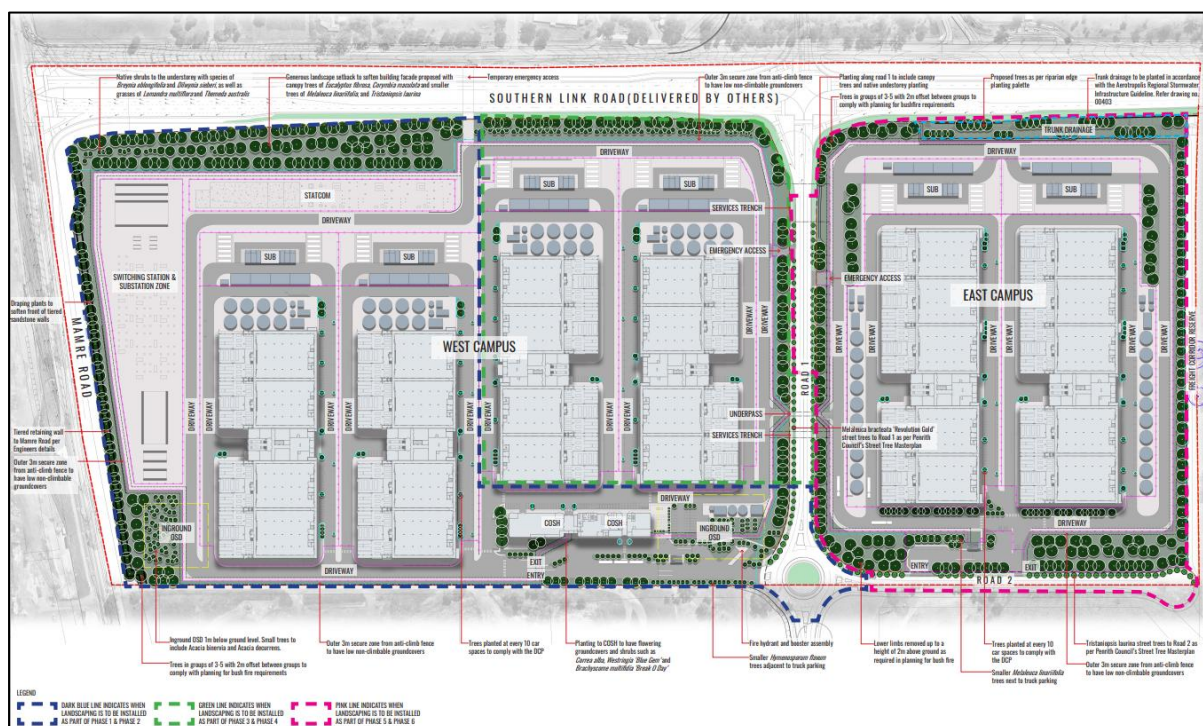


Figure 61. Landscape Master Plan

Source: Geoscapes, 2025

4.9 Site Preparation and Establishment Works

Site preparation activities are proposed to facilitate the proposed development. This includes demolition, tree removal, and earthworks.

4.9.1 Demolition and Tree Removal

The ultimate development involves the demolition of all existing buildings and structures, including existing hardstand and infrastructure.

A total of 215 trees and groups of trees within and adjoining the site boundaries be removed due to tree locations being in direct conflict with the proposed bulk earthworks and roadways

The removal requirements result from the following impacts:

- 156 trees and groups of trees fall directly within the footprint of the proposed bulk earthworks;
- 56 trees and groups of trees fall directly within the footprint of the proposed roadways, including the future Southern Link Road, Road No. 1 and Mamre Road widening works; and
- Three (3) neighbouring trees.

4.9.2 Dam De-watering

As part of the site preparation works, the six (6) farm dams on the site will be required to be dewatered, in accordance with a Dam Decommissioning Plan. The Dam Decommissioning Plan is to provide guidelines for the dewatering of dams and the translocation of aquatic fauna species. This plan will need to be in place prior to the commencement of the decommissioning works.

4.9.3 Remediation

The remediation strategy follows NSW EPA guidelines and industry best practice. Contaminated soil containing asbestos will be excavated and disposed at licensed facilities that can legally accept such materials. This includes approximately 5 cubic metres of soil with loose asbestos fibres and approximately 1,150 cubic metres of soil containing asbestos fragments. Petroleum-stained soils will be excavated and relocated to areas beneath future buildings or paved areas where they will not pose any risk or aesthetic concern. Waste materials unsuitable for retention will be removed and disposed appropriately, while inert materials such as bricks and concrete may be retained in suitable locations. Building rubble around dam embankments will be manually inspected and any asbestos materials removed before the rubble can be reused or disposed.

Following remediation, the site will undergo comprehensive validation to confirm all contamination has been adequately addressed, including soil sampling, laboratory testing, visual inspection, air monitoring, and documentation of waste disposal. Subsequently, the site will be suitable for the proposed data centre without requiring any ongoing management of contamination.

4.9.4 Earthworks

Bulk earthworks are required to provide six (6) large flat building pads to facilitate the proposed development of data centre parcels, in conjunction with associated hardstand areas, and carparking areas around the site.

The cut and fill requirements within the site have been defined through multiple design iterations and careful consideration of various factors within and surrounding the proposed development site, including but not limited to:

- Undulating topography within the Mamre Road Precinct;
- Provision for connectivity to and interfaces with adjoining lands;
- Achieving as close as possible to a balance of cut to fill to minimise the volume of material that needs to be imported or exported, allowing for management of topsoil and over-excavation (desilting) required within existing farm dams;
- Minimising the height and extent of retaining walls fronting the public domain including the future Southern Link Road, Mamre Road and internal estate roads;
- Avoiding extensive cut in bedrock sub-surface units;
- Meeting the requirements for the end-use of the site as a data centre campus; and
- Provision of a final design solution that addresses water management requirements.

A detailed earthworks plan has been prepared and is provided within the Civil Engineering Report at **Appendix 21** Infrastructure Delivery Strategy Report and Civil Infrastructure Report.



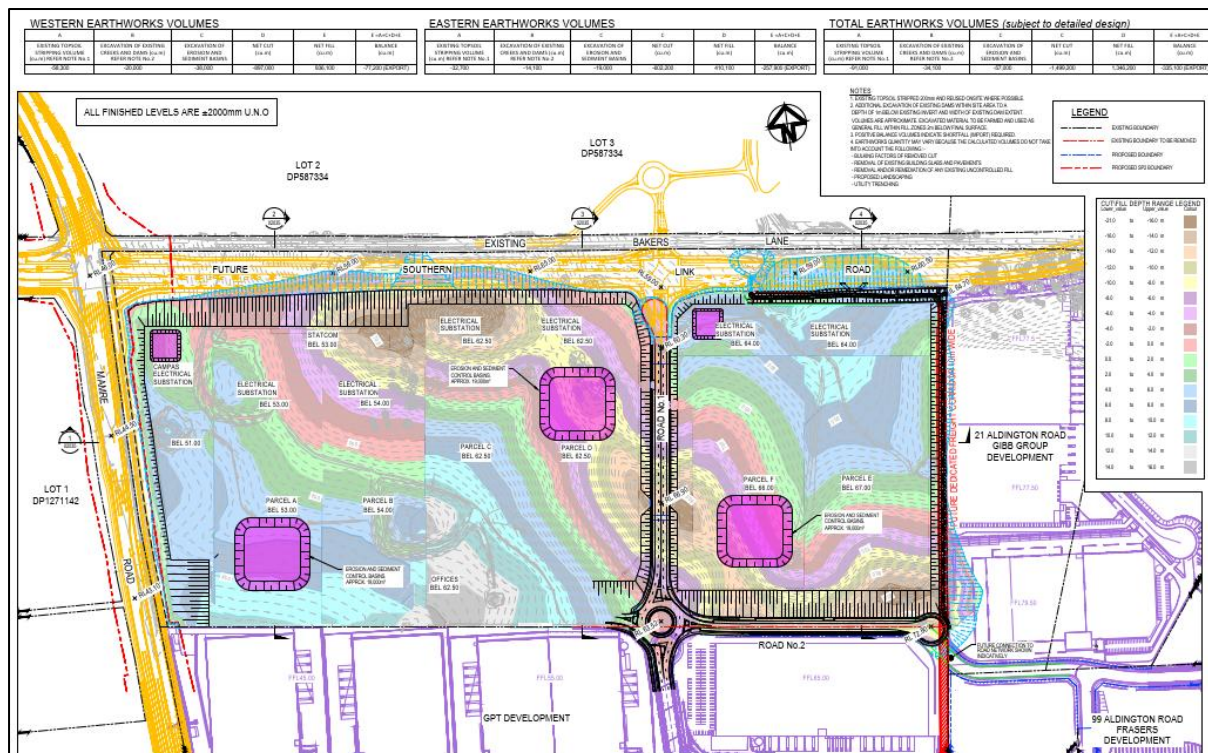


Figure 62. Bulk Earthworks Plan

Source: AT&L, 2025

The extent of cut and fill proposed is detailed as follows:

TABLE 10: CUT & FILL QUANTITIES	
Area	Volume
Stripped topsoil	-91,000m ³
Excavation of existing creeks and dams	-34,100m ³
Excavation of erosion and sediment basins	-57,000m ³
Net cut	-1,499,200m ³
Net fill	1,346,200m ³
Balance	-335,100m ³

4.9.5 Retaining Walls

The proposal incorporates retaining walls where level changes cannot be accommodated through batter slopes. Retaining walls shall be constructed adjacent to the road reserve and between data centre parcels within the site boundaries. All retaining walls shall utilise keystone block products or similar systems as detailed in the civil engineering drawings (**Appendix 21** Infrastructure Delivery Strategy Report and Civil Infrastructure Report).

In accordance with Section 4.4 of the MRP DCP 2021, retaining walls exceeding 2 metres in height shall be constructed as tiered structures. All retaining walls shall be designed and constructed in accordance with standard industry practices, relevant Australian Standards and applicable engineering guidelines.

Retaining walls shall be constructed on a staged basis corresponding with the proposed development earthworks programme. Where retaining walls are not immediately constructed, temporary batters at a gradient of 1:4 shall be maintained for stability purposes. Any batter exceeding a gradient of 1:5 shall be vegetated to prevent erosion and ensure stability.

All retaining walls shall incorporate pedestrian and vehicular safety barriers where required in accordance with Austroads Guidelines. Such barriers shall be designed and installed to meet all relevant safety standards and regulatory requirements.

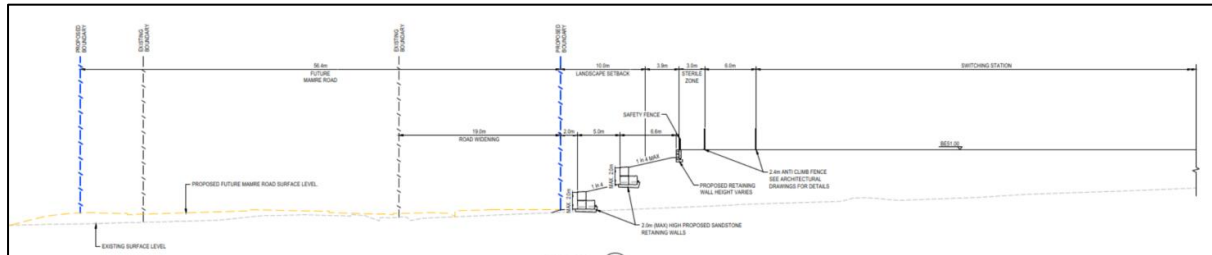


Figure 63. Typical Retaining Wall Section Adjacent to Mamre Road

Source: AT&L, 2025

4.10 Stormwater Management

The proposed stormwater drainage infrastructure for the data centre campus has been designed to manage and convey stormwater flows in accordance with relevant engineering standards prior to controlled discharge to receiving waters north of Bakers Lane and west of Mamre Road. The drainage system incorporates the following design criteria:

Estate road drainage infrastructure:

- Major drainage system (comprising pit and pipe networks, overland flow paths and channels): designed to accommodate the 1% Annual Exceedance Probability (AEP) storm event
- Minor drainage system (pit and pipe network): designed to accommodate the 5% AEP storm event as a minimum standard, with increased capacity where necessary to satisfy major system requirements

Data centre campus drainage infrastructure:

- Major and minor drainage systems: designed to capture and convey stormwater flows up to and including the 1% AEP design storm event, ensuring operational continuity of the Data Centre Campus whilst mitigating potential flood risk within the site

Further detail is provided in **Section 7.9** of this EIS and **Appendix 37** Water and Stormwater Management Plan.

4.10.1 Erosion and Sediment Control

A comprehensive Erosion and Sediment Control Plan (**Appendix 41**) has been prepared in accordance with relevant guidelines to manage potential impacts during construction activities.

The proposed erosion and sediment control measures are detailed within the Civil Engineering Drawings (**Appendix 39** Earthworks Strategy Report), which provide comprehensive layouts and technical specifications for all control infrastructure to be implemented across the subject site through to completion of construction works.

The following methodology and control measures will be implemented to mitigate potential sedimentation impacts during the construction phase:

- Minimisation of the spatial extent and temporal duration of soil disturbance activities
- Diversion of clean water runoff from undisturbed catchments around disturbed areas, with discharge via appropriate scour protection measures



- Installation of flow diversion structures to intercept surface flows and redirect clean water via designated drainage pathways
- Direction of sediment-laden runoff to appropriately sized temporary sediment basins designed to accommodate design storm volumes, with provision for chemical flocculation where required
- Implementation of stabilised construction access points incorporating vehicle shaker grids and wash-down facilities to prevent sediment tracking onto the adjacent road network
- Construction of catch drains to convey sediment-laden water to designated sediment control structures
- Installation of sediment fencing to provide source control through filtration and retention of sediments
- Progressive stabilisation of disturbed surfaces through hydroseeding or equivalent measures in areas not subject to immediate construction activities

All temporary sediment control basins will be positioned outside the 1% Annual Exceedance Probability (AEP) flood extent from both local overland flow paths and South Creek flooding."

4.11 Road Design and Parking

4.11.1 External Road Network

The site is bounded to the north by Bakers Lane, a local road under the ownership and maintenance of Penrith City Council, comprising a 6-8 metre sealed pavement with table drains within a 20-metre road reserve.

Notwithstanding the site's direct frontage to Bakers Lane along the entirety of its northern boundary, only emergency vehicular access from Bakers Lane is proposed as part of the proposal. The proposed development does not propose any external road upgrades or modifications to the existing road network.

The future SLR is planned to run parallel to Bakers Lane and will ultimately provide the primary access point to the site. The Southern Link Road is intended to function as an east-west arterial connection between Mamre Road and Wallgrove Road. However, funding for the delivery of this infrastructure has not been committed by TfNSW at the time of this EIS.

The primary point of vehicular access to the site will be via the north-south collector road that is currently under construction as part of the Yiribana Logistics Estate development (**SSD-10272349**). No vehicular access to the site off Mamre Road is proposed once operations have commenced.

4.11.2 Internal Road Network

The internal road network has been designed to accommodate the operational requirements of the proposal and the broader Mamre Road Precinct. The network anticipates heavy vehicle movements including semi-trailers (up to 19m) and A-Doubles (up to 30m), which require specific design considerations for lane widths and turning movements

The internal network comprises two road typologies in accordance with the Mamre Road Precinct Development Control Plan:

- Collector Road (Road No. 1): 25.6m road reserve with 15.4m carriageway width
- Industrial Road (Road No. 2): 24.0m road reserve with 15.0m carriageway width

Both road types are designed for 60km/h speeds (signposted 50km/h) and accommodate PBS Level 2 Type B vehicles as the design vehicle, with PBS Level 3 Type A vehicles as the check vehicle. Each road provides two 3.5m through traffic lanes and kerbside lanes of 4.2m and 4.0m respectively.



Roundabout construction is also proposed at the southern boundary of the site, as shown below.

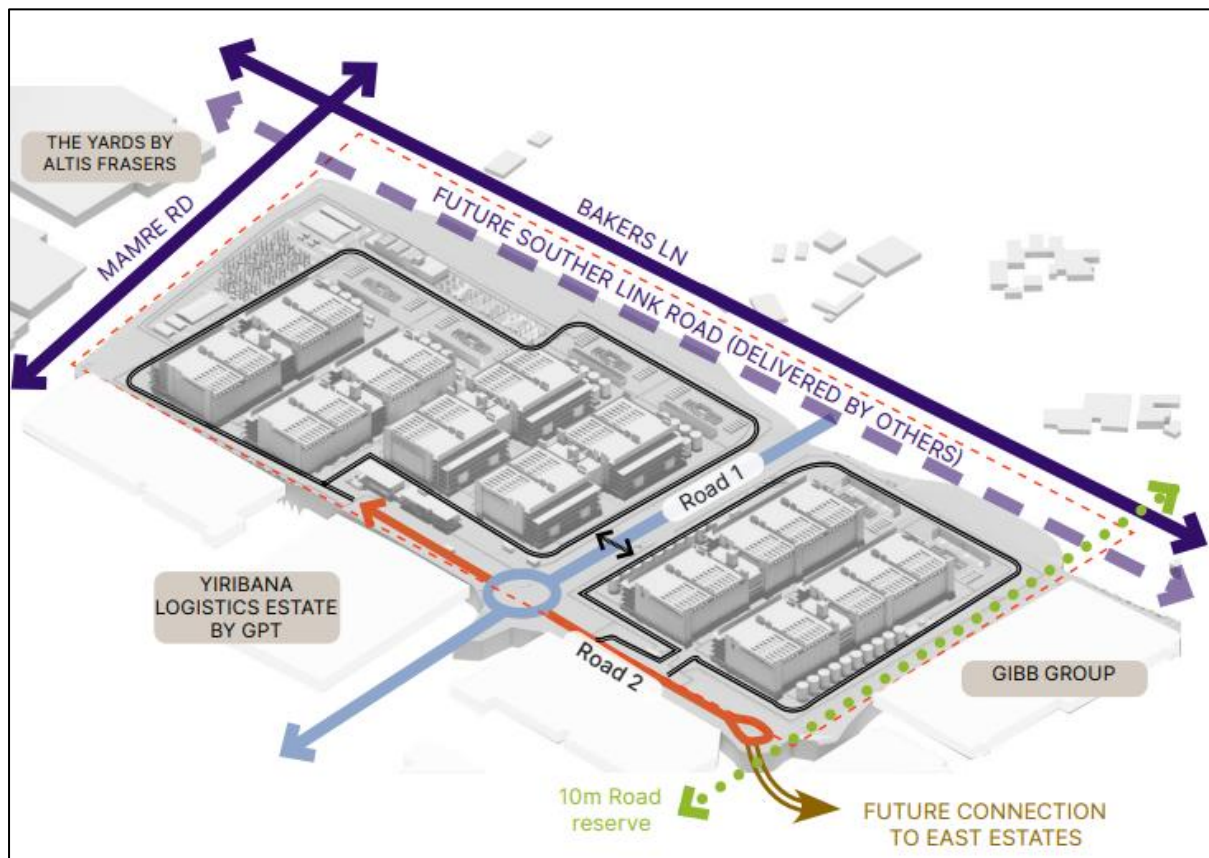


Figure 64. Site Access Strategy & Traffic Road Network

Source: Greenbox, 2025

4.11.3 On-Site Parking

Car-parking areas are located at-grade and directly adjacent to the buildings, meaning adequate parking is provided for each stage of the proposed development.

A total of 619 car parks is provided, including 124 Electric Vehicle (EV spaces). Six motorcycle parks are also proposed as part of the proposed development. All staff and customer/contractor car spaces would be designed to meet the minimum requirements of User Class 1/1A car parking (low turnover) to align with AS2890.1:2004 for staff parking and AS2890.6:2009 for accessible parking.

Parking spaces for the COSH building have been designed to user Class 3 standards within the campus (suitable for medium/high turnover) with publicly accessible spaces (for the café) provided in an angled configuration that is well suited to high turnover traffic. The internal manoeuvring area to and from the internal car park areas have been designed for light vehicles up to B99 with dimensions 1,940mm×5,200mm, as prescribed within AS2890.1: 2004.

4.11.4 Vehicle Access

Construction

The following proposed access arrangements are proposed for the construction of the proposed development:



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

- Phase 0 – Access via Yiribana Estate – Arrival: Northbound or southbound on Mamre Road turning into AIE to the Site via internal roads – Departure: Towards AIE and turning left or right onto Mamre Road heading southbound or northbound.
- Phase 1 – Temporary Access via Mamre Road – Arrival: Southbound on Mamre Road turning left into the Site – Departure: Turning left onto Mamre Road heading southbound
- Phase 2-7 Roundabout connecting to Aspect Industrial Estate (AIE) – Arrival: Northbound or southbound on Mamre Road turning into AIE to the Site via internal roads – Departure: Towards AIE and turning left or right onto Mamre Road heading southbound or northbound

Operational

Proposed operational access will be provided via the Industrial Collector Road connecting to Darrabarra Avenue, following its completion. A Condition of Consent is proposed requiring delivery of the Industrial Collector Road in advance of the proposed development becoming operational, consistent with conditions applied to other approved developments in the Mamre Road Precinct.

Following completion of the Berriwerri Drive / Local Road roundabout, operational vehicles will access the site via:

- Western Campus: direct access via the western leg of the Berriwerri Drive / Local Road roundabout
- Eastern Campus: entry and exit points from the east-west local industrial road
- Emergency access: driveways from Berriwerri Drive for both western and eastern campuses

The site's direct frontage to Bakers Lane along the entirety of its northern boundary, only emergency vehicular access from Bakers Lane is proposed as part of the proposed development.

4.11.5 Service and Loading

A loading dock comprising 1 loading bay (suitable for an HRV) for each sub-parcel (6 total) is considered sufficient and appropriate. Furthermore, the COSH building incorporating a café has been provided with a dedicated loading space suitable to accommodate an HRV which will provide a high level of servicing amenity. It is anticipated that service area design compliance with AS 2890.2:2018 would form a standard Condition of Consent further to approval.

4.12 Utilities

The proposed development will include the provision of the following required utilities:

Disel Fuel Tanks

The generator engines on site will use diesel fuel to generate power. All 2.2 MW generators enclosures will be located within the gantry areas. Each generator enclosure contains a fuel day tank. These generator day tanks will be supplied with fuel from bulk fuel tanks located in tank chambers on the ground floor. The fuel system in each shell provides sufficient fuel to run the generators for 26 hours. Fuel tanks will be designed to comply with AS 1692 and AS 1940 requirements.

The following table provides the storage requirements per shell configuration based on the proposed design.

TABLE 11: DIESEL FUEL TANKS		
Shell	Nominal Fuel Storage Capacity	Comment
Typical	696 kL	34 x 2MW Gensets with 5 x 132 kL Bulk Tanks and 34 x 1 kL Day Tanks

Mamre Road Data Centre Campus
706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

The fuel system design is based on the fuel consumption of the Cummins C2750D5BE (standby) generator at 100% load, running on diesel. The generators are less efficient at 100% load, making this the governing case for fuel consumption. The location of generator fuel tanks is shown below in **Figure 65** and **Figure 66**.

Figure 65. Bulk Supply Tank Locations
Source: Greenbox Architecture, 2025

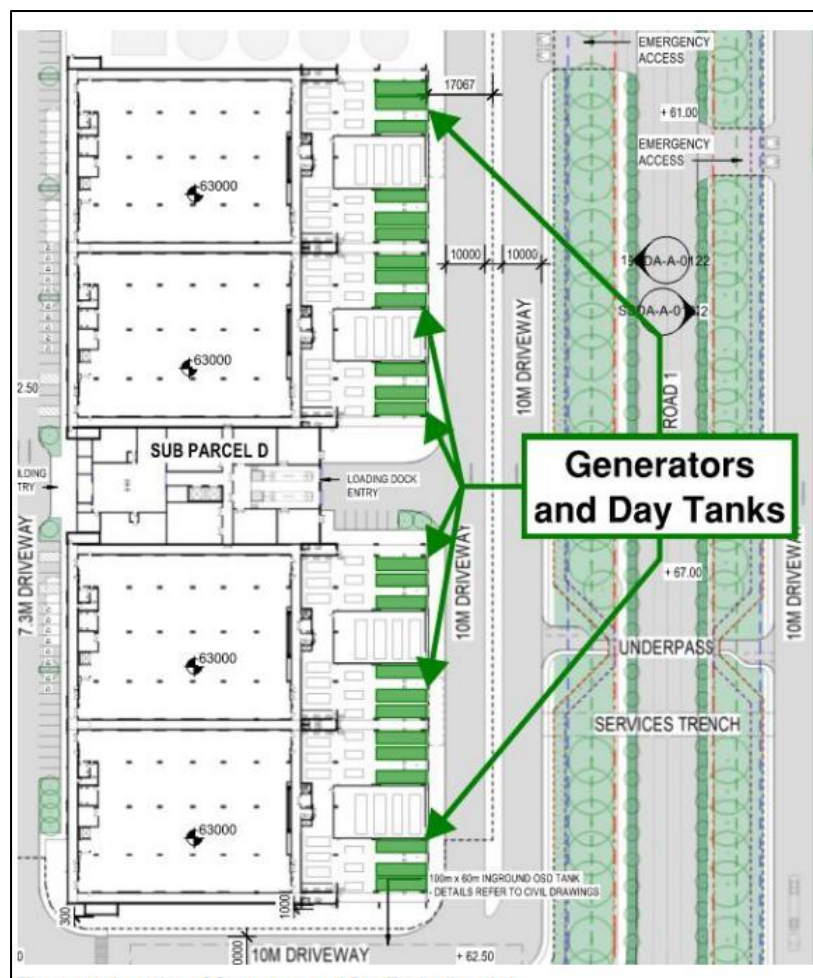


Figure 66. Day Tank Locations
Source: Greenbox Architecture, 2025

Industrial Water

The industrial water site infrastructure comprises with dual connections from recycled water mains from 2 different recycled water utilities with a set of water storage tanks per building which holds 24 hours of peak mechanical demand. Separate A and B mechanical makeup water system will be provided from each set of tanks for a N+N redundancy arrangement. Each A and B system will have a separate pump set, which each pump set can boost 100% of mechanical demand.

The volume of industrial water storage tanks is designed to have sufficient capacity to provide flow to N+R cooling plant for the worst-case 24-hour sequence of ambient conditions measured at the nearest ASHRAE weather station based on 20 years of recent historical data. The total tank volume also includes 10% of the total tank effective capacity allowing buffer zone for rainwater reuse and wastewater reuse top up.

The following table provides the storage requirements per building based on the proposed design.

TABLE 12: INDUSTRIAL WATER TANKS			
Building	Number of tanks per building	Total Water Storage capacity per building (kL)	Sitewide Total Water Storage Capacity (kL)
A	8 x 1,760 kL tanks	12,880	83,720
B	8 x 1,760 kL tanks	12,880	

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

C	8 x 1,760 kL tanks	12,880	
D	8 x 1,760 kL tanks	12,880	
E	10 x 1,760 kL tanks	16,100	
F	10 x 1,760 kL tanks	16,100	

Fire Water

Fire protection infrastructure comprises a combined sprinkler and hydrant fire water tanks and pumpset. The buildings effective height is greater than 25 meters and therefore, dual water supply is required for the sprinkler system under the NCC.

Based on the above assumptions and fire hydrant and fire sprinkler demands calculations, the summary of the firewater tank sizing is shown in the Table below:

TABLE 13: INDUSTRIAL FIRE WATER TANKS

System/Specification	Basis of Design	Requirement	Water Storage
Fire hydrant component	FM Global and Client standards: 1-hour on-site hydrant supply for 3 x hydrants Australian Standard- AS2419.1-2021: 4-hours fire hydrant supply.	3 x 10 L/s X 3600 X 4hr= 432,000L	1 X 432,000L
Fire sprinkler component	FM Global and Client standards: 1-hour on-site sprinkler supply. Sprinkler demand: 61 L/s Australian Standard- AS2419.1-2021: 1-hour sprinkler supply Dual supply for building with effective height more than 25m.	60.5 L/s X 3600 X 1hr= 217,800L	1 X 432,000L
Total effective capacity		Combined fire tanks	Total effective capacity required: 867,600L. 2 x 433,800L tanks

Substations

Lumea's 330/132kV substation on the Western side of the Campus is the connection point for the 132kV power supply on the Campus, serving six sub-parcels as follows:

- x 4 shell sub-parcel (120MVA power supply);
- 2 x 5 shell sub-parcel (140 MVA power supply).

Each of the six sub-parcel includes one 132/33kV substation with two individually incoming 132kV underground feeders and four 132/33kV transformers.

There will be twelve 132kV underground circuits running from Lumea's 330/132kV substation located on the western side of the campus to the 132/33kV substations. Each 132/33kV substation has then its own 33kV reticulation system to supply the shells with electricity.

4.13 Back-up Power System

The proposed development has opted for diesel-generator sets as the backup power source for the proposed site. This is based on the most appropriate technology for a mission critical data centre and the market readiness for this technology in New South Wales. Alternatives have been considered for this site, but none are considered viable except for alternative fuel for the generator engines.

The proposed site will use approximately 846 low voltage 2MW generators for sub-parcels A-F. These generators will only operate in the event of a mains utility failure to the respective electrical block or for testing purposes. These generators provide a total capacity of 1861.2MW backup power. This capacity exceeds the total consumption of the site because of redundant power strings that provide resiliency to the operation of the facility. The quantity of generators is outlined in the Plant and Equipment Section of this report.

The following table details generator distribution across the site:

TABLE 14: GENERATOR QUANTITIES BY SUB-PARCEL AND LEVEL						
Level	Sub Parcel					
	A	B	C	D	E	F
Level 4	24	24	24	24	30	30
Level 3	29	29	29	29	36	36
Level 2	29	29	29	29	36	36
Level 1	24	24	24	24	30	30
Ground	24	24	24	24	30	30
Total	130	130	130	130	162	162

Total site capacity: 846 generators providing 1,861.2MW backup power (including redundancy).

4.13.1 Maintenance Testing

To ensure operational readiness for unexpected mains power interruptions, generators will undergo regular maintenance testing. Quarterly testing occurs with generators connected to mobile load banks at each sub-parcel. Only one generator per sub-parcel is tested at any time during daytime hours between 7:00am and 6:00pm. Testing procedures will not exceed the 200-hour exemption limit prescribed under Schedule 1, Clause 17 of the POEO Act.



4.14 Plant and Equipment

The proposed development consists of Six Sub-Parcels (A-F) and ancillary buildings.

Sub-Parcel A-D (4 x Shell)

Sub-Parcel A-D each contain:

- A Four Shell Data Centre Building with Technical Space
- 1132/33kV Substation with two individually incoming 132kV underground feeders and four 132/33kV transformers
- 2.250MVA 33kV/415V Dry Type Transformer Kiosks including Ring Main Unit
- Containerised UPS Systems
- Primary and Secondary Busways
- Chilled and Condenser Water Systems, Data Hall Liquid and Air Cooling Systems, Emergency Misting Systems, Bulk Fuel Systems and Ancillary Cooling and Venting Systems.
- 8 x 1,760 kL industrial water tanks
- 130 x Low Voltage Generators

Sub-Parcel E and F (5 x Shell)

Sub-Parcel E-F each contain:

- A Five Shell Data Centre Building with Technical Space
- 1132/33kV Substation with two individually incoming 132kV underground feeders and four 132/33kV transformers
- Containerised UPS Systems
- Primary and Secondary Busways
- Chilled and Condenser Water Systems, Data Hall Liquid and Air Cooling Systems, Emergency Misting Systems, Bulk Fuel Systems and Ancillary Cooling and Venting Systems.
- 10 x 1,760 kL industrial water tanks
- 162 x Low Voltage Generators

Ancillary Buildings

The COSH Building will be serviced with an additional two low voltage Generators. Mechanical Cooling and Power Redundancy UPS System will also be provided for this building.



PART 5: STATUTORY CONTEXT

This section of the EIS outlines the key statutory requirements that must be considered prior to the determination of this SSDA and where those requirements have been addressed in the EIS. This section is also complemented by a statutory compliance table at **Appendix C** that identifies all statutory planning requirements relevant to the proposal.

5.1 Overview

This section of the EIS outlines the key statutory requirements that must be considered prior to the determination of this proposal and where those requirements have been addressed in the EIS.

Commonwealth Planning Context

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*

State Planning Context

- *Environmental Planning and Assessment Act 1979*
- *Environmental Planning and Assessment Regulation 2021*
- *Protection of the Environment Operations Act 1997*
- *Biodiversity Conservation Act 2016*
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *State Environmental Planning Policy (Resilience and Hazards) 2021*
- *State Environmental Planning Policy (Planning Systems) 2021*
- *State Environmental Planning Policy (Industry and Employment) 2021*
- *State Environmental Planning Policy (Transport and Infrastructure) 2021*
- *State Environmental Planning Policy (Sustainable Buildings) 2022*
- *State Environmental Planning Policy (Precinct – Western Parkland City) 2021*
- *Cumberland Plain Conservation Plan*
- *Western Sydney Aerotropolis Special Infrastructure Contribution Plan*

Local Planning Context

- *Mamre Road Precinct Development Contribution Plan 2021*

The proposal has been carefully assessed against the requirements and objectives of the above planning legislation, policies, and guidelines. In accordance with Clause 2.10 of the Planning Systems SEPP, development control plans do not apply to SSD. Nonetheless, an assessment against the key controls of the MRP DCP 2021 is provided at **Appendix 33** Mamre Road Precinct Development Control Plan 2021 Assessment.

5.2 Commonwealth Planning Context

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any action (which includes a development, project, or activity) that is considered likely to have a significant impact on Matters of National Environmental Significance (MNES) (including nationally threatened ecological communities and species and listed migratory species), must be referred to the Commonwealth Minister for the Environment. The purpose of the referral is to allow a decision to be made about whether an action requires approval on a Commonwealth level. If an action is considered likely to have a significant impact on MNES, it is declared a 'Controlled Action' for which formal Commonwealth approval is required. Currently, bilateral agreements allow the Commonwealth Minister for the Environment to rely on the NSW environmental assessment process when assessing a Controlled Action under the EPBC Act.



As outlined in the Biodiversity Development Assessment Report (**Appendix 15** Biodiversity Development Assessment Report), the proposal is not likely to impact an ecological MNES.

Two threatened fauna species listed under the EPBC Act were assessed due to the presence of some suitable habitat within the site. Significant Impact Criteria (SIC) assessments as part of the Biodiversity Development Assessment Report have been prepared for both species as follows:

- Swift Parrot
- Australian Painted Snipe

Detailed assessment of the impacts to these species is undertaken in **Section 7.16**. It is noted that there is a low likelihood of impact to Swift Parrot and the Australian Painted Snipe due to the degraded nature of the site, limited suitable habitat and a small area of habitat removal of 1.35 hectares of native vegetation. It has therefore been determined that a Commonwealth referral is not required for impacts to these species.

It is acknowledged that 0.63 hectares of the site is consistent with a critically endangered ecological community (CEEC) listed under the EPBC Act, identified as the Cumberland Plains Shale Woodlands CEEC, will be impacted by the proposal. Notwithstanding, there is a low likelihood of significant impact as the CEEC occurs in a highly fragmented and isolated patch, subject to historical disturbance and current weed ingress.

Migratory species are unlikely to occur at the site, given its location within an industrial setting and a lack of suitable habitat features. No other threatened species are likely to be impacted by the proposed development.

There are no National Heritage Places within the subject site. There are no wetlands of international importance within or in close proximity to the subject site.

Given the above, the proposal will not result in any significant impacts having regard to the EPBC Act. Therefore, a referral to the Commonwealth is not considered necessary.

5.3 Statutory Requirements

TABLE 15 below categories are used to identify the statutory requirements for the proposal and how each requirement has been satisfactorily addressed.



TABLE 15: STATUTORY REQUIREMENTS OVERVIEW

Category	Action Required
Declaration of SSD	Development consent is sought under Division 4.7 - State Significant Development' of the Environmental Planning and Assessment Act 1979 (EP&A Act). Section 4.36(2) of the EP&A Act states that: <i>A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.</i> Schedule 1 of Planning Systems SEPP lists development that is declared SSD. Schedule 1, Clause 25, states the following: 25 Data Centres <i>Development for the purposes of data centres that has a total power consumption of more than the relevant amount.</i> <i>(1A) Subsection (1) does not apply to development on land within the area of City of Sydney</i> <i>In this section -</i> <i>Relevant amount means -</i> <i>(a) for development in relation to which the relevant environmental assessment requirements are notified under the Act on or before 31 May 2023—10 megawatts, or</i> (b) for any other development—15 megawatts The proposed development is anticipated to have a total power consumption of up to 1.2 GW. Accordingly, the proposal is classified as SSD.
Consent Authority	Section 4.5 of the EP&A Act and Section 2.7 of the Planning Systems SEPP stipulate that the consent authority is the Minister for Planning (or the Department as their delegate) unless the proposed development triggers one of the matters set out in Section 2.7(1) in which case the consent authority will be with the Independent Planning Commission IPC). The Proponent has not made a reportable political donation in connection with the proposed development application. In accordance with Schedule 1 of the Planning Systems SEPP, development for data centres with a total power consumption of more than 15 megawatts constitutes SSD. As noted above, the total power consumption of the proposed development is in excess of 15 megawatts. The power to grant approval lies with the Minister for Planning (NSW DPHI) as the consent authority for SSD, pursuant to Section 4.5 of the EP&A Act.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 15: STATUTORY REQUIREMENTS OVERVIEW

Permissibility	The site is located within the IN1 General Industrial zone pursuant to the Industry and Employment SEPP. The proposed development constitutes a 'data centre' which is defined as following: <i>data centre</i> means a building or place the principal purpose of which is to collect, distribute, process or store electronic data using information technology. Data centres are a type of 'high technology industry' which in turn, is considered a type of 'light industry' which sits under the group term of 'industry'. Industries (other than offensive or hazardous industries) are permitted with consent in the IN1 General Industrial zone pursuant to the Industry and Employment SEPP and Section 2.31 of the Transport and Infrastructure SEPP. The proposal is consistent with the zone objectives as it provides for a typology of industry that will create employment opportunities and will encourage a high standard of development that does not prejudice the sustainability of other enterprises or the environment.
Other approvals	EPBC Act: No bilateral agreement applies to the proposal. Other approval details are outlined in TABLE 16 below.
Pre-condition to exercising power to grant approval	Pre-conditions to exercising the power to grant approval are outlined in TABLE 17 below.
Mandatory matters for consideration	Mandatory matters of consideration by the consent authority are outlined in TABLE 18 and Appendix C of this EIS.

5.3.1 Other Approvals

TABLE 16 below outlines the legislative approvals required for the proposal in addition to a development consent under Division 4.7 of the EP&A Act.

TABLE 16: OTHER APPROVALS

Matter	Consideration
Approvals not required for SSD	Section 4.41 of the EP&A Act stipulates that certain authorisations are not required for SSD. The following legislative approvals would otherwise be required if the proposal was not SSD.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 16: OTHER APPROVALS

Matter	Consideration																		
	<table> <tr> <th>Act</th><th>Approval Otherwise Required</th></tr> <tr> <td>Approval to alter or erect improvements, or to subdivide land, within a mine subsidence district under Section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i></td><td>No</td></tr> <tr> <td>A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i></td><td>No</td></tr> <tr> <td>An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i></td><td>No</td></tr> <tr> <td>Grant of mining lease under the <i>Mining Act 1992</i></td><td>No</td></tr> <tr> <td>An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i></td><td>No</td></tr> <tr> <td>Grant of production lease under the <i>Petroleum (Onshore) Act 1991</i></td><td>No</td></tr> <tr> <td>A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i></td><td>No</td></tr> <tr> <td>A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i>.</td><td>No</td></tr> </table>	Act	Approval Otherwise Required	Approval to alter or erect improvements, or to subdivide land, within a mine subsidence district under Section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i>	No	A permit under section 201, 205 or 219 of the <i>Fisheries Management Act 1994</i>	No	An approval under Part 4, or an excavation permit under section 139, of the <i>Heritage Act 1977</i>	No	Grant of mining lease under the <i>Mining Act 1992</i>	No	An Aboriginal heritage impact permit under section 90 of the <i>National Parks and Wildlife Act 1974</i>	No	Grant of production lease under the <i>Petroleum (Onshore) Act 1991</i>	No	A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i>	No	A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> .	No
Act	Approval Otherwise Required																		
Approval to alter or erect improvements, or to subdivide land, within a mine subsidence district under Section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i>	No																		
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A bush fire safety authority under section 100B of the <i>Rural Fires Act 1997</i>	No																		
A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the <i>Water Management Act 2000</i> .	No																		
Consistent approvals	Section 4.42 of the EP&A Act stipulates that certain authorisations cannot be refused if they are necessary for carrying out SSD and must be substantially consistent with the consent. <table> <tr> <th>Act</th><th>Approval Otherwise Required</th></tr> <tr> <td>An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i></td><td>No</td></tr> </table>	Act	Approval Otherwise Required	An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i>	No														
Act	Approval Otherwise Required																		
An aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i>	No																		



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 16: OTHER APPROVALS

Matter	Consideration	
	An approval under section 22 of the <i>Coal Mine Subsidence Compensation Act 2017</i>	No
	A mining lease under the <i>Mining Act 1992</i>	No
	A production lease under the <i>Petroleum (Onshore) Act 1991</i>	No
	An environment protection licence under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i> (for any of the purposes referred to in section 43 of that Act)	Yes - The proposal requires an Environment Protection Licence (EPL) in accordance with Clause 9 (chemical storage), Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act), as it is proposed to store more than 2,000 tonnes of diesel and lithium ion batteries.
	A consent under section 138 of the <i>Roads Act 1993</i>	An approval under Section 138 of the Roads Act 1993 is required for the connection to public roads.
	A licence under the <i>Pipelines Act 1967</i>	No



5.3.2 Pre-conditions

TABLE 17 outlines the pre-conditions to exercising the power to grant approval which are relevant to the proposal.

TABLE 17: PRE-CONDITIONS OVERVIEW			
Statutory Reference	Pre-condition	Assessment	Addressed in EIS
<i>Environmental Planning and Assessment Regulation 2021</i>	An environmental impact statement must be prepared in accordance with the SEARs issued for the Project, and contain the relevant information identified in sections 190 and 192 of the EPA Regulation.	This EIS addresses the SEARs issued by the Secretary pursuant to section 175 of the EPA Regulation and contains the detailed information identified in section 190 and section 192 of the EPA Regulation. Specifically, this includes a statement prepared by a Registered Environmental Assessment Practitioner (REAP). This application will be placed on public exhibition on the NSW Major Projects Portal.	Refer to PART 7 of this EIS.
<i>Biodiversity Conservation Act 2016</i>	Section 7.9 requires a development application for State Significant Development to be accompanied by a Biodiversity Development Assessment Report (BDAR). Section 7.14 requires the consent authority to take into consideration the likely impact of the proposed development on biodiversity values as assessed in the Biodiversity Development Assessment Report	A BDAR has been prepared for the site which addresses this matter (refer to Appendix 15).	Refer to Section 7.16 of this EIS.
<i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>	Clause 4.6 - Contamination and remediation matters are to be considered in preparation and determination of the development application.	A DSI has been carried out on the site by JBS&G. Based on the recommendations of the DSI a RAP has also been prepared by JBS&G. The DSI and RAP collectively confirms the site would be made suitable for the proposed land use following remediation and therefore, Clause 4.6 of the Resilience Hazards SEPP is satisfied.	Refer to Section 7.10 of this EIS.
<i>State Environmental Planning Policy</i>	Clause 2.122 - Traffic-generating development	The proposal includes development for the purposes of industry incorporating 20,000m ²	Refer to Section 7.4 of this EIS.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 17: PRE-CONDITIONS OVERVIEW

Statutory Reference	Pre-condition	Assessment	Addressed in EIS
<i>(Transport and Infrastructure) 2021</i>		or more of GFA which constitutes traffic-generating development, as described in Schedule 3 of the Transport and Infrastructure SEPP.	
<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>	Clause 2.14 - Obtaining approval of Panel for clearing of native vegetation Pursuant to Clause 2.14 of the B&C SEPP, the following is relevant for approval of Native Vegetation Panel for clearing native vegetation in non-rural areas: 1) <i>An application may be made to the Native Vegetation Panel by or on behalf of the landholder for approval to clear native vegetation in any non-rural area of the State.</i> 2) <i>The Native Vegetation Panel may, in accordance with this Part, grant an approval to clear the native vegetation under this Part or refuse the application.</i> 3) <i>An application for approval for the clearing of native vegetation may only be dealt with under this Part if the clearing exceeds the biodiversity offsets scheme threshold</i>	The proposal seeks consent for the clearing of vegetation. A BDAR has been prepared for the site which addresses this matter (refer to 0).	Refer to Section 7.16 of this EIS.
	Clause 6.6 - Water quality and quantity Cause 6.13 - Hawkesbury-Nepean conservation area sub-catchments	The proposal has been designed in accordance with the stormwater management scheme for the MRP as outlined in the Civil Engineering Report and thus meets all water quality and quantity requirements.	Refer to Section 7.7 of this EIS.
<i>State Environmental Planning Policy (Sustainable Buildings) 2022</i>	Clause 3.2 - Development consent for non-residential development	The ESD Report provided at Appendix 2 Estimated Development Cost Report details that the proposal seeks to minimise greenhouse gas emissions and consumption of	Refer to Section 7.13.5 of this EIS.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 17: PRE-CONDITIONS OVERVIEW			
Statutory Reference	Pre-condition	Assessment	Addressed in EIS
	Pursuant to Clause 3.2(1) of the Sustainable Buildings SEPP, in deciding whether to grant development consent, the consent authority must consider whether the development is designed to enable the following: (a) <i>the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,</i> (b) <i>a reduction in peak demand for electricity, including through the use of energy efficient technology,</i> (c) <i>a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,</i> (d) <i>the generation and storage of renewable energy,</i> (e) <i>the metering and monitoring of energy consumption,</i> (f) <i>the minimisation of the consumption of potable water.</i> Pursuant to Clause 3.2(2) of the Sustainable Buildings SEPP, development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.	energy, water (including water sensitive urban design) and material resources.	

5.3.3 Mandatory Matters for Consideration

TABLE 18 identifies the matters that the consent authority must consider in deciding to grant consent to the proposal. It also identifies the section(s) of this EIS and the appended documents that address these mandatory matters.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 18: MATTERS FOR MANDATORY CONSIDERATION		
Legislation/Statutory Reference	Matters for Consideration	Section in EIS/ Document Reference
Consideration under the EPA Regulation		
Section 193	Consideration of the principles of ecologically sustainable development	Refer to Section 7.13 of this EIS.
Consideration under the EP&A Act		
Section 1.3	Relevant objects of the EP&A Act.	Statutory compliance table at Appendix C.
Section 4.15	Relevant environmental planning instruments: ▪ <i>Environmental Planning and Assessment Act 1979</i> ▪ <i>Environmental Planning and Assessment Regulation 2021</i> ▪ <i>Protection of the Environment Operations Act 1997</i> ▪ <i>Biodiversity Conservation Act 2016</i> ▪ <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> ▪ <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ▪ <i>State Environmental Planning Policy (Planning Systems) 2021</i> ▪ <i>State Environmental Planning Policy (Industry and Employment) 2021</i> ▪ <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> ▪ <i>State Environmental Planning Policy (Sustainable Buildings) 2022</i> ▪ <i>State Environmental Planning Policy (Precinct – Western Parkland City) 2021</i> ▪ <i>Cumberland Plain Conservation Plan</i> ▪ <i>Special Infrastructure Contribution Plan</i>	Statutory compliance table at Appendix C.
	Relevant development control plan: Mamre Road Precinct Development Control Plan 2021	Refer to Appendix 33 Mamre Road Precinct Development Control Plan 2021 Assessment.
	Relevant draft environmental planning instruments	No draft planning instruments apply to the proposal or site.



ENVIRONMENTAL IMPACT STATEMENT

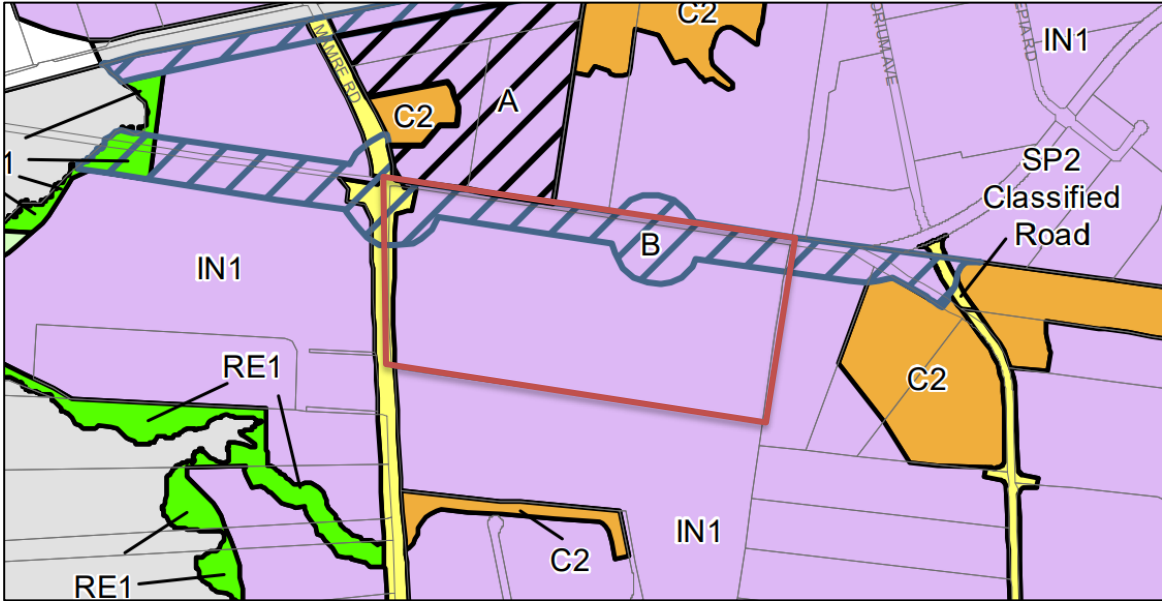
Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 18: MATTERS FOR MANDATORY CONSIDERATION

Legislation/Statutory Reference	Matters for Consideration	Section in EIS/ Document Reference
	Relevant planning agreements or draft planning agreements.	The site is not presently subject to a planning agreement.
	The likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.	This EIS has considered the impacts of the proposed development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality throughout.
	Suitability of the development.	Refer to Section 7.1.6 of this EIS.
	Submissions made in accordance with this Act or the regulation	Refer to Section 5 of this EIS.
	The public interest	Refer to Section 1 of this EIS.
Consideration under EPI		
State Environmental Planning Policy (Industry and Employment) 2021		
Chapter 2 Western Sydney Employment Area	The Industry and Employment SEPP is the primary EPI applicable to the site and provides zoning and development control provisions for the WSEA. An assessment of the proposal's consistency with the provisions of the Industry and Employment SEPP relating to the WSEA is provided in Appendix C . The Industry and Employment SEPP zones the site as IN1 General Industrial and SP2 Infrastructure. The site's zoning is illustrated in the Land Use Map provided at Figure 67 below.	Appendix C Appendix 32, PART 6 Appendix 35, Section 7.25



TABLE 18: MATTERS FOR MANDATORY CONSIDERATION		
Legislation/Statutory Reference	Matters for Consideration	Section in EIS/ Document Reference
	 Figure 67. Land Use Map (NSW Government, 2025) The proposed data centre use is permissible and consistent with the respective IN1 General Industrial zoning objectives. The northern portion of the site is marked 'Transport Investigation Area B' and therefore, Clause 2.34 of the Industry and Employment SEPP sets out that concurrence from TfNSW is required. This area would be utilised for the delivery of the Southern Link Road by TfNSW. The Industry and Employment SEPP also requires that the EIS address potential impacts on the operation of the Western Sydney Airport with regard to aircraft noise, airspace operations and potential bird or wildlife attraction. An assessment against the relevant matters is address within the Airport Safeguarding Assessment. (Appendix 34) and Section 7.19.	



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 18: MATTERS FOR MANDATORY CONSIDERATION		
Legislation/Statutory Reference	Matters for Consideration	Section in EIS/ Document Reference
Chapter 3 – Advertising and Signage	Schedule 5 of the Industry and Employment SEPP includes signage provisions that are required to be considered as part of applications that propose to include signage. The proposed signage as outlined in Section 3.8 includes Estate Signage and external façade signage zones. Pursuant to Clause 3.6 of the Industry and Employment SEPP: A consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied– (a) that the signage is consistent with the objectives of this Chapter as set out in section 3.1(1)(a), and (b) that the signage the subject of the application satisfies the assessment criteria specified in Schedule 5. An assessment against Schedule 5 of the Industry and Employment SEPP is provided at Appendix C. It is noted that content within the proposed signage zones would be subject to future tenant requirements. The proposed signage is also consistent with the requirements of the MRP DCP 2021, as demonstrated in Appendix 33 Mamre Road Precinct Development Control Plan 2021 Assessment.	Appendix C
State Environmental Planning Policy (Biodiversity and Conservation) 2021		
Chapter 2 Vegetation in non-rural areas	Chapter 2 of the Biodiversity and Conservation SEPP works to protect the biodiversity values of trees and other vegetation in non-rural areas of the State, and to preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation. The proposed development seeks consent for the clearing of vegetation.	Appendix C
Chapter 6 Water catchments	Chapter 6 of the Biodiversity and Conservation SEPP seeks to ensure that the potential impact to Hawkesbury-Nepean River as caused by development is considered in a regional context. Chapter 6 applies to the site and the general planning considerations prescribed in the chapter have been assessed against the proposed development as part of the design development.	Appendix C
State Environmental Planning Policy (Precinct – Western Parkland City) 2021		



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 18: MATTERS FOR MANDATORY CONSIDERATION

Legislation/Statutory Reference	Matters for Consideration	Section in EIS/ Document Reference
Part 4.3 – Airport safeguards	It is noted that the site is subject to the provisions of the Industry and Employment SEPP owing to its proximity to the Western Sydney Airport. Therefore, it is also subject to relevant provisions of the Western Parkland City SEPP. Specifically, the proposal is subject to Chapter 4 of the Western Parkland City SEPP relating to development controls for Airport safeguards applies to the proposal. Further details on these provisions and the proposal's corresponding compliance is provided in Appendix C .	Appendix 34
State Environmental Planning Policy (Resilience and Hazards) 2021		
Chapter 3 Hazardous and offensive development	The Resilience and Hazards SEPP applies to any proposals which fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'. At this stage, it is not intended that any of the buildings at the site will provide for the storage of dangerous goods in excess of the thresholds established under the Department of Planning's guideline, 'Applying SEPP 33'.	Appendix C
Mamre Road Precinct Development Control Plan 2021		
Mamre Road Precinct Development Control Plan 2021	The site is located within the area identified within the MRP DCP 2021, which sits under the Industry and Employment SEPP. As aforementioned, a detailed analysis of the proposal's consistency with the MRP DCP is provided at Appendix 33 . The proposal is generally consistent with the Structure Plan and applicable controls stipulated within the MRP DCP 2021 with the exception of the 20m building height control that is addressed in detail within Part 7 .	Appendix 33 Mamre Road Precinct Development Control Plan 2021 Assessment.
Cumberland Plain Conservation Plan		
Cumberland Plain Conservation Plan	The CPCP is part of the NSW Government's commitment to delivering the Western Parkland City, consistent with the Greater Sydney Commission's strategic vision described in its <i>Greater Sydney Region Plan: A Metropolis of Three Cities</i> and Western City District Plan. This includes providing the biodiversity approvals for development in Western Sydney's four (4) nominated areas and four (4) major transport corridors. The CPCP has been developed to meet requirements for strategic biodiversity certification under the BC Act and strategic assessment under the EPBC Act The majority of the site has been identified as urban capable under the CPCP. As such, the majority of the site does not require further biodiversity assessment with the BDAR only applying to the areas of 'excluded land' within the site.	Appendix 15



PART 6: COMMUNITY ENGAGEMENT

This section is a summary of the preliminary community and stakeholder engagement undertaken to inform the preparation of the Environmental Impact Statement (EIS). The engagement process was undertaken in accordance with the Secretary's Environmental Assessment Requirements (SEARs) and the Department's Undertaking Engagement Guidelines for State Significant Projects (DPHI, 2024). Further details are provided in the Community and Stakeholder Engagement Report prepared by Willowtree Communications, located in **Appendix 32**.

6.1 Identified Stakeholders

The consultation included a range of stakeholders, relevant State government authorities, service providers, community groups, and surrounding landowners and occupiers, as outlined in **TABLE 19**.

TABLE 19: STAKEHOLDER GROUP
Local Councils, Government Agencies, and Authorities
• Penrith City Council • Department of Climate Change, Energy, the Environment and Water: - o Conservation Programs, Heritage and Regulation Group - o Environment Protection Authority - o Water Group • Transport for NSW • Fire & Rescue NSW • NSW Rural Fire Service • NSW Health – Nepean Blue Mountains Local Health District • Heritage NSW • Heritage NSW • Sydney Water • Endeavour Energy • Transgrid • WaterNSW • Western Sydney Airport Corporation • Deerubbin Local Aboriginal Land Council
Identified Sensitive Stakeholders
• Emmaus Catholic College • Trinity Catholic Primary School • Mamre Anglican School • Catholic Healthcare Emmaus Retirement Village • Catholic Healthcare Emmaus Residential Aged Care Home • Little Smarties Learning Centre
Nearby Businesses and Landholders
• Business and owners of commercial land within the proposed engagement area.
Local Residents
• Residential properties within the proposed engagement area.
Community Groups and Organisations
• Twin Creeks Community Association • Luddenham Progress Association



6.2 Summary Of Community and Stakeholder Engagement Program

The engagement approach utilised a range of tools and methods designed to ensure accessibility, provide multiple opportunities for participation, and accommodate the diverse stakeholder groups identified for the proposed development. The selection of engagement tools was informed by the stakeholder groups identified, the IAP2 levels of engagement, and the Undertaking Engagement Guidelines for State Significant Projects.

TABLE 20: ENGAGEMENT TOOLS

Engagement Tool	Description
DPHI Request for SEARs	DPHI issued a request for agency and stakeholder input to inform the Secretary's Environmental Assessment Requirements (SEARs) for the proposed development.
Response to SEARs	Government agencies and stakeholders provided submissions identifying matters to be addressed in the Environmental Impact Statement.
Planning Focus Meeting	Interagency, authority and Council meeting to discuss SEARs responses and detailed approach to key issues raised
Individual Meetings	One-on-one meetings with key stakeholders including nearby sensitive receivers (schools, childcare centre, aged care facility), government agencies, and utility providers to discuss the proposal and address specific concerns.
Community Newsletter	A project newsletter distributed to 524 stakeholders, including nearby residents, businesses and sensitive receivers as well as various organisations, providing an overview of the proposal, engagement opportunities, and key project information. Council and several agencies were also provided with a copy of the Newsletter as a courtesy. The distribution area was determined based on proximity to the site, potential to experience impacts from the proposal, including areas likely to experience construction and operation-related impacts. In this context, the area was enlarged to include residential areas to the west and south of the precinct, following feedback from DPHI during the Planning Focus Meeting.
Direct Correspondence	Direct letters and emails to nearby property owners, sensitive receivers, and key stakeholders providing project information and inviting feedback.
Community Survey	An online survey enabling stakeholders to provide feedback on the proposal and raise any concerns or issues for consideration.
Online Information Session	Virtual briefing sessions providing an overview of the proposal, technical information, and opportunities for questions and feedback.
Direct Phone Line	A dedicated phone number established for community members and stakeholders to contact the proposed development team with enquiries.
Project Email	A dedicated email address for written enquiries, feedback and ongoing correspondence throughout the engagement period.

6.3 Summary of Engagement and Consultation Outcomes

The following engagement activities were undertaken to ensure comprehensive consultation across all identified groups, with outcomes documented to demonstrate how community and stakeholder feedback influenced the proposed development design. For further details, refer to the Community and Stakeholder Engagement Report.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE.21: AGENCY AND AUTHORITY ENGAGEMENT

Stakeholder	Summary of engagement
Department of Planning, Housing and Infrastructure (DPHI)	Organised a Planning Focus Meeting on 26 August 2025 attended by Penrith City Council and key government agencies, providing an opportunity for project presentation and issue identification. DPHI also attended the meeting with NSW EPA on 17 November 2025 - (details provided below)
Penrith City Council	Attended the Planning Focus Meeting and received direct correspondence on 9 October 2025, following up on their SEARs advice dated 19 September 2025. The proposed development's team requested a meeting on 9 October 2025 to refine the technical scope. The Council directed them to arrange a formal Pre-Lodgement meeting, which was subsequently held on 20 November 2025, with various Council representatives providing written advice on key development issues. A briefing of the Council executive was also provided at a meeting on 10 December 2025, having regard to the scale of the proposal and context in Mamre Road precinct.
Department of Climate Change, Energy, the Environment and Water (DCCEEW): - o Conservation Programs, Heritage and Regulation Group - o Environment Protection Authority - o Water Group	DCCEEW provided SEARs response on 18 September 2025 addressing requirements for the Summit site relationship, waterway health compliance, and biodiversity assessment. The Water Group received direct correspondence on 10 November 2025 requesting a briefing, but declined the offer and advised they will await the exhibited EIS. DCCEEW Water provided their standard input to SEARs for information.
Transport for NSW (TfNSW)	Transport for NSW attended the Planning Focus Meeting on 26 August 2025 and provided SEARs response on 15 September 2025 covering transport impact assessment, traffic modelling, voluntary planning agreement, road infrastructure, precinct integration, dedicated freight corridor, flooding and consultation requirements. A meeting held on 13 November with TfNSW provided an opportunity to discuss the evolution of the road network in the precinct and the approach to minimise the impacts on Bakers Lane and shift focus to access from the south as Berriwerri Drive is in the process of being delivered following the new intersection of Darrabarra Avenue with Mamre Road. Other coordination considerations include modelling and the interface with the planned upgrades to Mamre Road Stage 2, adjacent to the site, including temporary access for construction phases. These requirements and considerations have been addressed in the Environmental Impact Statement.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE.21: AGENCY AND AUTHORITY ENGAGEMENT

Stakeholder	Summary of engagement
NSW EPA	NSW EPA attended the Planning Focus Meeting on 26 August 2025 and provided SEARs response on 16 September 2025 addressing air quality, noise and cumulative impacts, noting the proposal will require an Environment Protection Licence. Direct correspondence was sent on 9 October 2025, following up on their attendance and SEARs advice, requesting a meeting to refine technical scope. Meeting with NSW EPA 17 November 2025 in which the Proponent provided an overview of the approach the Acoustic consultants were taking to address cumulative impacts and sensitive receivers, recognising that the precinct is in transition and will ultimately be an urban industrial area and several nearby receivers would relocate or transition to industrial uses.
Fire & Rescue NSW	Fire & Rescue NSW provided SEARs response on 12 September 2025 focusing on hazards and risks, particularly for battery energy storage fire-fighting challenges, and will likely recommend a Fire Safety Study as a condition of consent. These requirements and comments will be addressed in the Environmental Impact Statement.
NSW Rural Fire Service	NSW Rural Fire Service was sent an email with Community Newsletter #1 before a scheduled meeting held on 10 November 2025, attended by the proposed development's team including a bushfire consultant. A follow-up email on 12 November 2025 provided presentation slides confirming that a detailed Bushfire Assessment Report will accompany the EIS. The Community Newsletter was also sent on 10 November 2025.
NSW Health - Nepean Blue Mountains Local Health District	NSW Health - Nepean Blue Mountains Local Health District received correspondence on 9 October 2025 requesting a meeting before the end of October 2025. A follow-up was sent on 31 October 2025. The health district responded on 3 November 2025 identifying the correct contact, and was provided Community Newsletter #1 on 10 November 2025 with an offer for a briefing if required.
Heritage NSW	Heritage NSW was contacted regarding the Aboriginal Cultural Heritage Assessment Report. Heritage NSW advised on 29 October they do not require additional consultation prior to lodgement of the Environmental Impact Statement. Heritage NSW will provide comment on the Aboriginal Cultural Heritage Assessment Report during the public exhibition period
Sydney Water	Sydney Water attended the Planning Focus Meeting on 26 August 2025 and provided SEARs response on 18 September 2025 detailing water infrastructure requirements, stormwater management compliance, and specific advice on land acquisition and recycled water capacity. They advised continued engagement through their Growth & Development account manager. A feasibility Letter was received in June 2025 providing an indication of the systems capacities and possible requirements to including the need to 'continue to engage with Sydney Water (through Growth and development account manager) in understanding and progressing appropriate next steps to investigate viability of serving solutions



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE.21: AGENCY AND AUTHORITY ENGAGEMENT

Stakeholder	Summary of engagement
	collaboratively' for both water and sewer as well as advice on the consideration for the potential use of recycled water. These requirements and comments will be addressed in the Environmental Impact Statement.
Endeavour Energy	Initial Before You Dig Australia (BYDA) enquiry lodged on 13 October 2025; response included a cover letter and maps of underground assets. <i>Note. The focus of the consultation on the power supply is with Transgrid, as a direct connection to the bulk supply is proposed.</i>
Transgrid	Consultation is ongoing with Transgrid regarding the new 330 kV underground cable connection between Transgrid's Sydney West Substation and the site. A report was prepared in December 2025 to provide details regarding the cable route, cable system design, constructability and recommendations. Ongoing coordination for infrastructure delivery with the HV transmission being delivered by Lumea (part of Transgrid Group).
WaterNSW	WaterNSW received correspondence on 9 October 2025 requesting a meeting before the end of October 2025. WaterNSW responded on 9 October 2025 advising they did not comment on SEARs and will review the EIS when exhibited, remaining available if specific requirements need discussion.
Western Sydney Airport Corporation	Western Sydney Airport Corporation received correspondence on 9 October 2025 requesting a meeting before the end of October 2024. A follow-up was sent on 31 October 2025. A meeting was held on 5 November 2025 to discuss airport safeguarding, landscaping, water management, lighting, construction activities, wildlife management and amenity considerations. Follow-up on 10 November 2025 provided meeting summary and Community Newsletter #1.
Deerubbin Local Aboriginal Land Council	Deerubbin Local Aboriginal Land Council received correspondence from Biosis on 30 October 2025 about the Aboriginal Cultural Heritage Assessment addendum work, with feedback requested by 5:00PM on 27 November 2025. They also received Community Newsletter #1 on 10 November 2025.
Registered Aboriginal Parties	Registered Aboriginal Parties received correspondence from Biosis on 30 October 2025 about the ACHAR addendum with feedback requested by 5:00PM on 27 November 2025. Follow-up correspondence was sent on 13 November 2025 providing Community Newsletter #1 and inviting survey participation.
Aboriginal Community Members	On 16 December 2025 a Collaborative Design Workshop led by Yerrabingin (small group designing with Country approach) is also contributing to the consideration of Aboriginal Cultural Heritage.



6.4 Community Engagement – Sensitive Stakeholders in Bakers Lane

TABLE 22: IDENTIFIED SENSITIVE STAKEHOLDERS IN BAKERS LANE

Organisation /s	Summary of consultation
Mamre Anglican School Anglican School Corporation	- Mamre Anglican School / Anglican School Corporation received direct email correspondence on 9 October 2025 requesting a meeting, with in-person opportunities offered for 15 October 2025 at 10am or 2:30pm. - Mamre Anglican hosted a meeting on 15 October 2025 (which was also attended by the Catholic Diocese). This meeting provided a project briefing and received initial feedback. Following the meeting, site access was requested for the visual impact consultant after school hours (from 3:30pm onwards) on 21 October 2025 or shortly afterwards. - Community Newsletter #1 was sent to the school on 7 November 2025 with agreement to circulate to relevant school stakeholders. The Anglican Schools Corporation executives received correspondence on 10 November 2025 offering briefing opportunities and providing Community Newsletter #1 with social impact survey link. - A follow-up meeting was held on 26 November 2025, where a revised scheme was shared and further details on traffic, staging, visual analysis, construction and operation management was provided. This also included representatives from the Anglican School Corporation
- Emmaus Catholic College - Trinity Catholic Primary School Both represented by Catholic Schools Parramatta Diocese's	- Emmaus Catholic College & Trinity Catholic Primary School (Catholic Schools Parramatta Diocese) received direct email correspondence on 9 October 2025 requesting a meeting to brief them on the proposed development, with in-person meeting opportunities offered for 15 October 2025 at 10am or 2:30pm at the Emmaus facility. - A meeting was held on 15 October 2025 providing project briefing and receiving feedback. Following the meeting, site access was requested for the visual impact consultant to take photographs after school hours (from 3:30pm onwards) on 21 October 2025 or shortly afterwards. A follow-up meeting was scheduled for November 2025. - Community Newsletter #1 was sent on 7 November 2025 with agreement to circulate to Trinity Catholic Primary School, Emmaus Catholic College and Catholic Healthcare. The Diocese confirmed on 9 November 2025 they had shared the newsletter with the Catholic Schools and Catholic Healthcare. - A follow-up meeting was held on 26 November 2025, where a revised scheme was shared and further details on traffic, staging, visual analysis, construction and operation management was provided. This meeting was also attended by the representatives from both the primary and high school.
Catholic Healthcare Emmaus Retirement Village and Residential Aged Care Home	Catholic Healthcare Emmaus Retirement Village and Residential Aged Care Home received direct email correspondence on 9 October 2025, noting the Emmaus facility's proximity to the north of the site and requesting a



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 22: IDENTIFIED SENSITIVE STAKEHOLDERS IN BAKERS LANE

Organisation /s	Summary of consultation
	meeting to brief Catholic Healthcare on the proposed development and receive feedback. The email noted consultation was also underway with the Diocese of Parramatta regarding Emmaus Catholic College and Trinity Catholic Primary School. A meeting was held on 27 October 2025, providing a briefing on the proposed development and to gain initial feedback, and further representations were through the Catholic Diocese
Little Smarties Learning Centre	Little Smarties Learning Centre at Kemps Creek permanently closed in December 2024. This closure was verified through a phone call to the Little Smarties Learning Centre St Clair Campus, who confirmed the Kemps Creek facility had closed.
Residential Properties	On 8 November, 5 residential properties were delivered a Newsletter with a covering Neighbour letter offering to organise a direct meeting with the proposed development's Team

6.5 Community Engagement – Surrounding Industrial Estates and Businesses**TABLE 23: SURROUNDING INDUSTRIAL ESTATES AND BUSINESSES**

Stakeholder	Summary of Activities / Feedback
Goodman Oakdale West Industrial Estate	Community Newsletter Distribution Community Newsletter #1 on 7 November 2025 for the Mamre Road Data Centre Campus SSDA was distributed via email. The correspondence provided project information, survey link and invited recipients to online briefing sessions.
First State Erskine Park	
The YARDS / Kemps Creek Warehouse Logistics and Industrial Facilities Hub	
First Estate Erskine Park	
Mamre Road Kemps Creek Logistics	
Yiribana Industrial Estate (southern boundary of site)	
Aspect Industrial, 882 Mamre Rd	
Access Logistics Park, 884-928 Mamre Rd	
Gibb Group, 51 Aldington Rd	
Dexus (Warehouse and Distribution Centre) 153 Aldington Road	
The Edge Estate, CBRE, Aldington Road	
Fife Industrial Estate, FIFE Capital/Stocklands, 200 Aldington Road	
Westlink Industrial Estate, ESR, Aldington Rd and Abbots Rd	

6.6 Community Engagement – Community Groups and Associations**TABLE 24: COMMUNITY GROUPS AND ASSOCIATIONS**

Stakeholder	Summary of Activities / Feedback
Luddenham Progress Association	Community Newsletter Distribution

TABLE 24: COMMUNITY GROUPS AND ASSOCIATIONS

Stakeholder	Summary of Activities / Feedback
Twin Creeks Golf and Country Club	Email sent on 10 November 2025 advising that community engagement was underway. Community Newsletter #1 distributed with link to Social Impact survey. Recipients invited to contact project team with questions.
Twin Creeks Community Group	
BAPS Shri Swaminarayan Hindu Mandir (Aldington Road)	
Old MacDonald's Child Care (Erskine Park)	

6.7 Community Engagement - Local Resident Feedback

A local resident from Aldington Road provided feedback on 11 November supporting the proposed development, recognising its potential to create jobs, boost the local economy, and ensure Australian digital infrastructure is world-leading. The resident has worked in the digital sector and respects its importance.

The primary concern raised related to the preservation of a very large, old Eucalyptus tree (likely *E. Amplifolia* or *E. Tereticornis*, both indigenous to the area) located at the back of the site near the proposed "Tech SYD 6.5" building location. The tree provides critical habitat for native birds through hollow branches and represents both nostalgic and ecological value. The resident noted that many ancient trees have been removed with recent industrial development, resulting in habitat loss for local fauna, and requested consideration of the tree's retention if it is in healthy condition.

The proposed development team acknowledged the feedback and advised that the proposed plans would be reviewed to understand how they interact with the specific tree.

The resident followed up, emphasising the tree's significance and providing more specific location details (top of the hill at the far back right-hand side of the property when facing Mamre Road). They expressed that retention within an allocated small green space would be welcome news for local residents and offered to take a phone call to provide further location specifics.

6.8 Social Impacts Survey Results

A Social Impact Survey was conducted to provide a structured opportunity for stakeholders to provide feedback on the proposal and raise specific concerns or suggestions included with the Newsletter. The survey included questions regarding demographic information, understanding the level of support or concern, and gaining additional feedback. A total of 4 responses were received between 7 November to 19 November 2025.

In the survey responses, the following activities associated with the proposal were considered beneficial to the community:

- Enhance local employment opportunities (1)
- Provide development that fits with the emerging industrial area (1)
- Contribute to innovation and technology development in Western Sydney (1)
- None of the above (2)
- Other (please specify) (1) - No one should reside in industrial parks

When asked regarding the activities associated with this project that would be a cause for concern, the following were identified:

- Construction - noise and vibration impacts (4)
- Construction- dust and air quality effects during (4)



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

- Construction - traffic and road safety impacts (4)
- Building scale and visual prominence (2)
- Operational - noise from mechanical equipment (2)
- Operational - traffic generation and road impacts (3)
- None of the above (2)
- Other (please specify) (2) –
 - Impacts on nearby residents
 - Impacts on health

The following measures were considered to be most important to minimise potential impacts with respect to the proposed development:

- Dust and air quality controls and monitoring (3)
- Construction traffic management (4)
- Construction noise management (2)
- Advance notice of disruptive activities (2)
- Sustainability, including energy and water usage (2)
- Regular community communication (2)

In response to survey questions regarding any enhancement/ improvements that the community would like to see with respect to the proposal, included:

- Traffic and Road Infrastructure: Existing traffic congestion cannot accommodate additional development. Heavy vehicles are damaging roads, which in turn is causing damage to residents' vehicles.
- Quality of Life Impacts: Residents are experiencing diminished quality of life below their expectations due to ongoing development impacts in the area.
- Construction Management: Poor communication and coordination observed on site, resulting in inefficient work practices (work being redone multiple times).
- Transport Disruption: Concerns about potential road closures and transport disruptions during construction.
- Utility Capacity: Worried about potential water and electricity shortages resulting from the proposed development.
- Building design including visual appearance
- Environmental Impacts: Concerns about air quality and noise pollution during construction and operation.

General feedback obtained from the survey highlighted the following:

- Proximity to Schools: Concerns about approval of industrial facilities so close to schools, questioning the appropriateness of the proposed development.
- Health and Environmental Impacts: Concerns about air quality impacts and potential radiation exposure from the data centre facility, both during construction and operation.
- Isolated Residential Properties and Government Abandonment: Long-term residents on Aldington Road feel abandoned by government, finding themselves as the only remaining residential properties surrounded by industrial development.
- Cumulative Impacts: Experiencing severe disruptions to daily life from surrounding industrial activities including noise, dust and traffic impacts from the broader precinct.
- Access and Connectivity: Aldington Road to be closed to through traffic as part of precinct road upgrades, resulting in restricted access to homes and further isolation.

Further comments included a request to rezone the respondent's property to A1 Industrial and the need for the government to address leaving people in residential homes in newly zoned conservation



areas. This respondent was contacted by Willowtree Communications as they had registered for further information with the offer of a meeting to address their concerns. However, no response was received.

6.9 Summary of Response to Issues Raised

Feedback received during the engagement period has been carefully considered and has informed the preparation of the Environmental Impact Statement and, where possible, design refinements. The table below summarises the key issues raised by the community and stakeholders during engagement activities and outlines how these matters have been addressed in the proposed development.

TABLE 25: RESPONSE TO ISSUES RAISED

Topic	Response
Traffic and Road Infrastructure	A Transport Management and Accessibility Plan (TMAP) has been prepared addressing existing road conditions, construction traffic management, and operational traffic generation. The assessment considers cumulative traffic impacts and identifies appropriate mitigation measures. The proposal includes land dedication for the Mamre Road upgrade and future Southern Link Road corridor, which will improve road infrastructure in the precinct. The TMAP includes a draft Construction Traffic Management Plan, which will be finalised and implemented to manage heavy vehicle movements and minimise impacts on local roads in consultation with the relevant road's authorities. In response to the concerns raised by the schools, in managing traffic conflicts, the proposed use of Bakers Lane will be minimised. Initial construction access will be provided from Mamre Road (once established via Bakers Lane), with access switching to the Berri-Werri Drive to the south of the site for subsequent phases. Berri Werri Drive connects to Durra Barra Avenue, which then connects to Mamre Road.
Proximity to Schools and Sensitive Receivers	The proposed development has been designed to minimise impacts on nearby sensitive receivers, including residential, schools and aged care facilities located north of Bakers Lane. This included significant design revisions involving a change in the location of buildings C and D to provide greater setback between the Data Centre Campus and the Schools. Direct consultation was undertaken with the schools and aged care facilities to understand specific concerns. Technical assessments, including Noise and Vibration, Air Quality, and Visual Impact assessments, have been prepared to evaluate potential impacts and identify appropriate mitigation measures.
Air Quality and Environmental Health	An Air Quality Impact Assessment (AQIA) has been prepared, assessing potential construction and operational impacts. Data centres do not generate radiation or radioactive emissions. The facility will operate as a secure data storage and processing facility with minimal environmental emissions. Air quality impacts during construction will be managed through a Construction Environmental Management Plan, including dust suppression measures. Air quality impacts would be mitigated during operations, including staging the testing of backup generators, and the low probability of an emergency scenario occurring due to the inclusion of three feeder transmission lines and the capacity of the electrical network in the precinct.
Noise Pollution	A detailed Noise and Vibration Impact Assessment has been prepared, evaluating construction and operational noise impacts on nearby sensitive receivers. The assessment identifies appropriate acoustic mitigation measures and management strategies to ensure compliance with relevant criteria and minimise impacts on nearby facilities and residents.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 25: RESPONSE TO ISSUES RAISED

Topic	Response
Water and Electricity Infrastructure	Consultation has been undertaken with utility providers including Sydney Water and Transgrid to confirm infrastructure capacity and servicing requirements. The proposal includes on-site infrastructure upgrades and coordination with utility providers to ensure adequate supply without impacting existing users. This is detailed in Civil Engineering Report and Infrastructure Delivery Strategy Report.
Construction Management and Coordination	A Construction Environmental Management Plan will be implemented establishing clear protocols for site management, communication, and coordination. This will include measures to minimise disruption, manage environmental impacts, and maintain effective communication with nearby stakeholders throughout the construction period.

6.10 Further/Future Engagement

Pre-lodgement engagement informed an approach focused on transparent, ongoing communication with sensitive receivers (such as schools and aged care facilities) and clear processes for raising and resolving concerns throughout all project phases.

- **Assessment and Determination Phase:** The proponent will maintain communication with key facilities, notify stakeholders of the public exhibition period, share information, respond to feedback, and continue consultation with Penrith City Council and government agencies.
- **Construction Phase:** Engagement will include pre-construction meetings with sensitive receivers, a dedicated community liaison role, advance notification of disruptive activities, regular construction updates, and clear complaint-handling procedures. Coordination with the Council and agencies will address traffic and environmental impacts, detailed within the Construction Environmental Management Plan.
- **Operational Phase:** The Proponent will notify stakeholders of project completion, retain communication channels for operational queries, respond promptly to concerns, and continue liaising with Council and agencies.



PART 7: ASSESSMENT AND MITIGATION OF IMPACTS

This section of the EIS provides an assessment of the potential environmental impacts of the proposal in response to the matters for consideration outlined in the SEARs and summarises the key findings of the detailed technical studies in the appendices, recommended mitigation, minimisation, and management measures, where required.

This section of the EIS provides an assessment of the potential environmental impacts of the proposal in response to the matters for consideration outlined in the SEARs and summarises the key findings of the detailed technical studies in the appendices, recommended mitigation, minimisation, and management measures, where required. This section also provides detailed reasons to justify any departures.

7.1 General Requirements

7.1.1 Estimated Development Cost

As required by the SEARs, details of the EDC of the proposal have been provided in the EDC Report provided at **Appendix 2**. The Proposal as an EDC of \$8,999,802,659.81 (exc. GST).

7.1.2 Employment

Based on the parameters provided by the Proponent, the total number of construction jobs for the proposal is 10,059 FTE jobs and the operational jobs for the proposal is 800 as detailed with the Economic Impact Assessment at **Appendix 45**.

7.1.3 Power Consumption

The IT load for the proposal is 1.04-GW and the total power consumption for the proposal is 1.2-GW.

7.1.4 Staging

Development staging is identified in **Section 4.5**. The proposal is to be delivered over two stages (east and west) with 7 phases in total. The estimated construction timeframe is 10 years subject to market demand and other regulatory approvals.

7.1.5 Strategic and Statutory Context

This section of the EIS evaluates the statutory and strategic context of the proposal, in relation to the SEARs and addresses its specific matters.

In response to the Statutory Context requirements of the SEARs, **TABLE 26** specifies the location of each assessment of the relevant statutory and strategic documents.

TABLE 26: STATUTORY AND STRATEGIC CONTEXT REVIEW	
Document	Response / Location of Assessment
<i>Provide a detailed description of the history of the site, including the relationship between the proposed development and all development consents and approved plans previously and/or currently applicable to the site (including SSD-30628110).</i>	Refer to Part 2.10 of this EIS. The proposal as submitted does not rely on SSD-30628110.



TABLE 26: STATUTORY AND STRATEGIC CONTEXT REVIEW

Document	Response / Location of Assessment
<i>Demonstrate that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to:</i> ▪ <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> ▪ <i>State Environmental Planning Policy (Industry and Employment) 2021</i> ▪ <i>State Environmental Planning Policy (Planning Systems) 2021</i> ▪ <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ▪ <i>State Environmental Planning Policy (Sustainable Buildings) 2022</i> ▪ <i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i> ▪ <i>State Environmental Planning Policy (Western Parkland City) 2021</i> ▪ <i>Greater Sydney Region Plan: A Metropolis of Three Cities</i> ▪ <i>Our Greater Sydney 2056: Western City District Plan</i> ▪ <i>Future Transport Strategy 2056</i> ▪ <i>Mamre Road Precinct Structure Plan</i> ▪ <i>Mamre Road Precinct Development Control Plan (MRP DCP)</i> ▪ <i>Cumberland Plain Conservation Plan (CPCP).</i>	Refer to Appendix C and 33 of this EIS. The proposal is wholly consistent with objectives of all plans.

7.1.6 Suitability of the site

A detailed assessment of site suitability has been undertaken as detailed in **Section 3.3**.

7.1.7 Community and Stakeholder Engagement

A detailed engagement plan was developed in consultation with the proponent and in line with the *NSW's Undertaking Engagement Guidelines for State Significant Projects*. This is attached as **Appendix 32** and summarised in **PART 6** of this EIS.

7.1.8 Plant and Equipment Systems

A Plant and Equipment Systems Report has been prepared by Aurecon and is included as **Appendix 35**.

7.1.9 Back-Up Power

Proposed Back-Up Power



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

The proposal is to be supplied by 330/132kV and 132kV/33kV infrastructure. The power supply will be distributed within the site via the proposed underground electrical infrastructure and a substation serving each sub-parcel. The proposal comprises a STATCOM (Static Compensator) facility as part of the main substation that interfaces with the grid. This has been requested by Lumea as a load smoothing measure to improve the power quality impacts of the site. Ongoing development of power quality improvements are expected as part of the ongoing design of the HV system.

The Data Centre Campus is a mission critical facility and therefore requires back up generation if there is interruption to the utility supply. Each building will be provided with diesel generators and uninterrupted power supply (UPS) systems. The UPS system is designed to maintain supply between loss of utility and changeover to the generator supply, and it is not intended to maintain the full load on site for an extended period. For the purposes of the Plant and Equipment Systems Report, only the diesel generators are considered as back-up power noting that the UPS and battery system are for energy storage and short-term supply only.

Although the energy transmission system in the area is designed to be highly reliable, there is always a potential (although extremely unlikely) risk of interruption to utility supplies. Any utility outage without backup power generation on site would impact critical sectors of the economy and community which rely upon cloud computing, including banking, business operations and communication. The facility will play a key role in providing stable cloud infrastructure to the region.

The proposal demonstrates commitment to continual improvement by establishing that each development stage will provide opportunities to adopt new technologies, specifically exploring renewable fuel sources for diesel engines and modular replacement of generator containers as alternative energy sources become commercially available in Australia, alongside pursuing power purchasing agreements for upstream renewable energy.

Alternatives Considered

A comprehensive assessment of alternative commercially available technologies has been undertaken in **TABLE 27** below.

TABLE 27. BACKUP POWER OPTIONS ANALYSIS SUMMARY		
Technology	Description	Viability for Proposed Site
Solar Power (Photovoltaic Cells)	Power can be harvested from photovoltaic cells during daylight hours and provide DC power that must be transformed into usable AC power for the proposed development via numerous rectifier systems.	Based on the size, height and intended rooftop usage of the proposed sub-parcels, there is limited roof and site space available for solar power at scale. Additionally, the 24hr load profile of the proposed development does not suit the generation of solar power during daylight hours only. A significant energy storage solution would need to be implemented to provide sufficient backup power during non-daylight hours. This means large scale Solar power is not viable for the site.
Large-scale batteries (Lithium-ion Batteries / Flow Batteries)	Lithium-ion batteries use a cathode (positive electrode), an anode (negative electrode) and electrolyte as a conductor. Li-ion battery cells come in many varieties – but all use lithium ions. During charging the lithium ions flow	Due to the spatial requirements of Lithium-ion batteries for both fire-separation, fuel separation, and general safety requirements, there is insufficient space to provide enough battery storage to the site for a



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

	from the cathode to the anode through the electrolyte and separator. When discharging the flow of ions reverses from the anode to the cathode.	medium-term power failure. The current provision for battery storage on site is for short-term supply and energy storage for uninterruptable power systems only, to facilitate the switch between utility supply and the backup power supply if interruption to utility occurs (up to 5 minutes only). Thus, this technology is not viable be used as a standalone backup power supply for this site.
	- Flow batteries store energy in electrolytes in electrolyte tanks. The electrolyte is pumped through a reaction stack of electrochemical cells, in which charge, and discharge reactions take place at electrode surfaces. - Vanadium redox is the leading flow battery technology in terms of technical and commercial readiness.	Not viable for this site due to commercial availability and scale required to achieve energy autonomy on site during utility failure.
Hydrogen fuel	Hydrogen can be used as a fuel source or using fuel cells. A fuel cell consists of a negative electrode (anode) and a positive electrode (cathode) sandwiched around an electrolyte.	Not viable – significant spatial requirements of industrial tanks for 24 hours of hydrogen fuel on site. No current hydrogen pipeline would be possible within site development timeframe. Additional safety requirements for hydrogen usage on site and for the nearby school and residential areas would need to be considered.
HVO renewable diesel fuel	- Biodiesel is produced from a diverse mix of resources including vegetable oils (corn, soybeans, rapeseed, palm etc.), animal fats (beef tallow, pork lard etc.), and recycled cooking oil. - Conventionally feedstock goes to a transesterification process and becomes biodiesel, which can be blended with petroleum diesel. - Advanced methods such as hydrotreatment, gasification, and pyrolysis can be used to produce 'drop in' biofuels. These biofuels are chemically the same as petroleum diesel fuel and is compatible with existing infrastructure designed around petroleum.	Viable – Biodiesel for use in existing diesel engines is available within Australia and often used in first fill and testing arrangements. This site is proposed to use diesel generators, and HVO renewable diesel fuel is a viable option subject to further investigation.

7.1.10 Back-Up Generation System**Proposed Back-Up Generation System**

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

The proposal will utilise approximately 846 low voltage 2MW generators for buildings proposed to be located on sub parcels A-F. These generators will only operate in the event of a mains utility failure to the respective electrical block or for testing purposes. These generators provide a total capacity of 1,861.2-MW backup power which exceeds the total consumption of the site because of redundant power strings that provide resiliency to the operation of the facility. The quantity and location of generators is outlined in **TABLE 28** below.

TABLE 28: MAXIMUM GENERATOR QUANTITIES ACROSS THE SITE							
Location	Sub - Parcel A	Sub - Parcel B	Sub - Parcel C	Sub - Parcel D	Sub - Parcel E	Sub - Parcel F	COSH
Level 4	24	24	24	24	30	30	n/a
Level 3	29	29	29	29	36	36	n/a
Level 2	29	29	29	29	36	36	n/a
Level 1	24	24	24	24	30	30	n/a
Ground	24	24	24	24	30	30	2
Total	130	130	130	130	162	162	2
Total Generators Across Site							846

Each sub-parcel features a five (5) storey generator gantry supporting containerised generators. All generators discharge hot air on the façade side and intake cold air from within the gantry structure, with exhaust flue pipes discharging at the effective building height. Ground floor tanks provide bulk diesel fuel storage for the generator stack. Each containerised generator enclosure includes the generator engine set (2MW), fuel system with pumps, control and power panels, acoustic attenuation for air intake and discharge ventilation, exhaust gas silencer and flue connections, and radiator with a fan.



Figure 68. Example of a typical containerised 2MW generator

Source: Aurecon, 2025

The backup power generators are designed to operate for the entire duration that stable utility mains power is unavailable. While 26 hours of fuel storage is provided onsite, refuelling arrangements will enable the site to remain operational under backup power until stable utility supply is restored.

Testing occurs for all generators to ensure functionality in the event of utility failure. Generators are tested by connecting to a mobile load bank at each sub-parcel, with only one (1) generator per sub-



parcel tested at any time during daytime hours of 7:00am to 6:00pm. Further testing details and limits are provided in the AQIA.

7.1.11 Data Hall Cooling System

Proposed Data Hall Cooling System

The proposal deploys direct liquid to the chip data hall cooling. Direct to chip technology allows the majority of heat from IT equipment to be transferred into a water network rather than into the air. This results in a more efficient system with reduced reliance on air, which typically requires more power per kilowatt of IT cooling capacity. Additional benefits of direct liquid to chip include the ability to operate at higher water temperatures, thereby enhancing system efficiency by reducing the workload on chiller compressors and or hybrid dry coolers. As the end customer's data hall cooling strategy shifts toward a higher proportion of direct-to-chip liquid cooling, this in turn further improves the overall system efficiency.

The Proponent has expertise across numerous portfolios in various data hall cooling technologies, including fully air-cooled systems and liquid cooling technology, with first-hand knowledge of operational expenditure associated with different cooling approaches. Direct-to-chip technology is currently among the more efficient cooling approaches aligned with end-user requirements and current industry trends.

Power and water consumption are influenced by a range of factors, including ambient weather conditions, air recirculation, customer-specific design setpoints, and the final distribution between air and liquid cooling. Water-based chiller systems typically achieve better efficiency compared with air-based systems, reflecting the higher efficiency of mechanical rooftop equipment.

Recognising the continued evolving nature of data centre innovation, the mechanical design for the data halls has been developed to remain versatile and capable of accommodating or retrofitting future emerging, more efficient cooling solutions.

Air Cooled Chillers (ACCs) are the proposed solution due to their ability to provide continuous cooling without water use. The configuration of this equipment allows for faster construction and provides the client with the option for an alternative design at lower IT density targets. This design can also be implemented alongside HDCs with water-cooled chillers if water supply is available but insufficient to support a full campus HDC design. The number of ACCs is determined by the end customer, with quantities expected to range from 24 to 28 units. Mechanical equipment placement on the roof has been considered the impact of heat rejection to not affect habitable rooms and communal open spaces.

Alternatives Considered

Hybrid Dry Cooler (HDC) were considered however are not proposed at present. The design and operation of hybrid dry coolers can reduce water consumption by up to 25% at peak usage compared with standard open loop cooling towers of equivalent heat rejection capacity. Furthermore, HDCs can eliminate water use entirely under specific ambient conditions. Based on end user cooling water temperature requirements, the HDC can provide 60% of indirect free cooling on the most humid day, with the remaining cooling supplied by highly efficient water-cooled chillers. This approach minimises the power consumption of mechanical systems, with typical quantities ranging from 16 to 18 HDCs and six (6) to eight (8) water-cooled chillers depending on the end customer. Mechanical equipment placement on the roof has been considered the impact of heat rejection to not affect habitable rooms and communal open spaces.

Refer to **TABLE 29** below for further details.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

TABLE 29. MECHANICAL ROOF PLANT ASSESSMENT				
Technology	Description	Technology Maturity	Suitability for Deployment in Data Centres	Viability for Proposal
Air Cooled Chillers (proposed)	Heat absorbed from the IT equipment within the data hall is extracted by an air cooled chiller, which then supplies cooling water to the field again at the required design temperature. The air cooled chiller directly rejects heat from the data hall cooling water to the atmosphere.	High: Air cooled chillers have been deployed in data centres.	Suitable: - Air cooled chillers are suitable for cooling sites that do not have access to industrial water. - On average, an air cooled chiller system can support a lower density of computing equipment within the same building footprint compared with other cooling technologies. - Better water efficiency per MW IT cooling.	Viable: - The building design is intended to accommodate situations where industrial water is not available or limited. - This allows for faster deployment, with less construction relating to plant rooms, and supports modular construction. - It is also more suitable for lower targeted compute densities within the building.
Water Cooled Chillers Coupled with Hybrid Dry Coolers (alternative considered)	Heat absorbed from the IT equipment within the data hall is extracted by a water cooled chiller, which then supplies cooling water to the field again at the required design temperature. The water-cooled chiller rejects heat from the data hall cooling water, to a separate condenser water system. This heat is then rejected into the atmosphere through a Hybrid Dry Cooler or equivalent equipment.	High: - Water cooled chillers are commonly adopted in many data centres within Australia Moderate: - Hybrid Dry Coolers are not the most commonly used	Suitable: - Water cooled chillers are among the most energy-efficient mechanical cooling systems and are therefore widely used within the building industry. - On average, a water-cooled chiller system can support a higher density of computing equipment within the same	Viable: - Water cooled systems are generally the preferred choice for data centres due to their high efficiency. This results in a more sustainable use of energy for the data centre's intended purpose. - Capital and operating costs per megawatt of IT load are generally reduced compared with alternative solutions.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek (Lot 10 DP 1280592)

	Under suitable ambient conditions, the water-cooled chiller is bypassed, and heat from the data hall IT equipment is rejected directly into the atmosphere by the Hybrid Dry Cooler.	type of heat rejection equipment, but this technology has been extensively developed over time.	building footprint compared with other cooling technologies. ▪ Better power efficiency per MW IT cooling.	▪ Space requirements are minimised. ▪ With HDCs, the use of available industrial water is reduced compared with common water consuming technologies.
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A balance between water-based and air-cooled compressor systems has been considered to optimise utility demands of power and water. These considerations have informed the selection of two rooftop system configurations, developed with careful attention to their placement, operation and potential impacts on neighbouring and public infrastructure. Mechanical rooftop equipment is arranged in concentrated zones, maintaining sufficient clearance from nearby intakes, to prevent re-entrainment of heat-rejected fluids. Discharge from these systems is generally directed vertically to mitigate wind-driven recirculation.

7.2 Noise and Vibrations

Noise and Vibration Impact Assessment (NVIA) has been prepared by Renzo Tonin & Associates for the Proposal and is attached as **(Appendix 17)**. The NVIA has been prepared in accordance with the NSW Noise Policy for Industry (NPI), the NSW Interim Construction Noise Guideline (ICNG) (DECC 2009), the TfNSW Road Noise Policy (RNP) and other relevant guidelines and policies. The NVIA assesses noise and vibration impacts during the construction and operational phases of the proposal. When required, the NVIA proposes mitigation and management measures to reduce impacts.

7.2.1 Existing Environment

The site is located within the IN1 General Industrial zone within the MRP. Population density analysis using 2024 census data shows that the immediate site area has "very low" density (0-500 persons/km²), indicating a predominantly industrial area.

Identified Receiver's

Receiver locations assessed in the NVIA include residential, educational, industrial, places of public worship, recreation, and childcare. The nearest sensitive receivers to the site are located to the north and include the Mamre Anglican School, Trinity Catholic Primary School, Emmaus Catholic College, Emmaus Retirement Village and some rural dwellings on sites transitioning to industrial uses.

The NVIA categorises sensitive receivers based on whether they are inside or outside the MRP rezoned area and if they are expected to exist in the long-term or only in the short term (transitioning to industrial uses or relocating):

- Receiver catchments outside of the MRP.
- Receiver catchments inside the MRP (long-term).
- Receiver catchments inside the MRP (short-term).

A detailed list of receivers is provided in Appendix 17 and depicted in **Figure 70**.

Receivers outside the MRP

*This receiver group includes permanent existing residences outside the MRP (**Figure 70**), including in the neighbourhoods of*

- *Luddenham (NCA06) (near Twin Creeks Golf & Country Club) – with the closest residences approximately 1,400 metres west of the Proposal.*
- *Orchard Hills (NCA05) – with the closest residences approximately 1,500 metres north west of the Proposal.*
- *Mount Vernon and Horsley Park (NCA08) – with the closest residences approximately 2 kilometres east and south-east of the Proposal.*
- *Kemps Creek (NCA07) – with the closest residences approximately 1,600 metres south of the Proposal.*

Receivers inside the MRP (long-term receivers)



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

This receiver group includes existing noise-sensitive receivers within the MRP area in the vicinity of the Proposal, including:

- Catholic Healthcare Emmaus Retirement Village (NCA02).
- Trinity Catholic Primary School (NCA02).
- Emmaus Catholic College (NCA02).
- BAPS Shri Swaminarayan Hindu Mandir and Cultural Precinct (BAPS Temple) (NCA03-PW).

Receivers inside the MRP (short-term receivers)

This receiver group includes a number of existing noise-sensitive uses (existing rural dwellings) within the MRP that are expected to transition to industrial uses under existing or future development approvals, and the Mamre Anglican School, which is slated to relocate to the Sydney Science Park in 2029

Background Noise Levels

The NVIA conducted a review of recently approved State Significant Developments (SSD) and State Significant Infrastructure (SSI) within the MRP and Western Sydney Employment Area to identify appropriate noise monitoring survey results that are relevant to the site and representative of nearby sensitive receivers and ambient background noise levels. This process was undertaken to ensure consistency with prior SSD and SSI assessments. Table 3-1 in the NVIA provides details of the SSD and SSI monitoring results utilised for each receiver location. The adopted background noise levels in the NVIA are presented below.

TABLE 30: MEASURED RATING BACKGROUND NOISE LEVELS (RBL), dB(A)

Ref.	Location Description	Rating background noise levels (RBL), $L_{A90,15min}$		
		Day	Evening	Night
L1	676-702 Mamre Road, Kemps Creek	44	43	37
L2	The 'Village', 85 Bakers Lane, Kemps Creek	39	38	37
L3	Eastern boundary of Aspect Industrial Estate	35	33	30
L4	833-843 Mamre Road, Kemps Creek	47	41	34
L5	25-31 Mandalong Cl, Orchard Hills	41	41	35
L6	1 Medinah Av, Luddenham	37	36	33
L7	981 Mamre Road, Kemps Creek	48	46	34
L8	62 Mount Vernon Road, Mount Vernon	36	36	33

TABLE 31: RECIEVER LOCATIONS

Residential noise catchment area (NCA)	Receiver reference	Address	Receiver Type	Approximate distance to the Proposal, metres
NCA01	N1_R01	654-674 Mamre Road, Kemps Creek	Residential	360
NCA01	N1_R02	676-702 Mamre Road, Kemps Creek	Residential	270
NCA01	N1_R03	1 Bakers Lane, Kemps Creek	Residential	30
NCA01	N1_E01	Mamre Anglican School	Educational	60
NCA01	N1_P01		Passive Rec (School)	



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

NCA01	N1_A01		Active Rec (School)	
NCA02	N2_R01	Emmaus Retirement Village	Residential	480
NCA02	N2_E01	Emmaus Catholic College	Educational	170
NCA02	N2_P01		Passive Rec (School)	
NCA02	N2_A01		Active Rec (School)	
NCA02	N2_E02	Trinity Primary School	Educational	320
NCA02	N2_P02		Passive Rec (School)	
NCA02	N2_A02		Active Rec (School)	
NCA03-PW	N3_PW01	BAPS Temple and Cultural Precinct	Place of Worship	1,520
NCA03	N3_R01	20 Aldington Road, Kemps Creek	Residential	430
NCA03	N3_R02	53 Aldington Road, Kemps Creek	Residential	490
NCA04	N4_R01	799-803 Mamre Road, Kemps Creek	Residential	520
NCA04	N4_R02	819 Mamre Road, Kemps Creek	Residential	700
NCA04	N4_R03	833A Mamre Road, Kemps Creek	Residential	810
NCA04	N4_R04	833B Mamre Road, Kemps Creek	Residential	850
NCA04	N4_R05	854A Mamre Road, Kemps Creek	Residential	920
NCA04	N4_R06	845-857 Mamre Road, Kemps Creek	Residential	950
NCA04	N4_R07	859-869 Mamre Road, Kemps Creek	Residential	1,070
NCA04	N4_R08	885-899 Mamre Road, Kemps Creek	Residential	1,200
NCA05	All	Orchard Hills	Residential	1,500
NCA05	N5_CC1	Old MacDonald's Child Care	Childcare	1,510
NVA06	All	Luddenham	Residential	1,400
NCA07	All	Kemps Creek	Residential	1,600
NCA08	All	Mount Vernon	Residential	2,200
IND	101	East	Industrial	Adjacent
	102	South	Industrial	Adjacent
	103	West	Industrial	Adjacent



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

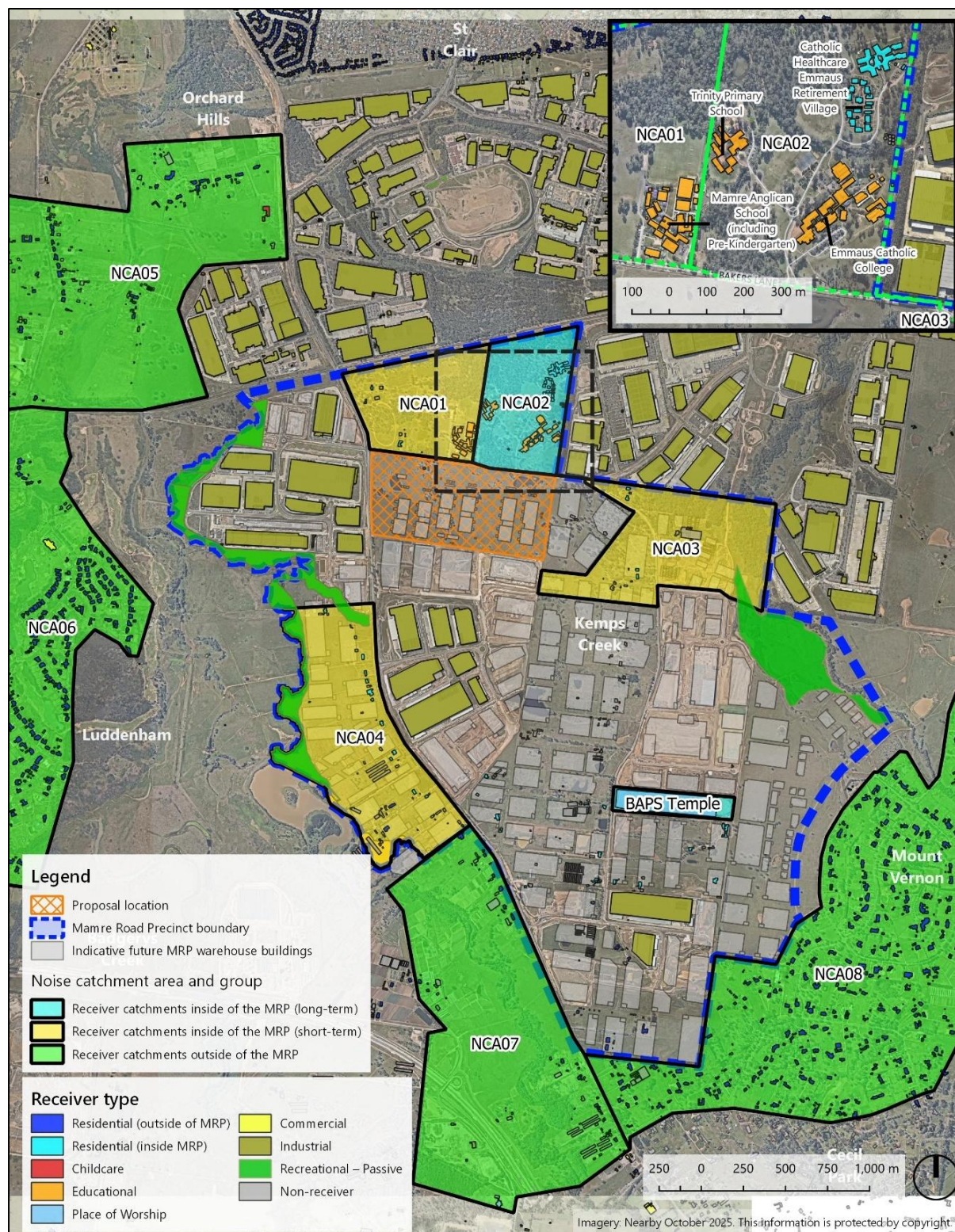


Figure 69. Site Location, nearby noise sensitive receivers, land uses and NCSs

Source: Renzo Tonin & Associates, 2025

7.2.2 Construction Noise

The construction of the proposed development would be carried out in stages over a period of 10 years, as described in (TABLE 36).

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 32: APPROXIMATE CONSTRUCTION PHASES AND DURATION OF WORKS

Phases	Construction Phase / Works	Works area (Figure 7-1)	Modelling scenario reference	Construction activities	Approximate duration (Subject to approval)
Phase 0	Site establishment	Entire of Stage 1 - Phase 1/2/3/4 + Substation and Statcom	PO	Site establishment and early works Establishment of construction facilities	Year 0 – 4 months
	Bulk earthworks, cut/fill and excavation works	Entire of Stage 1 - Phase 1/2/3/4 + Substation and Statcom	POE	Bulk earthworks and retaining wall works for western portion of Proposal. Utilities related works, including drainage formation, and installation of early service conduits, temporary power and water connections.	Year 0-2, 2-3 Years
	Road works	Temporary access & temporary turning head	POR	Construction of temporary access to the site off Mamre Road. Construction of temporary turning head off the North-South Collector Road within Yiribana Logistics Estate.	
Phase 1	Construction of Parcel A and COSH buildings, and associated works	Phase 1 / Parcel A	P1	Civil, utilities and in-ground works Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. COSH construction Incoming electrical switching station and Statcom construction. Building fitout Campus and Parcel road works and carparking Commissioning	Year 1-2 1-2 years
Phase 2	Construction of Parcel B and associated works	Phase 2 / Parcel B	P2	Civil, utilities and in-ground works Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. Building fitout Parcel road works and carparking Commissioning	Year 2-3 1-2 years



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Phase 3	Construction of Parcel C and associated works	Phase 3 / Parcel C	P3	Civil, utilities and in-ground works Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. Building fitout Parcel road works and carparking Commissioning	Year 3-4 1-2 years
Phase 4	Construction of Parcel D and associated works	Phase 4 / Parcel D	P4	Civil, utilities and in-ground works Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. Building fitout Parcel road works and carparking Commissioning	Year 4-6 1-3 years
	Road works	Road 1	P4R	Construction of a temporary road within the ultimate Road 1 corridor to provide emergency access out of the site.	
Phase 5	Bulk earthworks, cut/fill and excavation works (building footprint / staging areas)	Stage 2 - Phase 5/6	P5E	Site establishment Bulk earthworks, cut/fill and excavation works and retaining wall works for eastern portion of Proposal	Year 7-8 1-2 years
	Construction of Parcel E and associated works	Phase 5 / Parcel E	P5	Site establishment Civil, utilities and in-ground works Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. Building fitout Parcel road works and carparking Commissioning	
	Road works	Road 2	P5R	Construction of Road 2 between the roundabout and the eastern boundary of the site. Landscaping adjacent to road	
Phase 6	Construction of Parcel F	Phase 6 / Parcel F	P6	Civil, utilities and in-ground works	Year 9-10 1-2 years



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	and associated works			Parcel building construction, including electrical substation, water and fuel storage tanks and loading dock. Building fitout Parcel road works and carparking Commissioning	
Phase 7	Construction of Road 1 and final utilities and landscaping works	Road 1 and turning head at north end	P7	Road works Civil, utilities and in-ground works Landscaping works	Year 10 1 year

Project construction works are generally expected to be undertaken during the NSW Interim Construction Noise Guideline (ICNG) recommended standard construction hours, being:

- Monday to Friday 7 am to 6 pm
- Saturday 8 am to 1 pm
- No work on Sundays or public holidays

The proposed development also involves some out-of-hours works (OOHW), including constructing the temporary access from Mamre Road and other necessary road works. Due to the nature of roadworks, some tasks must be carried out after hours. Generally, roadworks will occur after hours if they could negatively impact the road network during peak periods, pose safety risks to workers, or if a roads authority has mandated that the works be done during nighttime.

Construction Noise Sources

The likely noise emission sources associated with the construction of the proposed development are identified and modelled in Table 7-7 of the NVIA. The assessment was based upon noise sources levels from a range of sources including sound power levels based on maximum noise levels provided in Table A1 of Australian Standard 2436 - 2010 'Guide to Noise Control on Construction, Demolition and Maintenance Sites', the ICNG, information sourced from past projects and/or information held in the internal library files.

Predicted Construction Noise Levels

The NVIA has modelled the potential construction noise levels at receivers for each construction stage of the proposed development, utilising the expected sound power levels of plant and equipment operating in proximity to receivers. Table 7-9 of the NVIA presents noise levels likely to be experienced at the nearby receiver locations during the construction phase. The noise levels are presented as ranges to provide an understanding of noise levels when the plant items operate at the location furthest (or most acoustically shielded) from the receiver and at the location closest (or with the highest potential noise level) to the receiver. The upper end of the range shown in Table 7-9 of the NVIA indicates the expected noise level at a receiver when construction work is taking place at the closest point on the site to the receiver. Although in practical application, noise-producing construction activities are carried out at different locations throughout the work area, resulting in varying noise levels at each receiver.

The noise predictions presented in this NVIA represent are conservative and represent the identified typical or high noise equipment/ plant operating continuously throughout the 15 minute period. It is



important to distinguish between high noise equipment/plant and typical construction noise scenarios within this assessment. High noise equipment/plant scenarios represent a worst-case condition, with both worst case equipment and location modelled, which is not expected to reflect the common construction noise emissions generated throughout the Proposal construction works for various receivers. Predicted noise levels from high noise equipment/plant scenarios mostly relate to short-duration activities involving noise intrusive equipment such as saw cutting and rockhammering. These scenarios are modelled to ensure the assessment captures these intensive conditions but are expected to be infrequent and of limited duration. In contrast, typical construction works involve less noise intrusive equipment and capture typical expected operations and usage within any given 15-minute interval. As such, noise levels during the typical activities are generally lower and more representative of day-to-day site construction.

The predicted noise levels in Table 7-9 of the NVIA show that the surrounding receivers are not expected to experience noise levels above the noise management levels (NML's) with the exception of the sensitive receivers located at NCA01, NCA02 and NCA03, and generally only during periods when high noise equipment/plant and loud earthmoving equipment are in use. However, based on the predictions in Table 7-9 of the NVIA, the following should be noted regarding the potential noise impacts on the nearest sensitive receivers:

- Construction noise levels at the receivers are predicted to be above the NMLs when high noise activities are being undertaken (rock hammering or saw cutting) at locations closest to the receiver. During these works, construction noise levels are expected to be 7-8 dB(A) above the NML during bulk earthworks and 1-5 dB(A) above the NML during road construction (the most noise-intensive construction periods).
- During typical construction works and activities, the expected noise levels at the schools or retirement village in NCA01 and NCA02 are not predicted to be above the NMLs.
- For residences in NCA01 and NCA03, during stages that are in close proximity to these receivers, construction noise levels are predicted to be above the NML during a range of construction activities.
- For all other residences or during typical construction activities, due to the substantial distance from the construction works, the construction noise levels are predicted to be below the standard hours NMLs.

Construction Noise Mitigation Measures

It is expected that the predicted exceedances of the NMLs at sensitive receivers can be effectively reduced through the preparation and implementation of a Construction Noise and Vibration Management Plan (CNVMP). The following management and mitigation measures have been noted in the NVIA and would be implemented into the CNVMP, prepared as a post-approval matter:

- General engineering controls, including screening, acoustic enclosures, silencers and substitution by alternative process.
- Noise management measures listed in Table 7-14 of the NVIA, including with consideration of potential cumulative impacts.
- Mitigation measures for diesel-powered cranes.
- OOHV evening and night works, including construction layout and planning.

The NVIA also recommends noise monitoring be carried out to understand the effectiveness of the implementation of the CNVMP in the event of a sustained complaint. Additional noise mitigation and management measures would need to be employed in accordance with the ICNG to reduce noise impacts on nearby receivers. Through the implementation of a comprehensive CNVMP, the NVIA concludes that the construction noise impacts of the construction works can be effectively managed to protect the reasonable amenity of nearby sensitive receivers.

7.2.3 Operational Noise

The proposed development seeks consent to operate 24 hours a day, seven days a week. The main operational components of the proposed development, with likely noise emission sources, are identified as follows:

- Operation of the data centre buildings and associated noise sources, including rooftop mechanical plant.
- High Voltage Substation (HVVS) and other electrical transformers.
- Cooling systems.
- Operation of backup generators during routine testing and emergency events.
- Vehicle movements on site, including the deliveries and car parking.
- Additional building services and mechanical systems.

Project Amenity Noise Levels

To ensure that the cumulative industrial noise level (comprising existing and new sources) remains within the recommended ambient noise levels for the area, the proposed development specific amenity noise level must be applied to each new industrial noise source entering the precinct. The recommended amenity noise level from Table 2.2 of the NPfI represents the total industrial noise level from all sources. Adjustments to address cumulative industrial noise are then applied to these noise levels to determine the proposed development-specific amenity noise level. The NVIA includes adjustments to the recommended amenity noise levels to determine the proposed development-specific amenity noise level identified for each of the three receiver groups due to the differing nature and potential timing of noise impacts across these receiver groups.

Receivers outside the MRP

DPHI's current approach for determining acceptable amenity goals for individual industrial developments within the MRP is understood to use an area-based approach consistent with Chapter 2 of the *Noise Policy for Industry* (NPfI), similar to that shown in NPfI Section 2.4.2, but based upon the area of a development (**TABLE 37**).

TABLE 33: MRP AREA-BASED PRECINCT NOISE GOAL ADJUSTMENT		
Mamre Road Precinct Area	Proposal Area	Cumulative adjustment to amenity goal based upon Proposal area, dB(A)
999 hectares	52 hectares	-13
972 hectares (SP2 zoning removed)		-13
949 hectares (IN1 zone only)		-12

The NVIA has proposed an updated approach to provide a cumulative adjustment factor based on additional considerations for large industrial clusters considering specifics of the MRP, including:

- Separation factor – due to the large size of the MRP and the large distances between parts of the MRP and surrounding receivers, development areas of the MRP will be either constrained or unable to contribute noise up to the allocated noise levels at each receiver area using the current cumulative adjustment approach. Further refinement to the current area based approach is appropriate to consider this unused capacity. A review showed a further 1-2 dB(A) adjustment could be considered.
- Concurrency factor - the larger the development cluster and the number of sites, the less likely it is that all sites will be operating at worst-case noise levels concurrently. Assuming that only 50% of the industries in the MRP would be operating at a reasonable worst-case scenario in a single 15-minute period a further 3 dB(A) adjustment could be considered.



Based on the consideration of these factors, and an updated approach is detailed in the NVIA. Maintaining a conservative approach, the cumulative adjustment to the amenity goal based on the Proposal area has been reduced from -13 to -10.

Receivers inside the MRP (long-term)

The methodology for determining the cumulative correction for these receivers, including the schools and retirement village to the north, is provided in Appendix C.2 of the NVIA and considers the potential impacts, and surrounding noise environment for both the short-term and long term situations to determine appropriate PNTLs in accordance with Section 2.4 of the NPfI. This approach considers a short-term -5 dB(A) cumulative adjustment with minimal surrounding industrial noise as the MRP is developing and a correction of -10 dB(A) for the future fully developed MRP when all surrounding contributing industrial developments are operating.

Receivers inside the MRP (short-term)

The NVIA has adopted the NPfI standard approach of a -5 dB(A) reduction for short-term receivers within the MRP. This reduction is based on three to four other developments contributing noise concurrently at each receiver as the MRP is developing.

Project Intrusive Noise Levels

To minimise a noticeable difference as a result of a new development the NPfI also sets the proposed development intrusiveness noise level for residences. The intrusiveness of a noise source may generally be considered acceptable if the equivalent continuous (energy-average) A-weighted level of noise from the source (represented by the LAeq,15min descriptor) does not exceed the background noise level measured in the absence of the source by more than 5 dB(A). The proposed development intrusiveness noise level has been established for managing short-term impacts at residences, but consistent with NPfI Section 2.4.3, is not being used to address long-term impacts due the area undergoing significant change and the existing noise environment likely changing.

Project Noise Trigger Levels

The proposed development noise trigger levels (PNTLs) have then been derived from the lower value of the proposed development intrusiveness noise levels and proposed development amenity noise levels, considering the cumulative adjustments detailed above for the proposed development amenity noise levels. The NVIA provides a summary of the PNTLs for each receiver type/area in Table 5-9.

Operational Noise Assessment

The NVIA modelled the expected typical operational scenarios, which included a breakdown of expected noise levels during each of the stages up to when the campus is fully developed (10 years):

- Typical operations – all plant and equipment operating during each of the day, evening and night periods, in addition to maintenance testing of back-up generators during the day, with associated equipment under a scheduled testing regime (up to 6 generators at a time during daylight hours with a run time of 60 minutes).

Additional modelling of the emergency critical power failure was included to show the potential noise levels in this extremely rare scenario.

The NVIA incorporated into the design a range of mitigation measures, in addition to proposing a number of mitigation and management measures to address potential exceedances of PNTLs at receiver's for the proposed development due to the operation of chillers, electrical distribution and

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

mechanical plant/building services. Other noise sources operating on the site would have a minor or negligible contribution to overall noise levels emanating from the site.

The incorporated and recommended design mitigation measures are provided in Table 8-11 of the NVIA and include acoustic attenuation of air chillers, generators, mechanical plant and building services and noise barriers and enclosures.

A testing regime for the diesel generators is also proposed to reduce potential noise impacts on the schools and retirement village to the north, including testing the nearest generators during school holidays/weekends and limiting the number of generators tested at any one time in areas closer to the receivers.

The NVIA modelled the potential noise levels of the proposed development with these mitigation measures operating based on a number of assessment scenarios covering the phases of the proposed development (refer to Table 8-14 of the NVIA).

The modelling predicted that under the worst-case operating scenarios, including at full development, noise levels at all receivers outside the MRP and long-term receivers inside the MRP would be below the PNTL's. This includes the Catholic Healthcare Emmaus Retirement Village (NCA02), Trinity Catholic Primary School (NCA02) and Emmaus Catholic College (NCA02).

Residual noise impacts (exceedances of the PNTLs) have been shown in the NVIA to occur at ten short-term receivers (nine residences and one school) within the MRP (**TABLE 38**). All receivers are identified with residual impacts not greater than 5 dB(A) above the PNTLs and below the NPfI recommended amenity noise levels. The residual impacts would also be considered marginal as per the NPfI.

Several of these receiver locations are dwellings ancillary to existing industrial or commercial operations, which would not be expected to be overly sensitive to marginal noise impacts. It is again noted that the Mamre Anglican School is slated to move to the Sydney Science Park in 2029; therefore, any residual noise impacts would either not occur or be short-lived in the case they are presented beyond this date.

As the receiver locations within the MRP with residual impacts are on strategically identified and zoned land for sought-after industrial development, it is considered likely that the dwellings would be removed and sites transitioned to industrial development, and so residual noise impacts would either not occur as in many cases they are only expected during later phases or the marginal impacts would be short-lived.

As the receiver locations within the MRP with residual impacts are on strategically identified and zoned land for sought-after industrial development, it is considered likely that the dwellings would be removed and sites transitioned to industrial development, and the marginal impacts would also be short-lived. However, should the sensitive receivers be occupied at the commencement of operations of the proposed development, and predicted impacts are still expected following detailed design review and commissioning/noise verification, consultation with the receivers would be carried out, and reasonable at-receiver property treatments would be proposed.

TABLE 34: RECEIVERS WITH IDENTIFIED RESIDUAL NOISE IMPACTS (WITHIN THE MRP - SHORT TERM RECEIVERS)

NCA	Receiver number	Address / Location	Receiver Type	Phases with predicted residual noise levels (Worst case predicted exceedances of PNTL with all mitigation and management, all periods, $L_{Aeq,15min}$, dB, dB(A) Day/ Night Operational Parcels
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ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

				A	AB	AB C	AB CD	AB CD E	AB CD EF
NCA01	N1_R03	1 Bakers Lane, Kemps Creek	Residential	- / 1	- / 1	- / 2	- / 2	- / 2	- / 2
NCA01	N1_E01	Mamre Anglican School	Educational	- / -	1 / -	1 / -	5 / -	5 / -	5 / -
NCA03	N3_R01	20 Aldington Road, Kemps Creek	Residential	- / -	- / -	- / -	- / 1	1 / 4	1 / 5
NCA03	N3_R02	53 Aldington Road, Kemps Creek	Residential	- / -	- / -	- / -	- / 1	1 / 4	2 / 5
NCA04	N4_R01	799-803 Mamre Road, Kemps Creek	Residential	- / 3	- / 4	- / 4	- / 5	- / 5	- / 4
NCA04	N4_R02	819 Mamre Road, Kemps Creek	Residential	- / 2	- / 3	- / 4	- / 4	- / 5	- / 4
NCA04	N4_R03	833A Mamre Road, Kemps Creek	Residential	- / 1	- / 2	- / 3	- / 3	- / 3	- / 3
NCA04	N4_R04	833B Mamre Road, Kemps Creek	Residential	- / -	- / 1	- / 2	- / 2	- / 3	- / 3
NCA04	N4_R05	845A Mamre Road, Kemps Creek	Residential	- / -	- / 1	- / 2	- / 2	- / 2	- / 2
NCA04	N4_R06	845-857 Mamre Road, Kemps Creek	Residential	- / -	- / -	- / -	- / 1	- / 1	- / 1

Operational Noise Management and Mitigation

The Proposal includes several management and mitigation measures, as described above and in Sections 8.3.2 to 8.2.6 of the NVIA. These measures would be implemented through an Operational Noise Management Plan (ONMP), including ongoing noise compliance monitoring. As detailed in the NVIA, additional measures can be implemented to reduce noise impacts as part of the detailed design of the proposed development at the construction certificate stage, including the selection of plant and equipment with reduced sound power levels, among other measures.

The ONMP would also incorporate continuous evaluations of mitigation measures and management practices to integrate and seize opportunities for noise emission reductions, thereby further diminishing the anticipated noise levels at sensitive receivers.

7.2.4 Sleep Disturbance

The potential for sleep disturbance resulting from maximum noise level events originating from the site during the night-time period must be carefully considered as per the NPfI which provides the following trigger levels:

- $L_{Aeq,15min}$ 40 dB(A) or the prevailing RBL plus 5 dB, whichever is the greater, and/or
- L_{AFmax} 52 dB(A) or the prevailing RBL plus 15 dB, whichever is the greater.

The NPfI requires further analysis of sleep disturbance when project-specific noise is expected to exceed the screening levels.

The night-time noise sources associated with the Proposal are steady-state or quasi-steady-state. Therefore, there is unlikely to be significant variation between $L_{Aeq,15min}$ values and L_{AFmax} values, and no significant peak noise events are expected. The NVIA concludes that, through the achievement of the night PNTLs for the proposed development, the sleep disturbance $L_{Aeq,15min}$ assessment levels will be inherently satisfied.



The only potentially loud instantaneous noise events that could occur across the Proposal operations with the potential to disturb sleep could be loading dock or carpark related activities

The sleep disturbance project assessment noise levels for the proposed development are provided in Sections 8.5.4 of the NVIA (refer to Table 8-22 of the NVIA).

The NVIA concludes that, the highest predicted noise level for each of the residential NCAs for the fully developed campus will achieve the L_{AFmax} values sleep disturbance assessment levels and sleep disturbance impacts are not predicted.

7.2.5 Road Noise

The potential noise impacts as a result of the operational or construction road traffic from the Proposal on public roads must be assessed in accordance with the TfNSW Road Noise Policy (RNP). The RNP road traffic noise criteria for various receiver types and a requirement that any increase in the total traffic noise level should be limited to 2 dB(A) above that of the corresponding 'no build option' before further feasible and reasonable mitigation measures are required. This is applicable to both operational and construction activities associated with the proposal.

The predicted traffic noise increase on public roads based on the expected traffic (including heavy vehicles) during construction and operations was assessed in the NVIA based on the findings of the Transport Management and Accessibility Plan prepared by Ason.

The NVIA concluded that the predicted change in traffic noise levels from additional operational and construction vehicles was less than 2 dB(A). Construction related road traffic noise is therefore expected to comply with the requirements of the RNP.

7.2.6 Vibration

The NVIA includes a construction vibration assessment based on the recommended minimum working distances for the most vibration-intensive plant expected, adopting a conservative approach. The site-specific minimum working distances for construction, including potential cosmetic damage and human annoyance for residences and schools, are shown in **Figure 70**. The nearest sensitive receivers include residences in NCA01, and Mamre Anglican School in NCA02, and the nearest warehouses in Kemps Creek Estate to the east and south. This assessment has concluded that the nearest sensitive receivers are located close to but outside of the minimum working distances for human annoyance, with the exception of the adjacent future warehouses when 13t vibratory rollers are in use nearby to these receiver during the proposed works.

Considering this, to reduce the potential human annoyance impact on these receivers, the NVIA proposes several mitigation measures to be implemented when vibration-generating equipment is being utilised in close proximity, including:

- Notification of vibration-intensive work periods to receivers and provision of complaint-handling procedures.
- Where vibration is found to be excessive, management measures should be implemented to ensure compliance with vibration standards. Management measures may include modifications to construction methods, such as using smaller equipment, establishing safe buffer zones, and, if necessary, imposing time restrictions on the most excessive vibration activities.
- Carry out attended vibration measurements and establish site specific acceptable minimum working distances.

The NVIA concluded that the potential for human annoyance from vibration can be reduced or managed to acceptable levels, subject to the implementation of the above-noted management measures as part of an overarching Construction Noise and Vibration Management Plan (CNVMP) and



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

through the detailed design of the proposed development, including input from the construction contractors.

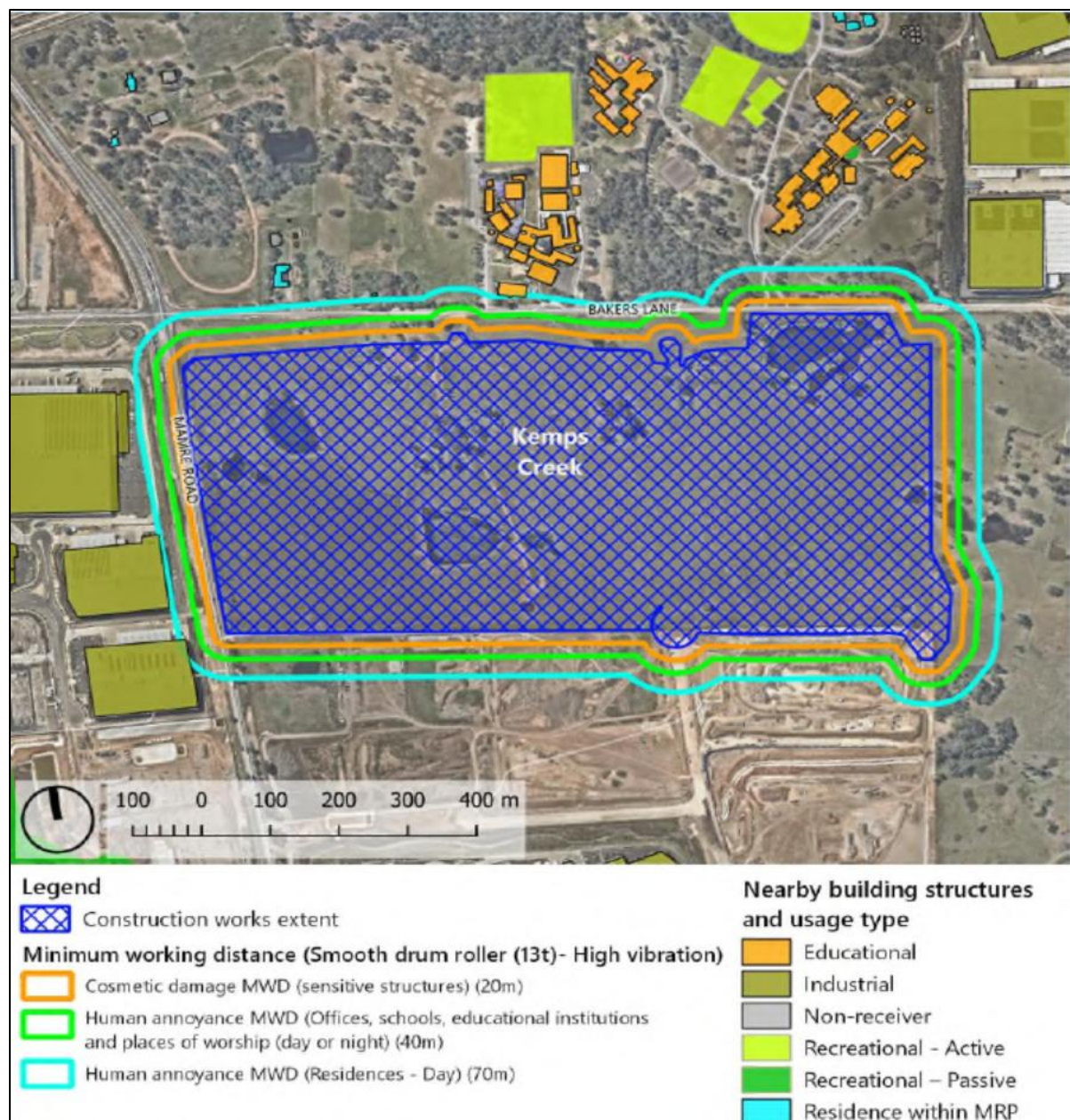


Figure 70: Minimum working distances (MWD) for cosmetic damage from the construction area extents (most vibration intensive plant)

Source: Renzo Tonin & Associates, 2025

7.3 Air Quality

An Air Quality Impact Assessment (AQIA) has been prepared by Northstar for the proposal and is attached as **Appendix 16** of this EIS. The AQIA has been prepared in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (Approved Methods) (EPA, 2022). The assessment methodology includes modelling local meteorology and the dispersion of potential emissions from the proposed construction and operation to predict potential air quality impacts on the surrounding environment. The proposed development has the potential to generate air quality impacts that can be effectively mitigated and managed during construction and operational phases.

7.3.1 Existing Environment

The site is located within the IN1 General Industrial zone within the MRP. Population density analysis using 2024 census data shows that the immediate site area has "very low" density (0-500 persons/km²), indicating a predominantly industrial area. Higher population densities are located as follows:

- North – St Clair and Erskine Park
- Southeast – Abbotsbury and Bossley Park
- Southwest – Luddenham

Receptor locations used in the AQIA include residential, educational, industrial, medical, recreational, and boundary receptors. The receptor list (provided in Appendix B of the AQIA and illustrated in **Figure 71** and **Figure 72** represents a cross-section of available locations used to characterise larger areas and more sensitive populations susceptible to changes in air pollution. The nearest sensitive receptors to the site are located to the north and include the Mamre Anglican School, Trinity Catholic Primary School, Emmaus Catholic College, Emmaus Retirement Village and some rural dwellings on sites transitioning to industrial uses.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

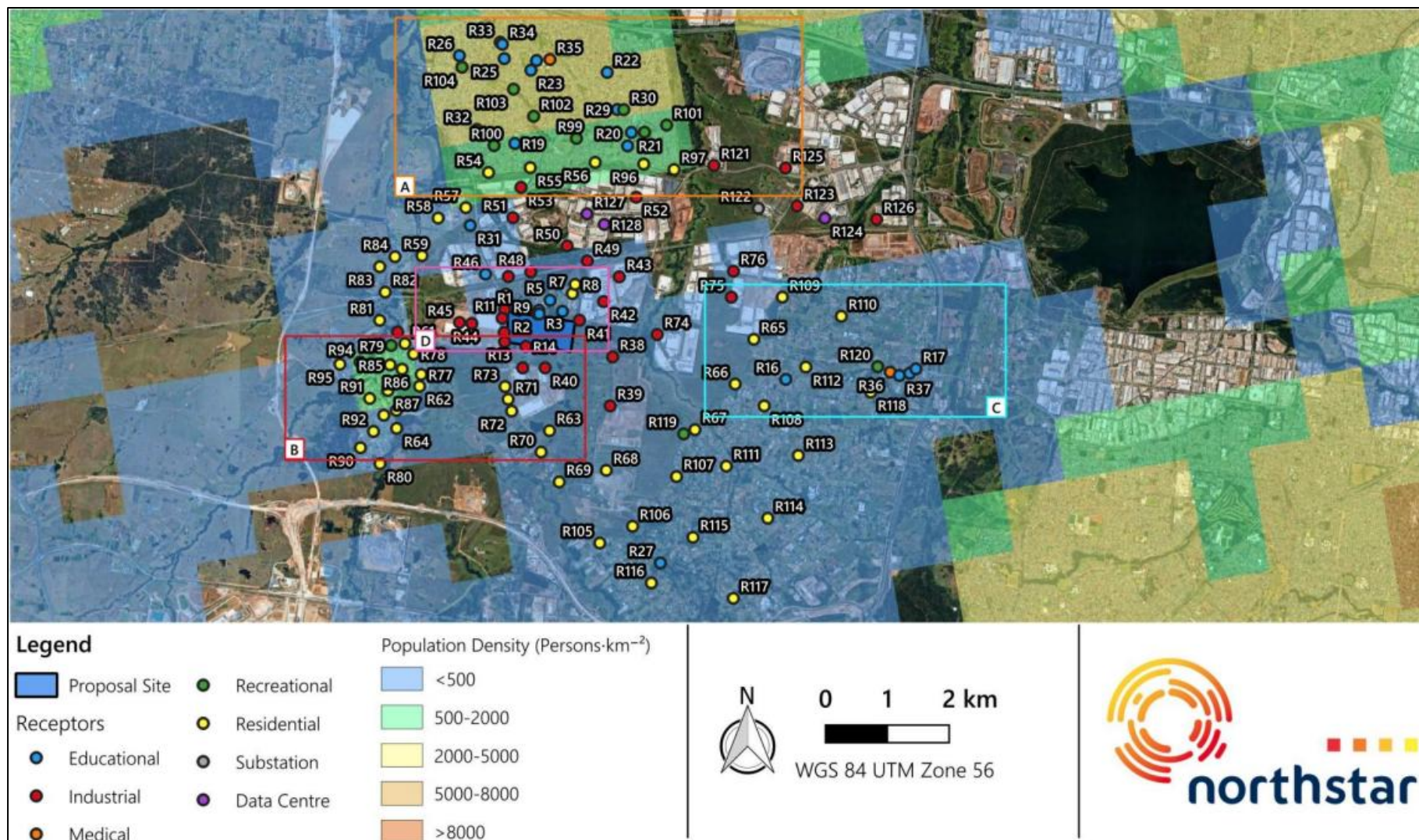


Figure 71: Location of Sensitive Receptors Surrounding the Proposal Site and Population Density (Part 1)

Source: Northstar, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

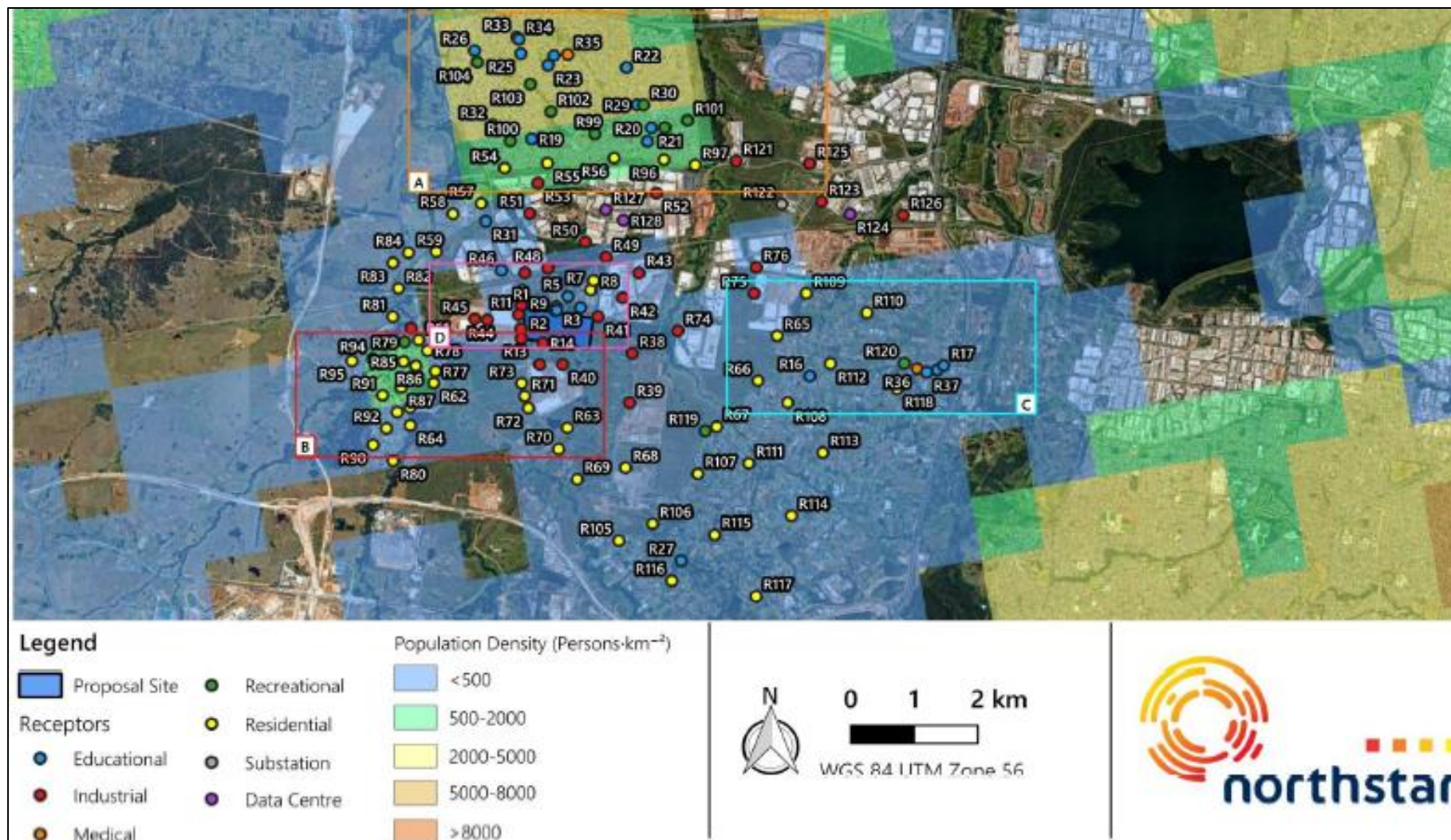


Figure 72: Location of Sensitive Receptors Surrounding the Proposal Site and Population Density (Part 2)

Source: Northstar, 2025

7.3.2 Assessment of Impacts

Modelling scenarios have been prepared in the AQIA to present the predicted air quality impacts of the proposal across all construction stages and phases of the proposed development. A summary of these scenarios is presented in **TABLE 35**. The scenario identifiers (for example 'C1') represent the scenarios associated with 'C' (Construction), 'E' (Emergency) operation, and under 'M' (Maintenance) testing, respectively.

TABLE 35: SUMMARY OF MODELLING SCENARIOS			
Scenario		Stage	Phase
Construction			
C1	Construction	Stage 1	Phase 0
C2	Construction	Stage 2	Phase 5
Operation – Emergency			
E1	Justified worst case	Stage 1	Phase 1
E2	Justified worst case		Phase 1 + Phase 2
E3	Justified worst case		Phase 1 + Phase 2 + Phase 3
E4	Justified worst case		Phase 1 + Phase 2 + Phase 3 + Phase 4
E5	Justified worst case	Stage 2	Phase 1 + Phase 2 + Phase 3 + Phase 4 + Phase 5
E6	Justified worst case		Phase 1 + Phase 2 + Phase 3 + Phase 4 + Phase 5 + Phase 6
Operation – Maintenance Testing			
M1	Maintenance testing	Stage 1	Phase 1
M2	Maintenance testing		Phase 1 + Phase 2
M3	Maintenance testing		Phase 1 + Phase 2 + Phase 3
M4	Maintenance testing		Phase 1 + Phase 2 + Phase 3 + Phase 4
M5	Maintenance testing	Stage 2	Phase 1 + Phase 2 + Phase 3 + Phase 4 + Phase 5
M6	Maintenance testing		Phase 1 + Phase 2 + Phase 3 + Phase 4 + Phase 5 + Phase 6

Construction Phase

The proposal will be implemented in two (2) stages over a period of 10 years. Stage 1 would occur over the first five years and Stage 2 over the second five years. The earthworks component of the proposal has the greatest potential for fugitive dust emissions, and this component of construction has been the subject of the majority of the assessment in the AQIA.

The AQIA includes a quantitative assessment of potential construction impacts based on the proposed construction staging and surrounding construction activities on other sites within the Mamre Road Precinct (MRP). The AQIA focused on dust soiling and on the increased ambient PM concentrations resulting from dust from construction activities on the site.

Exceedances of the 24-hour PM₁₀ criteria are predicted at receptors close to the site for Stage 1 construction works, which include bulk earthworks and roadworks. These predicted exceedances occur on days when elevated regional background concentrations exist. The incremental impact of the construction activities is minor and not shown to be heavily impacted by surrounding construction activities in the MRP. The AQIA does not predict any exceedances of the criterion during Stage 2 construction works.

No additional exceedances of the 24-hour PM_{2.5} criterion are anticipated at any receptor during Stage 1 or Stage 2 construction activities. The annual average criteria for TSP, PM_{2.5}, and dust deposition are



expected to be met at all receptors throughout both construction stages, even when accounting for impacts from surrounding construction activities within the MRP.

In terms of the annual average PM₁₀ criterion, an exceedance is predicted at the Mamre Anglican School and the Mamre Christian College during Stage 1 construction works and two industrial receivers during Stage 2 construction works.

To reduce the potential air quality impacts of the proposed development's construction and ensure exceedances of the relevant air quality criteria are mitigated, a comprehensive Construction Air Quality Management Plan (CAQMP) has been prepared (**Appendix 16**). The CAQMP includes real-time short-term (e.g., 1-hour average) PM₁₀ monitoring as part of the Trigger Action Response Plan (TARP) and implements a hierarchy of responses to ensure that impacts associated with the construction works are effectively managed. These responses include, among others:

- Monitoring and ceasing work during adverse meteorological conditions.
- Use of water sprays on stockpiles.
- Limit vehicle speed limits to 15km/h.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Minimise drop heights from truck dumping to 1.5 m.
- Implementation of track-out measures (e.g. wheel washing system) for trucks accessing the site.
- Install hard-surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowzers, and regularly cleaned.

Key Performance Indicators for the construction of the proposed development are provided as triggers in Table 7 of the AQMP, including the established construction air quality levels for dust and PM. The construction activities on site would be constantly monitored, and should any triggers be met, additional actions and mitigation measures would be implemented.

Subject to the implementation and monitoring of the effectiveness of the mitigation and management measures in the AQMP, the AQIA concludes that the potential construction impacts of the proposed development can be reduced to respond to the predicted exceedances.

Operation Phase

The proposed development has the potential to generate air quality impacts during routine generator testing and emergency power outages from generator exhaust emissions. The potential for emergency power outages is considered low as there has not been a sustained loss of electricity within the industrial precinct and main transmission lines (Sydney West BSP operated by Transgrid) since 2005. In the event of a full power outage, including all site feeders being offline, lithium-ion batteries would provide an immediate power supply until the backup generators reach full operation. The generators would provide continuous power until electricity is restored.

To ensure the generators are operable and for maintenance purposes, regular testing of each back-up generator is required. Up to six generators would be tested concurrently, between the hours of 7:00 am to 6:00 pm.

Key pollutants linked to the proposed development's operation include nitrogen dioxide (NO₂) and particulate matter (PM₁₀ and PM_{2.5}). These potential emissions result from the combustion of diesel fuel in the back-up generators.

The proposal would be implemented in six (6) phases over two broad construction/implementation stages. Potential air quality impacts during each of those six (6) phases are presented within the AQIA,



noting that the number of operational backup diesel generators will vary according to the number of phases in operation (which limits the amount of generators that could either be operated in an emergency scenario, or subject to maintenance testing (with a maximum of six operating at any given time)).

Detailed dispersion modelling has been undertaken as part of the AQIA for both the justified worst-case impacts associated with emergency scenarios and regular maintenance testing scenarios.

The justified worst-case scenarios have been developed to represent the potential maximum air quality impacts associated with the proposed development. The proposal differs from other data centre developments in that a significant level of redundancy is built into the design to ensure that the use of diesel generators is minimised. It is noted that many other data centres may be connected to the electricity supply grid by one (1) feeder only, such that any interruption to that supply would require full deployment of back-up power via diesel generators. In this case, three (3) feeders would supply the proposal, and generators would only be required for a short time, should supply from one (1) or two (2) feeders fail.

Scenario E1 to E6 – Justified Worst Case Scenarios:

The proposed development of the justified worst-case scenarios during all phases of the development has considered the following:

- One (1) feeder failure: Some generators would be required to be operated temporarily (15 to 20 minutes) whilst a medium voltage changeover occurs in the rings. Generators would only be used until the electricity supply is reconnected or whilst the changeover is in progress.
- Two (2) feeder failures: In this scenario, further and temporary generator support would be initiated to maintain full site load during switching and load balancing operations. Generator operation would again be generally short-duration and controlled until the network has been reconfigured and supply redundancy is restored.
- Three (3) feeder failures: In this event, all standby generation would operate to supply 100% of critical and essential loads, ensuring continuity of data centre operations for the duration of the grid outage, subject to available diesel fuel storage and resupply. This scenario is extremely unlikely.

Scenario M1 to M6 – Realistic (Maintenance Testing) Scenarios

The anticipated testing schedule involves either four (4) 2MW generators (during phase 1) or six (6) 2MW generators operating at 100% load (phase 2 onwards) within the specified testing hours. The proposed development of the maintenance testing scenarios during all phases of the development has considered the following:

- These scenarios are likely to occur periodically, where generators would be tested simultaneously at any one time during daytime hours (assumed to occur at any time between 7:00 am and 6:00 pm [11 hours]).
- The combination of generators (of a total of 846), which result in the maximum incremental and cumulative impacts at each receptor vary, and detailed analysis has been performed to confirm that the impacts predicted and presented within the AQIA represent those potential maximum impacts.
- Comparison of impacts against both short and long-term criteria is performed, providing another level of conservatism, as the testing schedule is modelled as occurring for every one (1) of the hours between 7:00 am and 6:00 pm, on each and every day of the year (4,015 hours). Testing hours are anticipated to be limited to 141 hours per year (of an allowable 200 hours). This approach is required to be performed in this manner to account for all potential combinations of emissions, meteorology and background conditions. Annual average



incremental predictions are therefore weighted by actual operating hours over those modelled to account for annual average emission loads.

Scenario E1 to E6 Impacts

TABLE 36: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E1						
Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂
Scenario E1 - 1 feeder outage - 67 generators of 132 operational						
Residential	20	82	312	0.055	0.225	0.036
Educational	64	111	381	0.175	0.304	0.043
Industrial	48	97	347	0.132	0.266	0.040
Recreational	0	0	298	0.000	0.000	0.034
Medical	0	0	126	0.000	0.000	0.014
Scenario E1 - 2 feeder outage - 132 generators of 132 operational						
Residential	94	136	729	0.258	0.373	0.083
Educational	121	153	1103	0.332	0.419	0.126
Industrial	106	134	665	0.290	0.367	0.076
Recreational	1	5	507	0.003	0.014	0.058
Medical	0	0	237	0.000	0.000	0.027
Scenario E1 - 3 feeder outage - 132 generators of 132 operational						
Residential	94	136	729	0.258	0.373	0.083
Educational	121	153	1103	0.332	0.419	0.126
Industrial	106	134	665	0.290	0.367	0.076
Recreational	1	5	507	0.003	0.014	0.058
Medical	0	0	237	0.000	0.000	0.027

TABLE 37: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E2						
Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂
Scenario E2 - 1 feeder outage - 133 generators of 262 operational						
Residential	69	119	726	0.189	0.326	0.083
Educational	132	161	1149	0.362	0.441	0.131
Industrial	99	138	677	0.271	0.378	0.077
Recreational	1	5	517	0.003	0.014	0.059
Medical	0	1	238	0.000	0.003	0.027
Scenario E2 - 2 feeder outage - 262 generators of 262 operational						
Residential	130	159	1353	0.356	0.436	0.154
Educational	166	179	1952	0.455	0.490	0.223
Industrial	143	164	1080	0.392	0.449	0.123
Recreational	7	38	737	0.019	0.104	0.084
Medical	1	7	406	0.003	0.019	0.046



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Scenario E2 - 3 feeder outage - 262 generators of 262 operational						
Residential	130	159	1353	0.356	0.436	0.154
Educational	166	179	1952	0.455	0.490	0.223
Industrial	143	164	1080	0.392	0.449	0.123
Recreational	7	38	737	0.019	0.104	0.084
Medical	1	7	406	0.003	0.019	0.046

TABLE 38: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E3

Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM₁₀	24-hour PM_{2.5}	1-hour NO₂	24-hour PM₁₀	24-hour PM_{2.5}	1-hour NO₂
Scenario E3 - 1 feeder outage - 133 generators of 392 operational						
Residential	67	132	718	0.184	0.362	0.082
Educational	148	182	993	0.405	0.499	0.113
Industrial	148	173	654	0.405	0.474	0.075
Recreational	1	4	497	0.003	0.011	0.057
Medical	0	0	241	0.000	0.000	0.028
Scenario E3 - 2 feeder outage - 326 generators of 392 operational						
Residential	151	177	1777	0.414	0.485	0.203
Educational	197	213	2416	0.540	0.584	0.276
Industrial	189	209	1468	0.518	0.573	0.168
Recreational	14	42	834	0.038	0.115	0.095
Medical	1	10	489	0.003	0.027	0.056
Scenario E3 - 3 feeder outage - 392 generators of 392 operational						
Residential	162	184	1827	0.444	0.504	0.220
Educational	202	216	2685	0.553	0.592	0.307
Industrial	196	211	1662	0.537	0.578	0.190
Recreational	21	51	914	0.058	0.140	0.104
Medical	1	16	566	0.003	0.044	0.065

TABLE 39: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E4

Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM₁₀	24-hour PM_{2.5}	1-hour NO₂	24-hour PM₁₀	24-hour PM_{2.5}	1-hour NO₂
Scenario E4 - 1 feeder outage - 199 generators of 520 operational						
Residential	102	144	1268	0.279	0.395	0.145
Educational	176	205	1478	0.482	0.562	0.169
Industrial	155	185	1084	0.425	0.507	0.124
Recreational	1	10	639	0.003	0.027	0.073
Medical	1	1	327	0.003	0.003	0.037
Scenario E4 - 2 feeder outage - 392 generators of 522 operational						
Residential	148	177	1907	0.405	0.485	0.218
Educational	212	227	2638	0.581	0.622	0.308
Industrial	189	216	1825	0.518	0.592	0.208
Recreational	21	49	932	0.058	0.134	0.106
Medical	1	14	555	0.003	0.038	0.063



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Scenario E4 - 3 feeder outage - 522 generators of 522 operational						
Residential	166	186	2097	0.455	0.510	0.239
Educational	217	235	3109	0.595	0.644	0.355
Industrial	204	223	2126	0.559	0.611	0.243
Recreational	39	69	1047	0.107	0.189	0.120
Medical	4	26	653	0.011	0.071	0.075

TABLE 40: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E5

Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂
Scenario E5 - 1 feeder outage - 199 generators of 684 operational						
Residential	116	157	1639	0.318	0.430	0.187
Educational	181	210	1679	0.496	0.575	0.192
Industrial	136	181	1591	0.373	0.496	0.182
Recreational	1	18	748	0.003	0.049	0.085
Medical	1	1	377	0.003	0.003	0.043
Scenario E5 - 2 feeder outage - 472 generators of 684 operational						
Residential	173	192	2537	0.474	0.526	0.290
Educational	219	233	3184	0.600	0.638	0.363
Industrial	194	221	2401	0.532	0.605	0.274
Recreational	44	77	1124	0.121	0.211	0.128
Medical	4	27	694	0.011	0.074	0.079
Scenario E5 - 3 feeder outage - 684 generators of 684 operational						
Residential	185	204	2737	0.507	0.559	0.312
Educational	228	240	3675	0.625	0.658	0.420
Industrial	211	224	2633	0.578	0.614	0.301
Recreational	64	94	1267	0.175	0.258	0.145
Medical	18	39	823	0.049	0.107	0.094

TABLE 41: NUMBER OF EXCEEDANCES AND PROBABILITY OF OCCURRENCE - SCENARIO E6

Receptor ID	Number of Additional Exceedances of the Criterion			Probability that an exceedance is predicted in one year		
	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂	24-hour PM ₁₀	24-hour PM _{2.5}	1-hour NO ₂
Scenario E6 - 1 feeder outage - 281 generators of 846 operational						
Residential	131	164	1728	0.359	0.449	0.197
Educational	192	216	1803	0.526	0.592	0.206
Industrial	154	184	1757	0.422	0.504	0.201
Recreational	5	25	790	0.014	0.068	0.090
Medical	1	2	424	0.003	0.005	0.048
Scenario E6 - 2 feeder outage - 554 generators of 846 operational						
Residential	169	190	2465	0.463	0.521	0.281
Educational	218	232	2992	0.597	0.636	0.342
Industrial	189	216	2356	0.518	0.592	0.269
Recreational	41	72	1094	0.112	0.197	0.125
Medical	3	23	670	0.008	0.063	0.076
Scenario E6 - 3 feeder outage - 846 generators of 846 operational						
Residential	185	204	2692	0.507	0.559	0.307
Educational	228	240	3313	0.625	0.658	0.378
Industrial	211	224	2656	0.578	0.614	0.303
Recreational	64	94	1261	0.175	0.258	0.144



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Medical	18	39	813	0.049	0.107	0.093
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Based on the worst-case standby generator operational scenario (Scenarios E1 to E6), a number of additional exceedances of the short-term air quality criteria for NO₂, PM₁₀ and PM_{2.5} are predicted, as presented in Tables 126 to 131 in the AQIA.

As noted in the AQIA, care must be taken when assessing 24-hour average impacts, as the actual duration of a power outage is likely to be much shorter than 24 hours. Therefore, the assessment should be considered highly conservative, as the operation of all backup generators for an entire 24-hour period has been modelled (which is extremely unlikely to occur).

Six scenarios have been assessed, assuming that up to 846 generators would be operational at any given time to provide critical IT load and sustained operations (at ultimate development). The predicted incremental concentrations under Scenarios E1 to E6 show exceedances of particulate matter (as PM₁₀ and PM_{2.5} and NO₂) at sensitive receptor locations if a power outage occurred, and the generators are operating at continuous 100% load.

An important aspect of the AQIA is the probability assessment which assesses the probability of an exceedance of the NO₂, PM₁₀ or PM_{2.5} criterion in any year of operation, considering a number of factors including the reliability of the electrical network. The probability assessment has been prepared using the latest information contained in the Endeavour Energy 2024 Distribution Annual Planning Report (DAPR) (Endeavour Energy, 2024). The DAPR concluded that the average unplanned outage duration per customer per year over a 10-year period from financial year 2013 (2013/14) to financial year 2023 (2023/24) was approximately 82.0 minutes, or 0.016% of the time per year.

The AQIA estimated the probability of 1, 2 or 3 feeders failing simultaneously leading to off-site impacts were calculated to occur once every 10,831 years, as an absolute maximum. To put the risk into perspective, the safety margin provided by three electricity feeders has been compared to industry-standard Safety Integrity Levels (SIL). The SIL for the proposal exceeds the levels required to demonstrate that the risk is 'as low as reasonably possible' (ALARP) by a significant margin.

The AQIA concluded that despite the predicted worst-case scenario exceedances of the relevant air quality criteria during emergency events, resulting from interruptions to the three feeders, the actual probability of the assessed scenarios transpiring is extremely low, and therefore the likelihood of the proposed development exceeding the relevant air quality criteria at nearby receivers is also extremely low.

The AQIA concluded that the potential air quality impacts of the proposal operation in emergency scenarios would be acceptable, based on the extremely low likelihood of all three feeders failing, subject to an ongoing monitoring and reporting regime, including ongoing testing of diesel generator emissions.

Scenario M1 to M6 Impacts

Annual average PM concentrations (as TSP, PM₁₀ and PM_{2.5}) resulting from maintenance scenarios are predicted to comply with the relevant impact assessment criteria, with no exceedances predicted.

Under the maintenance scenarios, no additional exceedances of the cumulative impact assessment criteria for 24-hour PM₁₀ and 24-hour PM_{2.5} are predicted as a result of the Proposal. While an exceedance of the 24-hour PM₁₀ and PM_{2.5} criteria is identified, these are attributable to elevated background concentrations that already exceed the respective criteria and are not related to emissions from the Proposal.

Predicted incremental and cumulative 1 (one) hour NO₂ concentrations remain below the relevant criteria at all considered receptor locations.



Predicted concentrations of CO, SO₂, PAHs, VOCs, and CH₂O across all assessed averaging periods are also below the relevant impact assessment criteria at all receptor locations under Scenarios M1 to M6.

Correspondingly, it is anticipated that during the operation of the testing schedule no significant air quality impacts are predicted to be experienced at sensitive receptors during routine operations.

Cumulative impacts

Cumulative impacts during the routine operation of the Proposal have been considered in a quantitative manner, taking account of the routine operation of surrounding data centres and including regional background concentrations (for PM and NO₂). The inclusion of surrounding data centres does not result in any cumulative exceedances of the air quality criteria during any of the maintenance scenarios assessed. Based on those findings, impacts associated with other pollutants are not anticipated to result in any significant cumulative impacts when considering surrounding data centre operations.

7.3.3 Management and/or Mitigation Measures

Construction Phase

A Construction Air Quality Management Plan (CAQMP) has been developed to support the proposal to minimise the risk of unacceptable air quality impacts during the construction phase. The CAQMP includes a range of mitigation measures to be employed, an air quality monitoring program, and a Trigger Action Response Plan (TARP) designed to minimise any off-site air quality impacts. The range of mitigation and management measures in the CAQMP includes:

- Monitoring and ceasing work during adverse meteorological conditions.
- Use of water sprays on stockpiles.
- Limiting vehicle speed limits to 15km/h.
- Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site.
- Minimise drop heights from truck dumping to 1.5 m.
- Implementation of track-out measures (e.g. wheel washing system) for trucks accessing the site
- Install hard-surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers, and regularly cleaned.

Key Performance Indicators for the construction of the proposal are provided as triggers in Table 7 of the CAQMP, including the established construction air quality levels for dust and PM. The construction activities on site would be constantly monitored, and should any triggers be reached, additional actions and mitigation measures would be taken.

Operation Phase

The AQIA concluded that, based on the results of the dispersion modelling assessment under Scenarios M1 to M6, the operation of the testing schedule will not cause exceedances at sensitive receptor locations surrounding the Proposal site. According to the assumptions in the AQIA, the Proposal's operation does not require any additional management strategies. The Proposal will be operated in accordance with the conditions of the proposed development consent and the EPL, subject to the approval of the development. The following operational phase air quality management strategies are recommended:

- Maintenance testing will be scheduled when nearby data centres are not conducting similar operations. This will require communication and coordination between data centre operators to minimise overlapping emissions.
- The testing will not occur during periods of high background air quality levels. Reference will be made to the NSW EPA webpage reporting the Air Quality Category (AQC) for St Marys AQMS on the day of planned maintenance to assess background conditions.
- Testing will also be prioritised outside of school hours, on weekends and during school holidays.

7.4 Traffic and Transport

A Transport Management and Accessibility Plan (TMAP) has been prepared by Ason and is included as **Appendix 10**. A preliminary Construction Traffic Management Plan (CTMP) and a preliminary Green Travel Plan (GTP) have also been prepared and are included as appendices to the Transport Management and Accessibility Plan. These plans have been prepared in accordance with the relevant TfNSW and Austroads guidelines.

7.4.1 Existing Environment

The site is primarily accessed via Bakers Lane, a single-lane-each-way local road running east-west that provides access to rural residential properties, schools, and a retirement village. In the vicinity of the site, between Bakers Lane and Darrabarra Avenue, Mamre Road operates as a two-lane, two-way major north-south arterial road linking the Great Western Highway to the M4 Motorway and Elizabeth Drive. The three key signalised intersections serving the area are:

- Mamre Road/Bakers Lane (upgraded mid-2023);
- Mamre Road/Darrabarra Avenue (constructed late-2024); and
- Mamre Road/Abbotts Road (currently being upgraded with signalisation works underway as of September 2025).

Darrabarra Avenue, another east-west road, currently serves the Aspect Industrial Estate and is planned to function as a four (4) lane collector road connecting to the future Berriwerri Drive as part of the broader MRP network. The surrounding area is undergoing significant transformation, with ongoing construction works associated with the progressive delivery of Mamre Road Precinct infrastructure to support the region's industrial development.

7.4.2 Assessment of Impacts

Operational Access

Once operational, all traffic will access the Mamre Road Data Centre Campus via a new four (4) leg roundabout on Berriwerri Drive, which will be constructed and dedicated to Council as part of the MRP Road Network.

The site will be split into Western and Eastern campuses (divided by Berriwerri Drive) with the following primary access points proposed in addition to emergency and egress points:

- **Western Campus:** Two (2) way access forming the direct western leg of the Berriwerri Drive/Local Road roundabout.
- **Eastern Campus:** Separate entry and exit access points from the east-west local industrial road.

The access design accommodates:

- **20m articulated vehicles (AV)** for right-in and right-out movements;
- **12.5m heavy rigid vehicles (HRV)** for right-in, left-out, and right-out movements; and



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- **30m a-double movements** at the western campus roundabout for safe turnaround within the publicly accessible area.

Both campuses include secure entry gates with queuing analysis showing adequate capacity. Public queuing areas comprise 90m queuing length across multiple lanes, accommodating approximately 13 cars without impacting on exit movements for the data centre campus.

Operational Parking

In accordance with the MRP DCP 2021, the parking rates for industrial development is the greater of the following:

1. 1 space per 200m²; or
2. 1 space per 2 employees.

Applying the above is considered an overprovision noting that industrial land uses encompass a large variety of operations including traditional labour intense manufacturing to modern high-technology businesses. This is reflected in the variability in the nominal parking requirements under the MRP DCP 2021, varying between 550 parking spaces (under the employee rate) and 1,138 parking spaces (based on the floor space rate). In the case of data centres, it is argued that the resultant number of staff required for such operations is very low.

The MRP DCP 2021 floor space rate has thus been disregarded (relating to industry uses involving the production or storage of physical goods) to which the requirement based on the employee rate would be for 550 parking spaces. In response, provision for 619 parking spaces is provided and would nominally comply with this requirement.

To provide further validation of the parking supply with respect to the proposed floor space, a weighted average parking rate was established by benchmarking six (6) established data centres in Greater Sydney, as set out in **TABLE 42**.

TABLE 42: BENCHMARKED SITES - PARKING RATES				
Data Centre	Address	GFA (m ²)	Parking Spaces	Effective Parking Rate
CDC Eastern Creek Campus	17 Roberts Rd, Eastern Creek	44,330	90	1 space per 493m ²
AirTrunk SYD1	35 Huntingwood Dr, Huntingwood	28,530	50	1 space per 571m ²
SYD3 Equinix	47 Bourke Rd, Alexandria	18,063	60	1 space per 301m ²
NEXTDC Sydney (S1)	4 Eden Park Drive, Macquarie Park	10,391	24	1 space per 433m ²
NEXTDC Sydney (S2)	8 Giffnock Ave, Macquarie Park	15,726	28	1 space per 562m ²
NEXTDC Sydney (S3)	2 Broadcast Way, Artarmon	33,799	100	1 space per 571m ²
Weighted Average		150,839	352	1 space per 429m ²

Application of the weighted floor space based average parking rate (1 space per 429m²) to the proposal would equate to demand for 531 parking spaces, which would be amply accounted for against the provision of 619 parking spaces.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The proposal also includes a café, which is largely intended to service the campus, but will also be open to the general public. In ordinarily applying guideline parking rates to the café component, the Transport for NSW Guide to Transport Impact Assessments (GTIA) has been referenced in lieu of such rates being published in the MRP DCP 2021. For take-away food outlets that have on-site seating but without drive-through facilities, the applicable parking rates are either:

- 12 spaces per 100m² GFA; OR
- The greater of:
 - 1 space per five seats (both internal and external seating); OR
 - 1 space per two seats (internal seating).

For reference, the café contains approximately 400m² GFA and has a nominated seating capacity for 70 customers internally and 96 customers externally. Application of the seating-based rate yields a parking nominal parking requirement for 35 parking spaces while the floor space rate yields a requirement for 48 parking spaces. In response, a provision for 79 parking spaces has been proposed which can be accommodated 540 allocated for the sub parcels. These spaces are located within close proximity to the COSH building (containing the café) and include 33 customer parking spaces accessed securely (within the western campus) and 13 customer parking spaces accessible by the public (before the secure entry gates). This corresponds to a ratio of 75% internal customers vs 25% external customers and is considered an appropriate ratio given the café is largely intended to service a captive market.

The MRP DCP 2021 stipulates the following bicycle parking rates for the following uses:

- Bicycle Parking:
 - Industry: one (1) space per 1,000m² of gross floor area of industrial activities (over 2,000m² gross floor area).
 - Office: one (1) space per 600m² of gross floor area of office and retail space (over 1,200m² gross floor area).
- End of Trip Facilities
 - Industry: For industrial activities with a gross floor area over 4,000m², at least one (1) shower cubicle with ancillary change rooms.
 - Office: For ancillary office and retail space with a gross floor area over 2500m², at least one (1) shower cubicle with ancillary change rooms.

Application of these rates to the data hall (industry) and support space (office/café) components results in a nominal requirement for 284 bicycle spaces for the proposal. In response, the Mamre Road Data Centre Campus will include a consolidated bicycle end of trip facility that provides capacity for 30 bicycle spaces (vertical rails) and 44 locker spaces and shower/ change rooms. While this represents a nominal shortfall relative to the MRP DCP 2021 rates, the proposed arrangements are considered reasonable in light of the number of spaces supporting a cycling mode share of 5% as set out in the target mode shares set in the GTP. The provision reflects the realistic uptake of cycling transport (given the inherent catchment limitations of Kemps Creek) while providing a high level of amenity to encourage users to use this form of transport, where possible.

Operational Traffic Generation

The GTIA does not stipulate any trip rates for data centre land uses. As such, a benchmark exercise was undertaken in accordance with the GTIA to assess the trip generating potential of six (6) established data centres within Greater Sydney. Based on a 24-hour survey undertaken in May 2024, the benchmarked average site peaks for the data centres are set out below:

- AM Peak: 0.07 vehicle trips per hour / 100m² GFA
- PM Peak: 0.06 vehicle trips per hour / 100m² GFA
- Daily: 0.70 vehicle trips per day / 100m² GFA



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The benchmarked site trip rates for data centres are appreciably lower than guideline rates for other industry uses, including large-format warehousing under the GTIA. Notwithstanding, shift patterns were observed to vary across the survey data centres, including the number of shifts (two (2) versus three (3) changeovers) and timing across the 24-hour period. In this regard, a first principles assessment was also undertaken for the proposal, and a 24-hour profile of vehicle trips was established by scaling the arrival and departure profile to the daily trip generation rate set under the benchmarking study. That is, the total daily trip generation of the proposal would be consistent with the benchmark daily trip rate surveyed across the six (6) data centres in Greater Sydney, with the AM and PM site and network peak trips being uniquely associated with the proposal.

The resulting AM and PM trip generation and derivative trip rates for network and site peaks for the proposal have been adopted for modelling development volumes on the surrounding road network. This equates to:

Network peak - AM and PM trip generation volumes of 141 vehicle trips per hour, and 171 vehicle trips per hour for the network, and 167 vehicle trips per hour

Site peak - AM and PM trip generation volumes of 167 vehicle trips per hour and 174 vehicle trips per hour for the network and 167 vehicle trips per hour

For comparison, the traffic volumes under each rate have been contrasted with the default MRP trip rates (0.23/0.24) in **Figure 73**, affirming that the trip-generating potential for data centres is well below warehouse and industry uses.

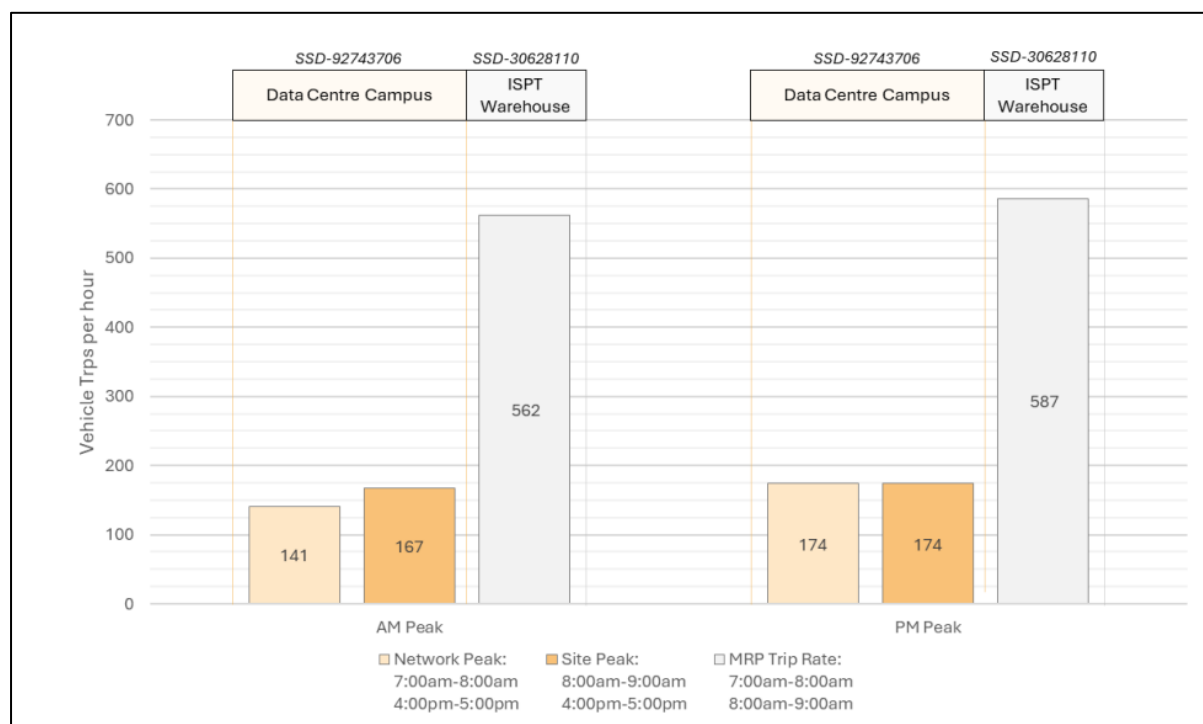


Figure 73. Trip Rate Comparison

Source: Ason Group, 2025

The future traffic flows on the surrounding road network have been assessed using SIDRA modelling. SIDRA modelling determines the average delay (AVD) that vehicles encounter, the degree of saturation (DOS) of the intersection and the Level of Service (LOS) of the intersection. The LOS criteria are as follows (for signalised intersections and roundabouts):

- **A:** Good operation;
- **B:** Good with acceptable delays and spare capacity;

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- **C:** Satisfactory;
- **D:** Operating near capacity;
- **E:** At capacity. At signals, incidents will cause excessive delays. Roundabouts will require other controls; and
- **F:** Extra capacity required.

Traffic modelling using SIDRA software was undertaken for the base year of 2025, along with future horizon years of 2027 (expected development opening year) and 2036 (10 years post-opening). The modelling was conducted for both the AM and PM weekday peak periods, which were determined based on the analysis of observed traffic survey data.

The base case and project case results for the opening year in 2031 are summarised in **TABLE 43** below.

TABLE 43: FUTURE INTERSECTION MODELLING CONDITIONS - OPENING YEAR (2031)							
Intersection	Configuration	Scenario	Period	DOS	AVD	95% Queue	LOS
Mamre Road / Bakers Lane	Signals	Base Case	AM	0.812	18.1	205	B
			PM	0.682	19.8	150	B
		Project Case	AM	0.836	18.9	238	B
			PM	0.781	19.3	202	B
Mamre Road / Darrabarra Avenue	Signals	Base Case	AM	0.616	20.6	181	B
			PM	0.704	22.8	227	B
		Project Case	AM	0.656	22.9	191	B
			PM	0.820	31.9	289	C
Mamre Road / Abbotts Road	Signals	Base Case	AM	0.532	17.0	108	B
			PM	0.504	12.3	85	A
		Project Case	AM	0.536	16.6	107	B
			PM	0.599	16.9	130	B
Darrabarra Avenue / Berriwerri Drive	Roundabout	Base Case	AM	0.021	10.9	1	A
			PM	0.035	9.9	1	A
		Project Case	AM	0.048	10.6	2	A
			PM	0.113	9.9	4	A
Berriwerri Road / Access Road	Roundabout	Base Case	AM	-	-	-	-
			PM	-	-	-	-
		Project Case	AM	0.022	11.9	1	A
			PM	0.012	11.9	1	A

The 2031 year of opening results that intersections will generally continue operating at acceptable levels (LOS A-C), with minimal delays caused by the addition of development volumes. A review of the detailed SIDRA output also indicates that no approaches for the study intersections have an LoS of F that would indicate capacity on that leg has been exceeded.

The base case and project case results for the future 2036 year are summarised in **TABLE 44** below.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 44: FUTURE INTERSECTION MODELLING CONDITIONS - PROJECT CASE (2036)

Intersection	Configuration	Scenario	Period	DOS	AVD	95% Queue	LOS
Mamre Road / Bakers Lane	Signals	Base Case	AM	0.836	18.9	236	B
			PM	0.779	19.5	201	B
		Project Case	AM	0.848	19.6	254	B
			PM	0.810	19.1	218	B
Mamre Road / Darrabarra Avenue	Signals	Base Case	AM	0.645	19.8	192	B
			PM	0.813	27.4	293	B
		Project Case	AM	0.656	22.9	191	B
			PM	0.851	33.0	328	C
Mamre Road / Abbotts Road	Signals	Base Case	AM	0.557	16.7	116	B
			PM	0.618	16.7	135	B
		Project Case	AM	0.536	16.6	107	B
			PM	0.630	16.7	141	B
Darrabarra Avenue / Berriwerri Drive	Roundabout	Base Case	AM	0.021	10.9	1	A
			PM	0.036	10.0	1	A
		Project Case	AM	0.048	10.6	2	A
			PM	0.113	9.9	4	A
Berriwerri Road / Access Road	Roundabout	Base Case	AM	-	-	-	-
			PM	-	-	-	-
		Project Case	AM	0.022	11.9	1	A
			PM	0.012	11.9	1	A

The 2036 future year results indicate that intersections will continue operating at acceptable levels with the LoS continuing to operate at a minimum Level of Service of C. A review of the detailed SIDRA output also indicates that no approaches for the study intersections have an LoS of F that would indicate capacity on that leg has been exceeded.

In summary, the proposal is found to have minor traffic impacts that can be readily accommodate without the need for additional upgrades over the planned Phase 1 improvements under the Mamre Road Stage 2 upgrade.

Construction Access

A preliminary Construction Traffic Management Plan (CTMP) has been prepared and is provided as an appendix to the TMAP.

The construction access strategy for the proposal has been designed in three (3) distinct phases to align with the staged development of the site. Construction vehicle routes are provided in **TABLE 45** below.



The proposed construction access arrangements have been developed to minimise impacts on the surrounding road network and will be implemented across three distinct phases:

TABLE 45: CONSTRUCTION ACCESS ARRANGEMENTS

Phase	Details
Phase 0	Access for early works construction (when construction volumes are very low) activities is expected to be via the South through the Yiribana Estate. In the unlikely scenario that this access is not available at the time of commencement of early works, access is proposed off Bakers Lane for a short period only for the purpose of establishing the temporary left-in-left-out access via Mamre Road. Upon completion of the temporary access via Mamre Road, the existing access on Bakers Lane will be removed.
Phase 1	The scope of the Phase 1 works includes the construction of the roundabout which provides the connection to Yiribana and Aspect Estates. The works associated with Phase 1 will access the Site via the temporary access via Mamre Road. Upon completion of Phase 1 works and with the assumption that appropriate connections will be provided by the neighbouring estates prior to the completion of Phase 1, the temporary access via Mamre Road will be removed and all subsequent construction vehicles will be required to access via the roundabout
Phase 2-7	upon completion of the roundabout, the construction vehicles will be required to access the Site via the roundabout and through the neighbouring estates.

The following vehicle movement patterns are proposed for each construction phase:

- Phase 0 – Access via Yiribana Estate
 - Arrival: Northbound or southbound on Mamre Road turning into AIE to the Site via internal roads
 - Departure: Towards AIE and turning left or right onto Mamre Road heading southbound or northbound
- Phase 1 – Temporary Access via Mamre Road
 - Arrival: Southbound on Mamre Road turning left into the Site
 - Departure: Turning left onto Mamre Road heading southbound
- Phase 2-7 Roundabout connecting to Aspect Industrial Estate (AIE)
 - Arrival: Northbound or southbound on Mamre Road turning into AIE to the Site via internal roads
 - Departure: Towards AIE and turning left or right onto Mamre Road heading southbound or northbound

Construction vehicle routes are illustrated in **Figure 74**. It is noted that construction vehicles are prohibited from using Bakers Lane for site access or egress at any time. Approved route maps will be distributed to all drivers as part of mandatory site induction procedures.

The largest vehicles anticipated to access the subject site are 20-metre articulated vehicles and 19.6-metre truck and dog combinations. Should oversize or over-mass vehicles be required, appropriate permits will be obtained from Transport for NSW and the National Heavy Vehicle Regulator prior to mobilisation. This CTMP addresses standard construction vehicles only; separate applications will be submitted if oversize vehicle access is required

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

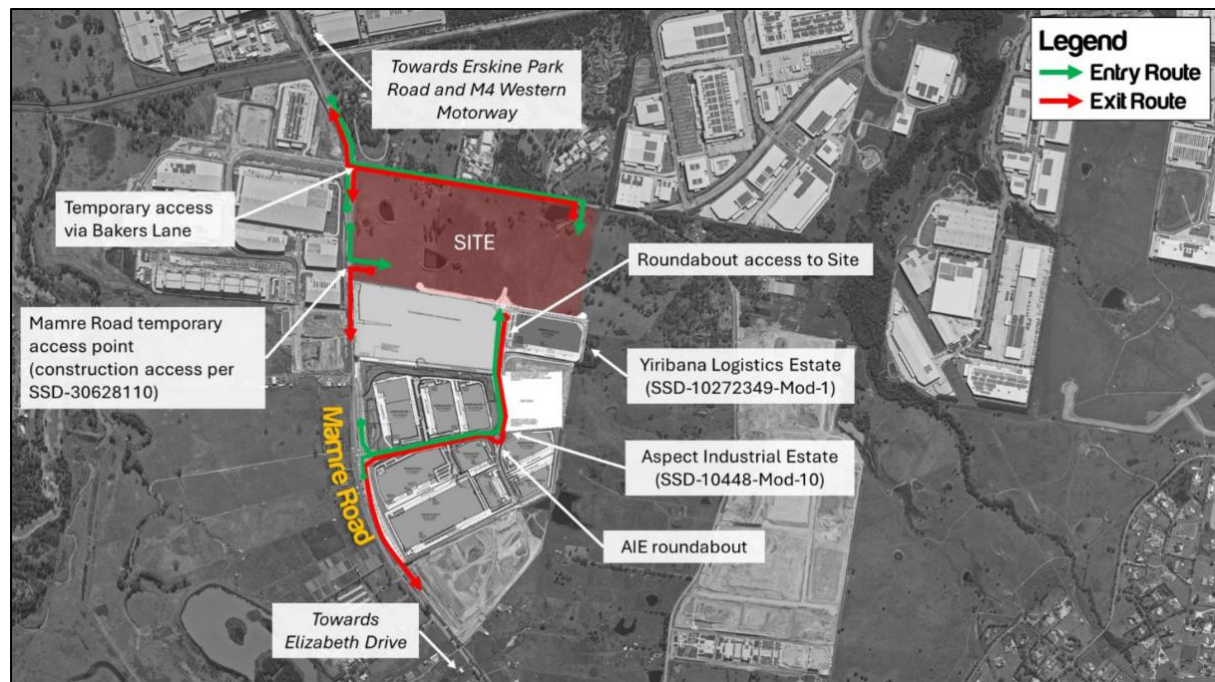


Figure 74. Construction Vehicle Routes

Source: Ason Group, 2025

All construction activities are planned to occur within standard construction hours to minimise disruption to the surrounding area. The standard construction hours are set out below:

- Monday to Friday (other than Public Holidays): 7:00am – 6:00pm
- Saturday: 8:00am – 1:00pm
- Sunday & Public Holidays: No works to be undertaken

Construction Traffic

Traffic generation thresholds have been established for each construction phase to ensure impacts on the surrounding road network remain manageable and is provided in **TABLE 46**.

TABLE 46. TRAFFIC GENERATION THRESHOLDS				
Phase	Access Location	AM Peak Hour (7:45am - 8:45am)	M Peak Hour (2:45pm - 3:45pm)	Reference/Justification
Early Works	Bakers Lane	Two (2) heavy vehicle trips per hour (in and out combined)	Two (2) heavy vehicle trips per hour (in and out combined)	Based on Preliminary CTMP traffic survey prepared for SSD-30628110 on the site. Conservative limits due to school zone on Bakers Lane and limited capacity. Access only until Mamre Road temporary access constructed.
Phase 1	Temporary Mamre Road access.	30 heavy vehicle trips per hour (in and out combined)	30 heavy vehicle trips per hour (in and out combined)	Based on SIDRA modelling in Preliminary CTMP for SSD-30628110 on the site. Modelling demonstrates no impact on Mamre Road/Bakers Lane intersection operation.

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Phases 2-7	Roundabout connecting to Yiribana and Aspect Estates.	92 trips per hour	48 trips per hour	Based on Mamre Road Data Centre Campus Transport Management and Accessibility Plan (Appendix 10). One (1) truck equates to one (1) inbound plus one (1) outbound movement equates to two (2) trips. Construction traffic not expected to exceed operational peak hour traffic generation.
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Green Travel Plan

A preliminary GTP has been prepared by Ason and is included as part of the Transport Management and Accessibility Plan as **Appendix 10**. The GTP aims to address travel demand and outlines potential sustainable travel initiatives for the proposal. Given the site's current industrial and rural location, travel patterns are heavily car-dependent, with the majority of workers driving to the area according to 2016 Census data. The GTP aims to gradually shift this behaviour by setting a preliminary five (5) year target to reduce single-occupancy car travel, while increasing bus usage and introducing cycling and motorcycle usage.

The GTP outlines potential strategies that can be adopted in achieving future transport targets. There are a number of actions identified in the GTP which can be employed to encourage non-car modes of transport to and from the site. The plan identified that sustainable transport options will improve over time as the precinct develops, particularly with the future Sydney Metro – Western Sydney Airport Line (Luddenham Station approximately 4km away) and extended bus services such as the 779 route now connecting to St Mary's station. The GTP would contribute to a healthier and higher quality of life for building tenants, staff and visitors whilst reducing air and noise pollution.

7.5 Built Form and Urban Design

7.5.1 Design Quality

The proposed development comprises a range of key design moves planned campus designed to accommodate critical digital infrastructure while responding to its environmental and urban context.

The campus will include six parcels of four-storey data centre buildings, integrated with six technical office buildings and a dedicated campus office building, creating a cohesive and functional environment for high-performance operations.

Supporting infrastructure includes incoming and internal electrical substations, associated services, and comprehensive site preparation works such as earthworks, stormwater management, sewer connections, internal road networks, and landscaping. The design approach prioritises operational efficiency, scalability, and resilience, ensuring the campus can meet future technological demands while maintaining a strong commitment to sustainability and environmental stewardship.

Architectural principles focus on functional clarity, modularity, and adaptability, with building forms and materials selected to balance technical requirements with visual integration into the surrounding landscape. The proposal also incorporates strategies for stormwater management, energy efficiency, and biodiversity protection, aligning with planning objectives and best-practice guidelines for large-scale infrastructure developments.



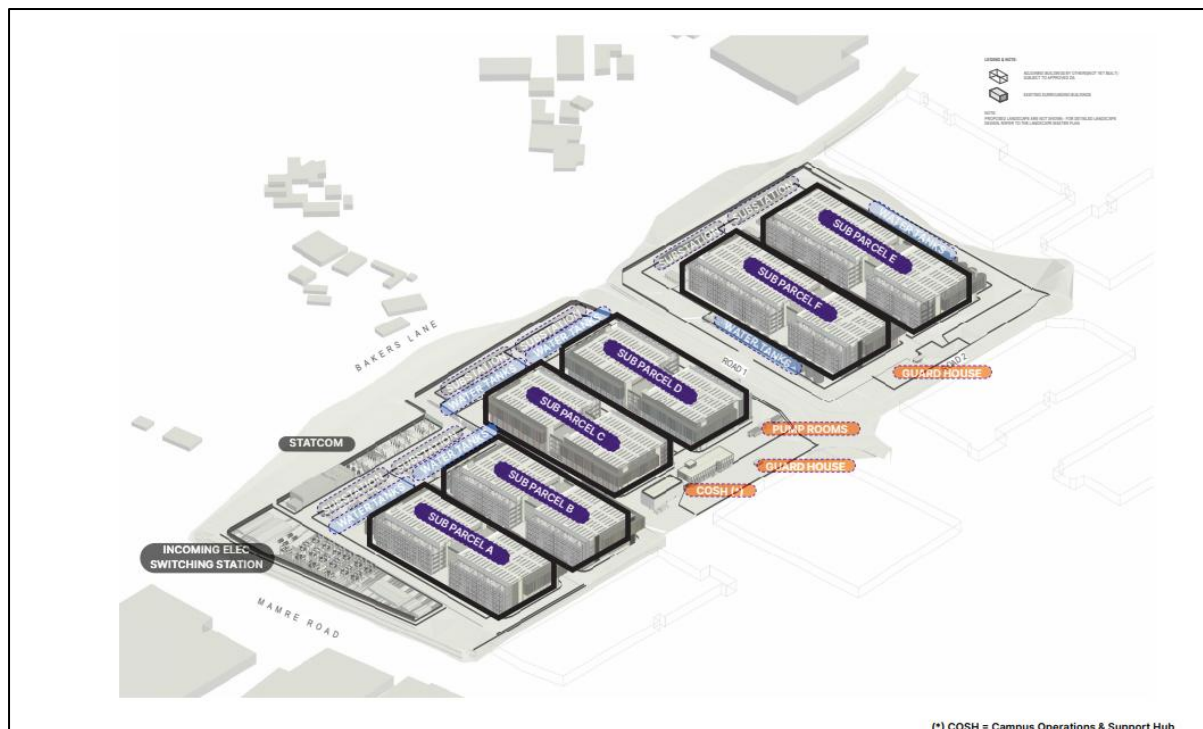


Figure 75: Campus sub parcel arrangement

Source: Greenbox, 2025

Consistency with MRP DCP 2021

A full and comprehensive assessment of MRP DCP is provided at **Appendix 33** which demonstrates general compliance with relevant controls. It is noted that pursuant to the MRP DCP that a maximum building height control of 20m applies to the site. The provisions of this control and justification for the exceedance based on the 40m high buildings (53.5m from the lowest point of the existing ground level) is provided below.

TABLE 47: SECTION 4.21 OBJECTIVES - MRP DCP

Objective	Response
a) To encourage building form that responds to the topography of the site and the relative position of the allotment to other allotments and the street.	The site, as it presently exists, is constrained in terms of topography due to the level difference from east to west. To accommodate development for data storage purposes or general industrial use as per the zone objectives and permissible development typologies, it is required to substantially cut and fill throughout the site to create a suitable platform for development, which is proposed under this application. The built form proposed will be constructed on building pads that afford an elevated position in relation to Mamre Road and the future SLR. Given the topographic constraints of the site, the proposal is considered to respond appropriately to surrounding allotments and public roads, as the built form transitions from east to west.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 47: SECTION 4.21 OBJECTIVES - MRP DCP

Objective	Response
b) To ensure a scale of buildings which minimises the impact of development on adjoining residential areas, including views.	The proposed buildings, despite being 40m in height from the finished pad levels, will have minimal impact on views from residential areas. Namely Twin Creeks, Mount Vernon and Erskine Park residential result in minor impacts. A combination of existing vegetation, built form and substantial distances of more than 4km will make the scale indescribable as compared to other industrial developments, such as the approved and constructed Snack Brands high-bay warehouse located at 585 Mamre Road which affords a height of 37m.
c) To retain views to and from key public spaces, low-lying rural landscapes, native vegetation and riparian lands	Key public spaces: There are presently no key public spaces within the MRP. It is noted on the western side of the precinct, however there is land zoned RE1 public recreation that will be dedicated to Penrith City Council in the future. Any views afforded from this area will be altered due to existing and planned future industrial development, dense landscaping and the future Stage 2 Mamre Road upgrade. The proposal is therefore not considered to unduly impact any views from key public spaces. Low lying rural landscapes: Low lying rural landscaping exists within the Luddenham area to the west and to the south. Due to the distance from these areas, coupled with the transitioning nature of the MRP comprising a range of industrial building typologies, there is considered to be no undue impact. Native vegetation and riparian lands: Native vegetation and riparian areas exist throughout the MRP, however the views to and from these areas would generally remain the same as a compliant development.
d) To minimise the impact of buildings upon the surrounding public realm, including areas of environmental significance, landscape value and residential uses.	The proposal does not adversely impact on the public realm due to the substantial building setbacks achieved to the future SLR to be delivered by TfNSW and Mamre Road and zoned RE1 public recreation land. Setback distances to the future SLR range between 100m to 199m to the main data centre buildings, while the setback to Mamre Road is up to 116m. Areas of environmental significance, being South Creek and Ropes Creek are in excess of 1.2km from the site boundaries. Setbacks, combined with existing and future built form, established and proposed landscaping ameliorate the impact of the proposed built form despite the exceedance of the 20m limit and create a desirable precedent for future development.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Consistency with controls

The proposal is consistent with the controls of section 4.2.1 as addressed below:

Table 48: SECTION 4.21 MRP DCP CONTROLS	
Objective	Response
1. Building height should respond to the natural landscape and scale of adjoining development, with lower elements towards the street, pedestrian paths, adjoining rural residential areas, environmental and open space areas, riparian corridors and ridgelines	The proposal provides a generally uniform height across the site due to the extensive benching required. In lieu of providing stepped building elements, it is proposed to substantially setback buildings from the northern boundary of up to 199m and 116m to the western boundary.
2. Buildings should not exceed a maximum height of 16m from the existing ground level within 250m of a rural-residential zone. For all other sites, a maximum building height of 20m from existing ground level is permitted.	The site is not located within 250m of a rural-residential zone.
3. Should the nature of the business require that part of the building exceeds the 20m building height control (e.g. high bay warehouses), the proponent must demonstrate that the taller element will not create unacceptable solar, wind and visual impacts to surrounding sensitive uses or impact on the environmental and open space lands or the public domain.	The proposal will not create unacceptable impacts as follows: ▪ Solar – as per the diagrams provided in Appendix 4 compliance is generally achieved. ▪ Wind – there are no known adverse impacts. ▪ Visual – as stated, the setbacks provided, landscape zones and location of ancillary infrastructure and buildings suitably mitigates impacts.
4. Taller building elements over 15m should be set back from the street frontage.	All buildings are setback more than 15m.
5. Building height must ensure direct solar access to public domain, including street trees and footpaths, open space and environmental areas, between the hours of 11:00am and 2:00pm at the winter solstice, 21 June. Shadow diagrams must demonstrate this outcome.	Solar access is maintained to public domain areas including street trees, footpaths, open space areas and environmental areas between 1:00 am to 2:00 pm in mid-winter. Shadow diagrams are provided in Appendix 4 .
6. Building services located on the roof (such as HVAC, lift motor room, exhaust fans, etc) must be accommodated within the maximum permissible height of the building and away from the street frontage or sensitive interfaces where possible.	This control is not considered relevant as it relates to warehousing rather than development for a data centre. It is noted that the location of plant and equipment for the proposal provides optimal efficiency to operate the data centre buildings in terms of power consumption and cooling.
7. A Visual Impact Assessment is to be submitted with development applications demonstrating that development will not have a significant adverse impact on the scenic quality of:	A VIA has been prepared and is addressed in detail in this EIS (refer Section 7.6) which demonstrates the degree of impact is acceptable.



Table 48: SECTION 4.21 MRP DCP CONTROLS

Objective	Response
- The Precinct, particularly when viewed from elevated locations and view lines identified in Figure 10; Wianamatta-South Creek; and Adjoining rural-residential areas	
8. Buildings should be sited on mid-slope to minimise visual impact on ridges and to be in harmony with the existing landscape. Where possible, buildings should be designed to "step" physically up or down the site in keeping with the existing topography.	Due to the nature of data centre operations, it is not possible to step the buildings, however, to compensate for this, extensive setbacks are provided, up to 199m to the northern boundary and 116m to the west. Compared to a scenario where the building complies with only the minimum 20m, the subject proposal provides a far superior outcome in terms of visual perception, as shown below in Figure 76 and Figure 77 .

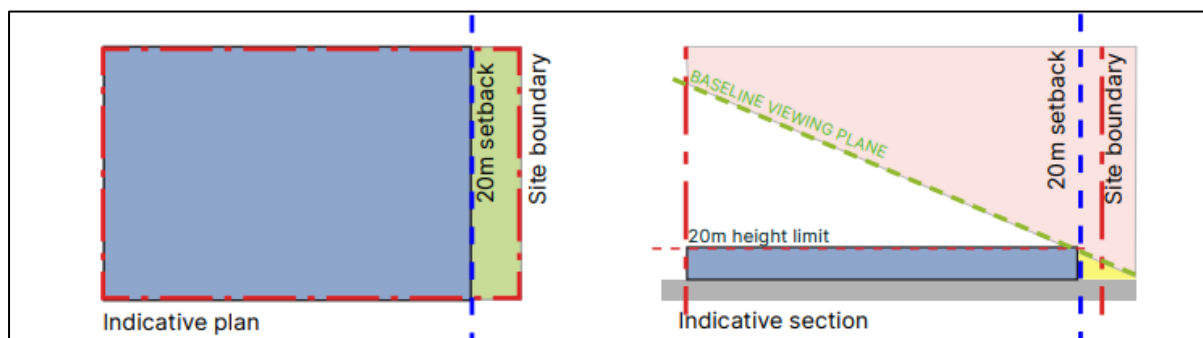


Figure 76: Minimum Compliant Setback Scenario

Source: Greenbox, 2025

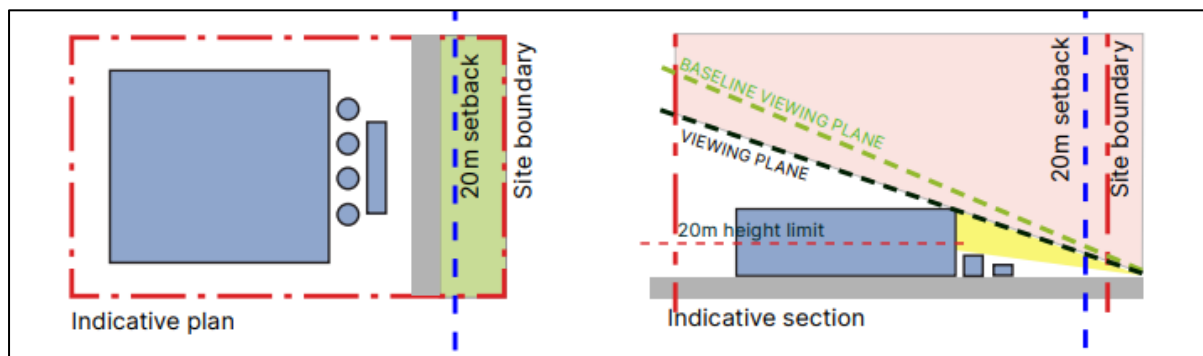


Figure 77: Proposed Setback Scenario

Source: Greenbox, 2025

7.5.2 Design Option Analysis

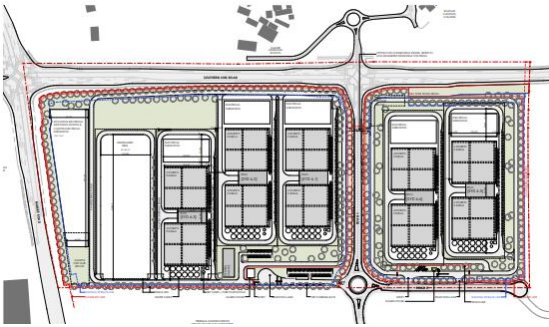
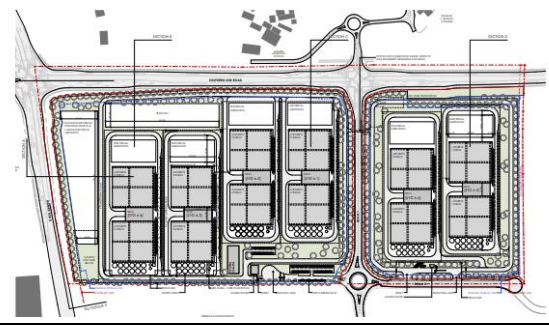
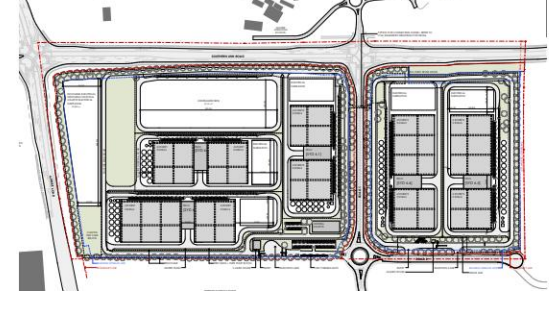
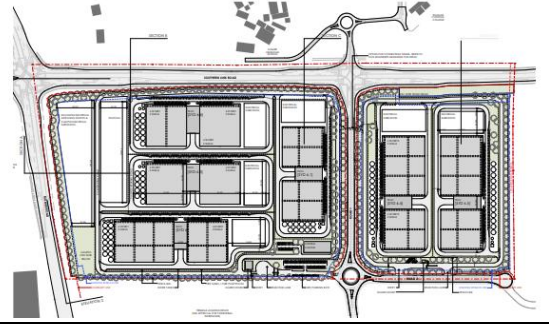
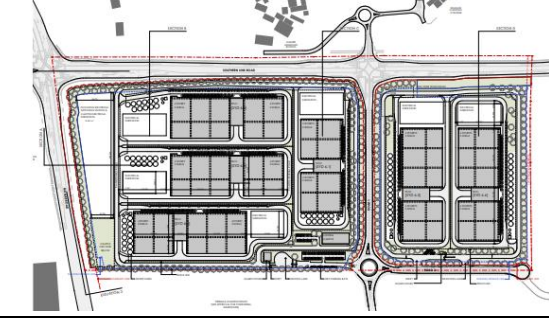
A total of five options were explored in the design development process prior to submission of this proposal. All options are summarised as follows:

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 49: OPTIONS ASSESSMENT

Architectural Scheme	Response
	<u>Option 1</u> Advantages: compact footprint, efficient core services. Disadvantages: limited flexibility for staged expansion.
	<u>Option 2 (selected)</u> Advantages: improved resilience and reliability. Disadvantages: increased complexity in site circulation and infrastructure routing.
	<u>Option 3</u> Advantages: good access service corridors, moderate land use Disadvantages: required careful coordination for infrastructure distribution.
	<u>Option 4</u> Advantages: centralised infrastructure with improved flexibility. Disadvantages: staging complexity for future phases.
	<u>Option 5</u> Advantages: high capacity for future growth and scalability. Disadvantages: greater initial land take and higher infrastructure cost.

7.5.3 Better Placed

The proposal achieves good design in accordance with the seven (7) objectives for good design in *Better Placed*, as addressed below and documented in the Design Report prepared by Greenbox Architecture at **Appendix 5** of this EIS.

Objective 1 - Better Fit - Contextual, local and of its place

The proposal aligns with the Better Placed Policy under the 'Better fit' objective, as it presents a unique opportunity to deliver a high-quality data centre within the MRP, an area designated for significant industrial uses and large-scale development. The proposal represents a logical and appropriate outcome that will generate employment opportunities and support economic growth. It is consistent with key strategic and statutory planning frameworks, responding sensitively to its location, context, and social setting. Through considered design strategies, the proposed development integrates with its surroundings, addresses potential impacts on nearby transitioning sensitive land uses, and contributes positively to the evolving local character and emerging data centre landscape in NSW.

Objective 2 - Better Performance - Sustainable, adaptable and durable

The proposal focuses on 'Better performance' through sustainability, adaptability, and durability, ensuring long-term resilience and minimal environmental impact. The design integrates eco-friendly materials and energy-efficient systems to reduce the proposal's environmental footprint and support future generations. Designed for flexibility, the proposed development can evolve with changing technologies, market demands, and environmental conditions, ensuring it remains relevant and functional over time. The proposal uses high-quality, robust materials that reduce the need for repairs and maintenance, offering lasting performance and reliability. The proposal will incorporate several Ecologically Sustainable Development (ESD) principles, as detailed within **Section 7.13** of this EIS.

Objective 3 - Better for Community - Inclusive, connected and diverse

The proposal meets the Better Placed criteria by addressing technological needs, connectivity, and diversity. The proposed data centre is in major cloud availability zones and well-connected telecommunications infrastructure. This aids the increasing demand and adoption of cloud technology. The proposed development will generate high-skilled employment opportunities in the MRP and improve the day-to-day lives of the community, thereby strengthening the community's economic well-being.

Objective 4 - Better for People - Safe, comfortable and liveable

The proposal aligns with the Better Placed principles, particularly in relation to the 'Better for people' criteria. The design incorporates both safety and security features throughout the proposed development, with careful attention given to physical and passive surveillance, accessibility, and the design of the data centre. Acoustic screening is featured around the plant equipment on the roof to reduce and mitigate noise pollution and visual impact. Operating 24/7, the proposal ensures constant activity on-site, fostering a safe and secure environment. Landscaped setbacks and the street interface have been thoughtfully designed to activate the precinct and create pedestrian-friendly connections.

Objective 5 - Better Working - Functional, efficient and fit for purpose

The proposal aligns with the Better Placed principles in regard to the 'Better working' criteria. The proposed development promotes efficient use of the site and maximise the potential output of a hyperscale data centre. It is designed as a state-of-the-art data storage centre facility incorporating campus administration office space, staff canteens, large meeting rooms, data storage halls and plant and equipment areas. The building has been thoughtfully designed to align with the Better Working principles, prioritising efficiency, functionality, and fitness for purpose. The integration of a well-



designed data centre and carefully planned landscaped setbacks not only enhances operational performance but also ensures these spaces meet both current and future needs.

Objective 6 - Better Value - Creating and adding value

The proposed scheme aligns with the Better Placed principles in regards to the 'Better value'. Our society and economy have rapidly embraced digital technology, making data centres essential for modern life. From remote work and entertainment to streaming, social media, online banking, and e-commerce, these technologies rely on robust data centre infrastructure. The proposed development of a new data centre will:

- Provide a secure location for data storage
- within the area
- Increase the speed of digital access for data centre users in Sydney and across NSW
- Enhance support for local innovation and AI development, fostering economic growth and ensuring industry remains within Australia.

Objective 7 - Better Look and Feel

The proposal aligns with the Better Placed principles regarding the 'Better look and feel'. The proposal carefully balances both functionality and aesthetic appeal throughout the design process. It integrates seamlessly with its surrounding environment, blending into the urban context. The activation of the facade along Mamre Rd and Bakers Lane creates an engaging streetscape, enhancing the overall look and feel of the proposed development. Landscaped setback areas further enrich the public domain, adding to the visual appeal of the urban space. By incorporating attractive architectural forms, along with landscaped areas and green spaces, the design enhances the aesthetic quality of the environment, creating a more inviting and visually appealing atmosphere.

7.5.4 Connecting with Country

The Designing with Country process has been formally initiated in alignment with relevant statutory requirements and cultural heritage obligations. Specialist consultants have been appointed to undertake the required assessments and provide recommendations to inform the design and delivery of the proposed development.

While the proposed development is in a preliminary design stage and specific Country-led and collaborative design engagement with the First Nations community have not yet been undertaken, work with Yerrabingin has begun to surface key aspects specific to exploring a Place in Country contextual analysis that will shape the next phases. These insights will be progressively integrated as the design develops to ensure the proposed development reflects, respects, and responds to this Country, integrating the thoughts, ideas, and voices of the First Nations community through collaboration in the next stages. The proposed development's team is committed to embedding the outcomes of the Designing with Country engagement into future design development and decision-making.

This includes ensuring that guidance the First Nations community and Country informs project objectives, design principles, and implementation measures, in accordance with planning frameworks and cultural responsibilities.

7.5.5 Building Code of Australia

A BCA Design Compliance Report has been prepared by MBC Group for the proposal and is attached as **Appendix 7**. The BCA Design Compliance Report provides an assessment of the current design proposal against the Deemed-to-Satisfy (DtS) provisions of the BCA.



The BCA Design Compliance Report concludes that the proposal can readily achieve compliance with the BCA, subject to resolution of the matters identified in the report. This can be achieved by way of performance solutions or plan amendments prior to the Construction Certificate stage.

7.5.6 Accessibility

An Access Compliance Assessment Report has been prepared by MBC Group for the proposal and is attached as **Appendix 8**. The Access Compliance Assessment Report provides an assessment of the Deemed-to-Satisfy provisions of the BCA, and the *Australian Standards for Access and Mobility*

The Access Compliance Assessment Report concludes that the proposal is capable of complying with the relevant accessibility requirements, subject to detailed design. This can be achieved prior to the Construction Certificate stage.

7.6 Visual Impact

Geoscapes has prepared a Visual Impact Assessment (VIA) for the proposal, which is included in **Appendix 9**.

7.6.1 Existing Environment

The site is zoned IN1 General Industry and SP2 Infrastructure pursuant to the Industry and Employment SEPP. The surrounding context comprises a patchwork of developing industrial estates, educational facilities, and residual rural dwellings. Recent construction along Mamre Road, Aldington Road, and Abbotts Road has introduced large, rectilinear warehouse buildings that contrast with the remaining agricultural lands.

7.6.2 Assessment of Impacts

Geoscapes has provided a VIA of the proposed development from 17 viewpoints surrounding the site, as outlined below and in **Figure 78**.

- **VP1:** Mamre Road Approach from North, Orchard Hills
- **VP2:** Mamre Road & Bakers Lane Intersection, Kemps Creek
- **VP3:** Adjacent to 1 Bakers Lane, Kemps Creek
- **VP4:** Mamre Anglican School, Kemps Creek
- **VP5:** Trinity Catholic Primary School, Kemps Creek
- **VP6:** Emmaus Retirement Village, Kemps Creek
- **VP7:** Emmaus Catholic College, Kemps Creek
- **VP8:** Bakers Lane Approach from East, Kemps Creek
- **VP9:** 30-38 Mount Vernon Road, Mount Vernon
- **VP10:** Adjacent to 845 Mamre Road, Kemps Creek
- **VP11:** Mamre Road Approach from South, Kemps Creek
- **VP12:** Adjacent to 8 Medinah Avenue, Luddenham
- **VP13:** Elizabeth Drive, Badgery's Creek
- **VP14:** Luddenham Road, Orchard Hills
- **VP15:** Adjacent to 284 Aldington Road, Kemps Creek
- **VP16:** Aldington Road, Kemps Creek
- **VP17:** Opposite 1-17 Capitol Hill Drive, Mount Vernon

Collectively, the 17 viewpoints provide a balanced and representative cross-section of the visual envelope surrounding the site, covering a full spectrum of receptor sensitivities, distances and directions. The selection ensures that the assessment captures near-field and distant views, residential and public-domain contexts, and educational, community and heritage receptors, consistent with the SEARs and the objectives of this Landscape and Visual Impact Assessment.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus
706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

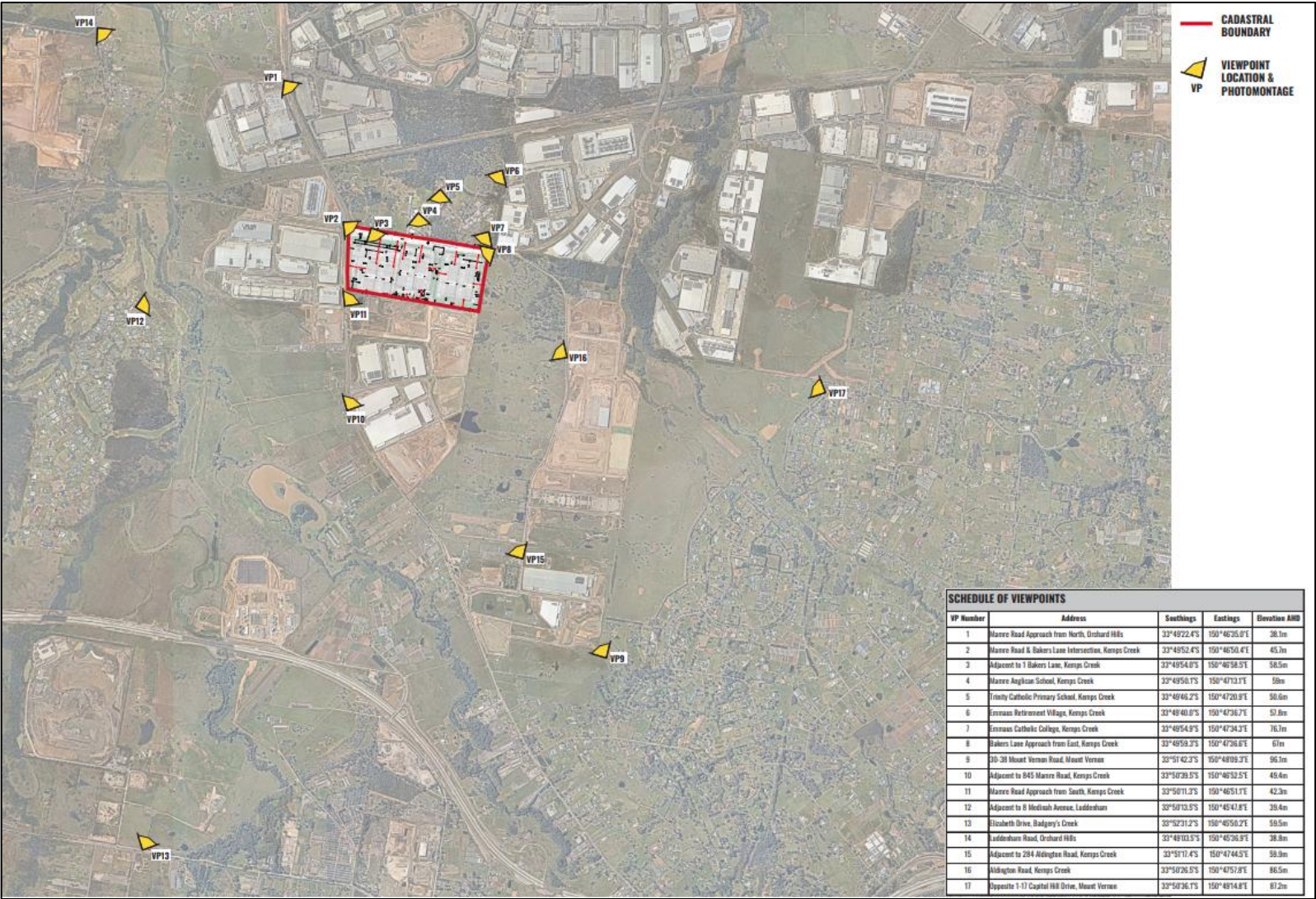


Figure 78: Visual Impact Assessment Viewpoint Locations

Source: Geoscapes, 2025

A summary of the analysis is provided below:

Northern Educational and Aged Care Receptors (VP4, VP5, VP6, VP7)

These viewpoints represent educational and aged-care receptors located north of the site along Bakers Lane. Viewing conditions vary considerably across these locations, ranging from heavily screened ground-level positions to elevated open outlooks.

Collectively, these viewpoints address the SEARs requirement to assess nearby educational and aged-care receivers north of Bakers Lane. They capture a representative range of viewing conditions from highly filtered and screened outlooks through to more open elevated vistas, thereby providing a comprehensive understanding of potential visual impacts on these sensitive receptor types.

TABLE 50 provides an assessment of the visual impacts from each viewpoint surrounding the site.

TABLE 50. NORTHERN EDUCATIONAL AND AGED CARE RECEPTORS			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP4: Mamre Anglican School, Kemps Creek - Looking South	Medium	Low	Minor
VP5: Trinity Catholic Primary School, Kemps Creek - Looking South	Medium	Negligible	Negligible/none
VP6: Emmaus Retirement Village, Kemps Creek - Looking Southwest	High	Low	Moderate/Minor
VP7: Emmaus Catholic College, Kemps Creek - Looking South and Southwest	High	Medium	Moderate

The magnitude of change for each viewpoint is shown in **Figure 79** below. Images on the left are pre-development scenarios, and images on the right are the ultimate development scenario, which incorporates the proposed landscaping.



Figure 79: Magnitude of Change for VP 4

Source: Geoscapes, 2025

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)



Figure 80. Magnitude of Change for VP 5

Source: Geoscapes, 2025



Figure 81. Magnitude of Change for VP 6

Source: Geoscapes, 2025



Figure 82. Magnitude of Change for VP 7

Source: Geoscapes, 2025

Road Corridor and Immediate Approach Route Receptors (VP1, VP2, VP8, VP10, VP11)

These viewpoints represent the key public-road corridors and approach routes where the proposal would be most readily experienced by road users within the surrounding network. They include direct interface locations along Bakers Lane and Mamre Road, where transient motorists and cyclists experience clear or partially filtered views toward the site.

Collectively, these locations illustrate typical visibility conditions experienced by transient road users travelling at moderate to high speeds. Views from these corridors would be experienced briefly as motorists pass the site, with visual exposure varying according to screening vegetation, road alignment



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

and viewing distance. These viewpoints respond to the SEARs requirement to assess views from Mamre Road and major approach routes, providing a representative assessment of visual impacts on transient receptors using the public road network.

TABLE 51 provides an assessment of the visual impacts from each viewpoint surrounding the site.

TABLE 51. ROAD CORRIDOR AND IMMEDIATE APPROACH ROUTE RECEPTORS			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP1: Mamre Road Approach from North, Orchard Hills - Looking Southeast	Low	Medium	Minor
VP2: Mamre Road & Bakers Lane Intersection, Kemps Creek - Looking Southeast	Medium	Medium	Moderate/ Minor
VP8: Bakers Lane Approach from East, Kemps Creek - Looking Southwest	Low	High	Moderate/ Minor
VP10: Adjacent to 845 Mamre Road, Kemps Creek - Looking Northeast	Low	Medium	Minor
VP11: Mamre Road Approach from South, Kemps Creek (Looking Northeast)	Low	Low	Minor Negligible

The magnitude of change for each viewpoint is shown in **Figure 83 – Figure 87** below. Images on the left are pre-development scenarios and images on the right are the ultimate development scenario which incorporates the proposed landscaping.



Figure 83. Magnitude of Change for VP 1

Source: Geoscapes, 2025



Figure 84. Magnitude of Change for VP 2



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Source: Geoscapes, 2025



Figure 85. Magnitude of Change for VP 8

Source: Geoscapes, 2025



Figure 86: Magnitude of Change for VP 10

Source: Geoscapes, 2025



Figure 87. Magnitude of Change for VP 11

Source: Geoscapes, 2025



Western, Northern and District-Scale Residential Receptors (VP3, VP9, VP12, VP14, VP17)

These viewpoints represent residential and semi-rural receptors within Mount Vernon, Luddenham and Orchard Hills, encompassing a range of viewing distances from immediate near-field proximity through to distant landscape outlooks.

From VP3, the proposal would be experienced at close range from a residential driveway directly adjoining the Site, representing the most immediate near-field outlook from private property north of



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Bakers Lane. From VP9, VP12, VP14 and VP17, the proposal would be perceived at progressively greater distances as a component within the broader landscape setting. Visibility from these more distant locations is typically filtered or substantially reduced by intervening vegetation, landform and built form.

Collectively, these viewpoints address the SEARs requirement to assess visual impacts on residential and semi-rural receptors within Luddenham, Mount Vernon and the surrounding locality, capturing representative viewing conditions from both immediate adjacencies and the wider residential catchment.

TABLE 52 provides an assessment of the visual impacts from each viewpoint surrounding the site.

TABLE 52. WESTERN, NORTHERN AND DISTRICT-SCALE RESIDENTIAL RECEPTORS			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP3: Adjacent to 1 Bakers Lane, Kemps Creek - Looking Southeast	Medium	High	Moderate
VP9: 30-38 Mount Vernon Road, Mount Vernon - Looking Northwest	Medium	Low	Minor
VP12: Adjacent to 8 Medinah Avenue, Luddenham - Looking East	Medium	Low	Minor
VP14: Luddenham Road, Orchard Hills - Looking Southeast	Medium	Medium	Moderate/ Minor
VP17: Opposite 1-17 Capitol Hill Drive, Mount Vernon - Looking West	High	Nil	None

The magnitude of change for each viewpoint is shown in **Figure 88 - Figure 92** below. Images on the left are pre-development scenarios and images on the right are the ultimate development scenario which incorporates the proposed landscaping.



Figure 88. Magnitude of Change for VP 3

Source: Geoscapes, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)



Figure 89. Magnitude of Change for VP 9

Source: Geoscapes, 2025



Figure 90. Magnitude of Change for VP 12

Source: Geoscapes, 2025



Figure 91. Magnitude of Change for VP 14

Source: Geoscapes, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)



Figure 92. Magnitude of Change for VP 17

Source: Geoscapes, 2025

Southern District-Scale Public-Domain Receptor (VP13)

This viewpoint provides a district-scale outlook from a major arterial corridor located south of the site. From this location, the proposal would be perceived at a considerable distance as a component within the broader landscape panorama. Views are experienced by transient motorists travelling along Elizabeth Drive at moderate to high speeds, with visual exposure limited to brief glimpses as vehicles pass. The proposal would be seen in the context of existing industrial and commercial built form, with visibility potentially filtered by intervening vegetation and topography, depending on seasonal conditions and atmospheric clarity.

This viewpoint addresses the SEARs requirement to assess visual impacts from major road corridors, providing a representative district-scale perspective on how the proposal would be experienced from the wider transport network south of the site.

TABLE 53 provides an assessment of the visual impacts from VP13 surrounding the site.

TABLE 53. SOUTHERN DISTRICT-SCALE PUBLIC-DOMAIN RECEPTOR			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP13: Elizabeth Drive, Badgery's Creek - Looking Northeast	Medium	Low	Minor

The magnitude of change for the viewpoint is shown in **Figure 93** below. The image on the left is the pre-development scenario and the image on the right is the ultimate development scenario which incorporates the proposed landscaping.



Figure 93. Magnitude of Change for VP 13

Source: Geoscapes, 2025



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Southeast and Eastern Industrial-Transition Receptors (VP15, VP16)

These viewpoints represent transitional areas along Aldington Road where existing rural land uses are progressively transitioning to industrial development. From these locations, the proposal would be experienced within an evolving industrial landscape context. Visibility is influenced by the local ridgeline topography and the presence of concurrent large-scale development, both of which substantially limit and fragment long-term views toward the site. As the area continues to develop in accordance with planning objectives for the Western Sydney Aerotropolis, intervening built form is anticipated to further screen or obscure views from these receptors.

These viewpoints illustrate the visual character of the emerging industrial interface along Aldington Road, demonstrating how topographic features and the ongoing transition from rural to industrial land uses combine to reduce visual exposure from this portion of the surrounding road network.

TABLE 54 provides an assessment of the visual impacts from each viewpoint surrounding the site.

TABLE 54. SOUTHEAST AND EASTERN INDUSTRIAL-TRANSITION RECEPTORS			
Viewpoint Location	Visual Receptor Sensitivity	Magnitude of Change	Significance of Visual Impact
VP15: Adjacent to 284 Aldington Road, Kemps Creek - Looking Northeast	Medium	Low	Minor
VP16: Aldington Road, Kemps Creek - Looking West	Low	Nil	None

The magnitude of change for each viewpoint is shown in **Figure 94** and **Figure 95** below. Images on the left are pre-development scenarios and images on the right are the ultimate development scenario which incorporates the proposed landscaping.



Figure 94. Magnitude of Change for VP 15

Source: Geoscapes, 2025



Figure 95. Magnitude of Change for VP 16

Source: Geoscapes, 2025

Overall, the assessment found that 11 of 17 viewpoints would experience negligible to minor visual impacts, with four viewpoints experiencing moderate/minor impacts primarily affecting transient road users and one elevated educational receptor. Two viewpoints recorded moderate impacts, comprising an immediate near-field residential adjacency at VP3 and an elevated aged care outlook at VP6.

Proposed landscaping has been incorporated across all visual assessments to reduce the magnitude of change. Overall, visual impacts range from negligible to moderate, with the highest impacts limited to immediate near-field adjacencies. The majority of receptors, including distant residential and district-scale public domain viewpoints, experience minor or negligible visual change, consistent with the evolving industrial character of the MRP.

7.7 Hazards and Risk

A Preliminary Risk and Hazard Analysis (PRHA) has been prepared in support of the proposal and is provided at **Appendix 22**. The PRHA comprises a preliminary risk screening and preliminary hazard analysis. The Preliminary Risk Screening identifies classes and quantities of all dangerous goods to be used, stored or produced on site, while the Preliminary Hazard Analysis provides a comprehensive qualitative risk assessment of all identified hazards associated with these materials. The Preliminary Hazard Analysis has been completed in accordance with the Resilience and Hazards SEPP and *Applying SEPP 33 - Hazardous and Offensive Development Application Guidelines* (SEPP 33).

7.7.1 Assessment of Impacts

The PRHA identified three (3) primary categories of hazardous materials proposed for the storage on site and is provided in **TABLE 55**.

TABLE 55. OVERVIEW OF DANGEROUS GOOD		
Dangerous Good	Maximum Quantity	UN Classification
Diesel Fuel	18,056,000 L	Class C1 Combustible Liquid
Lithium-Ion Batteries	2,652,000 kg	Class 9 Miscellaneous Dangerous Goods
Transformer Oil	1,430,000 L	Class C2 Combustible Liquid

Diesel

Diesel fuel storage for the proposal comprises internal bulk storage tanks and associated day tanks. Bulk storage is located on the Ground Floor within dedicated tank rooms, with one (1) room per shell containing five (5) parallel-arranged tanks. Fuel from the bulk tanks is transferred via fixed pumping infrastructure to day tanks, which supply the generators during operation. The proposal includes 34-day tanks per shell distributed within the generator enclosures from Ground Floor to Level 4, noting



that minor variations occur in generator layouts between levels. The proposed distribution of diesel storage is set out in **TABLE 56**.

TABLE 56. DIESEL STORAGE			
Storage Location	Volume Unit	No. of Units	Total Volume
Bulk tanks	132,000 L	130	17,160,000 L
Day tanks	1,000 L	896	896,000 L

The proposed storage exceeds both the SafeWork NSW manifest threshold (100,000 L) and POEO Act Scheduled Activity threshold (2,000 tonnes), requiring SafeWork NSW notification and an EPL from NSW EPA which will be sought prior to construction.

Lithium Ion Battery

Battery storage totalling 2,652,000 kg is distributed across Power Train Units (PTUs) on generator gantries (30 per shell, 102,000 kg per shell) and in-rack batteries within data halls. All batteries will be UL 9540A tested, demonstrating no module-to-module fire propagation. Storage exceeds the SafeWork NSW manifest threshold (10,000 kg), requiring notification. The relevant aspects of the FM Global Property Loss Prevention Data Sheet 5-32 – Data Centres and Related Facilities have been considered. In particular, this standard has been considered to address the risk associated with the lithium-ion batteries with regard to the configuration of the batteries within the server racks and the performance of the automatic sprinkler system.

Transformer Oil

The proposal includes 24 high voltage transformers (132/33 kV) within external substations serving the six (6) data centre buildings. Transformers contain mineral oil for cooling and insulation purposes, with a total site inventory of approximately 1,430,000L. While transformer oil is classified as a Class C2 combustible liquid (flash point approximately 140°C) and is not subject to SEPP 33 dangerous goods thresholds, it is acknowledged that oil-filled transformers present fire hazards under fault conditions. All transformers will comply with AS 2067:2008 requirements, including individual bunding, blast walls between units, and appropriate separation distances.

Alternative Locations Considered

The proposed locations on site for the backup generators, their associated diesel fuel storage and the lithium-ion batteries forming part of the UPS system, has been developed by the stakeholder team to suit both the operational needs of the site and to result in the optimum safety profile for the site. A discussion on the locations and any alternative option is presented in **TABLE 57**.

TABLE 57. LOCATION FOR IDENTIFIED HAZARDS		
Hazard	Current Location	Typical Alternative Location
Back-up Generators	Backup generators are currently located on the generator gantries associated with each data centre building onsite. This is principally within the centre of the site, i.e. as far away from the property boundary is feasible. The structure supporting the generators is	As the generators require substantial airflow to correctly function (intake and cooling air, and exhaust), locating them completely inside of the building floor plate is not feasible without still providing ducted supply/exhaust air to the units. Other alternative locations such as completely on-grade would result in generators being located directly adjacent to the property boundary due to



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	four (4) hour concrete fire rated.	large spatial requirements to support all the generators on the same level.
Bulk Diesel Storage	The bulk diesel storage is proposed to be within each data centre building on ground floor, contained within a fire rated tank chamber ('room') complying with AS1940:2017. This is considered to be the optimal location on site with respect to adjacent sensitive receivers.	Alternative external bulk fuel tanks (i.e a tank farm), located closer to the site boundary and without the protection of a fire-rated room or an automatic sprinkler system. Whilst inground tanks ('buried') tanks is also an alternative option, this would result in major site excavation during installation and soil movements during construction and any associated future maintenance or repair.
Lithium-ion Batteries	The proposed LIBs onsite are located either within fire rated PTU enclosures on the gantries of the data centre buildings or within the data centre halls. In both locations the batteries are fire-separated from other battery installations and alternative hazards.	Alternative location for the LIB systems onsite would be outside of the building footprint in an external BESS 'farm' setup. This on-grade deployment would result in battery units being located directly adjacent to the property boundary due to large spatial requirements to support all the PTUS on the same level.

7.7.2 Infrastructure Requirements

An Infrastructure Delivery, Management and Staging Plan has been prepared in support of the proposal and is provided at **Appendix 21**. The Infrastructure Delivery, Management and Staging Plan outlines the sequential delivery of key enabling works, specifically focusing on earthworks, roadworks, sewer, water, and power infrastructure.

7.7.3 Existing Water Supply

Water

There are a number of water services in the vicinity of the site. There is a 100mm diameter ductile iron cement lined (DICL) main on the eastern side of Aldington Road, a 200mm diameter DICL main on the western side of Mamre Road, and a 300mm diameter DICL main located at the intersection of Baker Lane and Aldington Road.

Sewerage

There is no existing sewer infrastructure located at or adjacent to the site.

Electricity

There is an overhead power line (11kV and 240V) on the southern side of Bakers Lane reserve parallel to the site boundary, and multiple existing high voltage cables are located within Bakers Lane and Mamre Road.

7.7.4 Proposed Supply

Water



Local reticulation mains will be installed within the proposed road network. However, due to the large water needs of the data centre, an additional trunk supply main will need to be constructed to provide bulk water supply to the proposal. This is subject to Sydney Water approval, and at the time the report was written, the final route and size of this main had not yet been determined. The work will connect to the significant water trunk infrastructure currently in planning or under construction, including trunk supply mains along Mamre Road and Bakers Lane (this would be approved via a Section 73 Certificate and 138 Roads Act Approval). The trunk watermain installation along Bakers Lane and Mamre Road frontage is identified as part of Phase 1 works, as discussed in **Section 7.7.5** below.

Water Demand Scenarios

The water demand for cooling the data halls is entirely governed by the type of heat rejection technology adopted, which is in turn largely influenced by the availability of a secure water supply. Three operational scenarios have been assessed, reflecting different cooling strategies and their dependency on water availability:

The **'Dry' scenario** represents a zero-water approach where no water is available for heat rejection under any circumstances. In this scenario, water demand is limited solely to facility operations (amenities, landscape irrigation) and all heat rejection is managed through air-cooled chillers. This scenario requires no critical water storage or pumping infrastructure but represents the least energy-efficient and most operationally constrained option. This scenario would only occur if Sydney Water or other bulk water suppliers are unable to provide a secure water supply to the site.

The **'Minimum Water Use at Extreme Ambient Conditions' scenario** assumes minimal water use, where water is only utilised on extreme temperature days, hot days, or when power failure occurs for facility operations. Heat rejection continues to rely on air-cooled chillers (not water-based cooling). This represents the typical estimated water use for each data centre building, with peak demand of 10.3 ML in January and 22.4 ML average annual consumption. The sizing of water storage, pipework and pumping infrastructure would be based on the average rate of water flow to each piece of equipment.

The **'Wet' scenario** would utilise recycled water available on-site for heat rejection. Heat rejection systems and electrical systems are designed to operate with recycled water where available, with maintainable critical water storage, pumping and distribution infrastructure. This high-density cooling approach uses evaporative or water-cooled chillers and would result in water demand of 253.1 ML during peak month (January) and 2,261 ML average use over a year. This scenario will only be utilised if recycled water is available to site. It reduces energy use and GHG emissions, increases density and provides more effective land/site utilisation. 24 hours peak water storage is required.

The proposed heat rejection strategy for the Mamre Road Data Centre is Air Cooled Chillers.

Sewerage

Since there is no existing sewer infrastructure at the site, new sewer connections will be required. The proposed development will need to connect to Sydney Water's newly constructed infrastructure, specifically draining to pumping station 1221 and connecting to the trunk sewer gravity and rising mains within Mamre Road. This sewer connection work is scheduled for Phase 1 of the infrastructure staging and will link into the broader regional infrastructure that Sydney Water is building to service the Mamre Road Precinct, including the Advance Recycled Water Centre (ARWC).

Electricity

The proposal requires a new bulk power supply arrangement. TransGrid will provide bulk supply from the TransGrid West Zone Substation, with high voltage connections to be installed primarily within existing and proposed road corridors. Two (2) potential routes were investigated with a preferred now chosen. The TransGrid lead-in high voltage work is identified as a critical component of Phase 1



infrastructure delivery to service the site. Additionally, coordination with Endeavour Energy will be required for local HV network connection, substation, and feeder augmentation.

The delivery of the below proposed HV Connection will be primarily installed within existing and proposed road corridors. The proposed road corridor to the northeast of the site inside the existing Goodman site (Southern Link Road) has been extensively disturbed with previous earthworks as part of **SSD-7348**. In addition, electrical conduits have previously been laid through the portion of property within the Goodman site in the future Southern Link Road corridor and also within the property between the Goodman site and Bakers Lane.

7.7.5 Infrastructure Upgrade Works

Infrastructure delivery has been structured into seven (7) distinct phases, aligned with construction and commissioning phases of the data centre campus. The staging focuses on the progressive provision of essential infrastructure including earthworks, internal roadworks, and key utility services, as set out in **TABLE 58** below.

TABLE 58. INFRASTRUCTURE STAGING SUMMARY			
Phase	Key Focus	Main Deliverables	Indicative Timing
Phase 0 (Stage 1)	Bulk Earthworks & Temporary Access	Site establishment at the western portion of the site, cut/fill to finished levels, drainage basins, temporary access from Mamre Road, and early service corridors.	Year 0-2
Phase 1 (Stage 1)	Parcel A and associated works	Permanent access road connection to GPT development to the south, Emergency access to Bakers Lane TransGrid lead in high voltage, Trunk water main along Bakers Lane and Mamre Road frontage. Sewer connection, Initial Road connection to GPT.	Year 1-2
Phase 2, 3 & 4 (Stage 1)	Parcel B, C & D and associated works	Temporary Road along Road 1.	Years 2-6
Phase 5 (Stage 2)	Bulk Earthworks & Parcel E	Site establishment at the eastern portion of the site, cut/fill to finished levels, drainage basins, and access from Temporary Road 1. Services connection via cross connections across the future road 1 (north-south road).	Years 7-8
Phase 6 & 7 (Stage 2)	Parcel F and associated works	Permanent road access, Road 1 and 2 and roundabout. Sydney Water Channel, final services connection to Phase 3 and 4.	Years 8-10

Infrastructure staging will be closely coordinated with relevant authorities:

- Transport for NSW – for Mamre Road intersection and external roadworks.
- Sydney Water – for potable water and sewer connections, including Section 73 approval.
- Endeavour Energy – for local HV network connection, substation, and feeder augmentation.
- TransGrid – Bulk HV supply.
- Penrith City Council – for stormwater, drainage, and erosion control compliance.



7.8 Soils

An assessment of potential impacts on soil resources and riparian land on or near the site has been undertaken as part of the Acid Sulfate Soils Assessment (**Appendix 38**) prepared by JBS&G, an Earthworks Strategy Report (**Appendix 39**) prepared by AT&L Engineering and a Salinity Management Plan (**Appendix 40**) prepared by PSM.

7.8.1 Assessment of Impacts

Soil Erosion

While significant earthworks are expected across the site, with cuts up to 21m deep and fills up to 16m high, the overall impacts on soil resources are expected to be minimal. This is largely as a result of the implementation of appropriate erosion control measures during construction in addition to stormwater systems, surface gradients, and landscaping specifically designed to control surface flows and minimise erosion effects. Additionally, the vast majority of the site will be sealed hardstand, with appropriate surface runoff collection and disposal systems incorporated into the design. Refer to the Erosion and Sediment Control Plan prepared by AT&L Engineering and provided as **Appendix 41**.

Salinity

The soils on site are classified as "Non-saline" to "Slightly saline" (with four (4) samples classified as "non-saline" and two (2) as "slightly saline"), with soil electrical conductivity levels less than the upper limit of the "A2" exposure classification per Australian Standard AS3600-2018 "Concrete Structures."

Acid Sulfate Soils

There is a low risk of acid sulfate soils being present at the site, noting that the site is not located within the area covered by NSW Acid Sulfate Soil Risk Maps, sits at an elevation greater than 40m above sea level, is not situated in a coastal estuary setting, and has underlying geology consisting of Bringelly Shale rather than coastal estuary deposits. Based on these factors, it is concluded that management of potential acid sulfate soils is not necessary and no further consideration of this issue is required.

Earthworks

As discussed above, the site requires significant earthworks to accommodate the proposal. The western portion will generate approximately 77,200m³ of excess material that could be stockpiled or exported, while the eastern portion will produce approximately 257,900m³ requiring export.

The earthworks strategy integrates with multiple constraints including the future Southern Link Road to the north, Mamre Road upgrade to the west, and internal roads connecting to adjacent developments (Yiribana Logistics Estate, Gibb Group, and Frasers Property Industrial sites). External roadworks are designed to stringent guidelines for large vehicles and have been adopted as fixed constraints for position and levels.

As surrounding development are also large-scale industrial developments, property boundary interfaces typically create significant level differences, as each site's governing entry levels are set from different locations along the road network. Despite these challenges, the proposed strategy was developed through multiple design iterations to optimise integration while meeting the proposals operational requirements.

Retaining wall interfaces with the public domain have been minimised as much as possible, though complete elimination is not feasible given site constraints. The differing governing levels of surrounding sites make it impossible to eliminate retaining walls in some areas. Extensive retaining walls within and



surrounding the site are necessary to achieve level pads for each data centre parcel while balancing cut and fill volumes.

Alternative Options Considered

The bulk earthworks strategy and site grading has been developed in consideration of various site constraints and through design development and iteration with the proposed developments architect and other specialist consultants. An alternative option whereby the proposed bulk earthworks levels would be raised by 1 metre across the site has been considered in further detail. This alternative option would achieve close to a balance of cut to fill across the site. However, this option would also result in final building heights 1 metre higher than the adopted design strategy and would result in a greater length and area of retaining walls across the site. For these reasons, this alternative option is not preferred.

7.8.2 Management and/or Mitigation Measures

The Salinity Management Plan has been prepared to effectively manage site salinity, to minimise the effect of the proposal on the salinity processes and to protect the proposal from salinity damage. Mitigation measures regarding development components are provided below:

- (A) **Earthworks:** Grade all surfaces to prevent water ponding, establish vegetation cover on permanent batters, implement erosion and sediment control measures including fencing, traffic control, and stockpile protection.
- (B) **Soil Importation:** Highly saline or contaminated soils must not be imported to the site.
- (C) **Gardens and Landscaped Areas:** Select plant species suited to moderate salinity and clayey soils, use nutrient-rich non-saline topsoil, and minimize waterlogging through waterwise gardening practices, proper irrigation, and deep-rooted perennial species.
- (D) **Roads, Footpaths and Hardstand Areas:** Grade and maintain surfaces to prevent water ponding, design connections to restrict infiltration into underlying soils, install services at time of construction, and provide damp-proof course or membrane beneath slabs.
- (E) **Drainage:** Design stormwater and surface water systems to restrict infiltration and groundwater recharge, minimise disturbance to natural drainage patterns, minimise infrastructure leakage, and direct runoff around exposed surfaces and landscaped areas.
- (F) **Structural Durability:** Design concrete members using A2 exposure classification (AS3600:2018), concrete piles using mild classification, and steel piles using non-aggressive classification (AS2159:2009).

7.8.3 Water Management

A Water and Stormwater Management Plan has been prepared by AT&L Engineering and provided as **Appendix 37**. A Civil Infrastructure Report has been prepared by AT&L Engineering and provided as **Appendix 21**. A Geotechnical Assessment has been prepared by PSM and provided as **Appendix 18**.

7.8.4 Existing Environment

The site is subject to undulating terrain with elevations ranging from 42.5 m AHD to 85.5 m AHD and slopes ranging from 2% to 15%. There is one (1) mapped hydroline traversing the northeastern portion from southwest to northeast, and field validation of a first-order unnamed tributary of South Creek modified into farm dams connected by overland flow paths. The site comprises six (6) internal catchments totalling approximately 52 hectares and receives drainage from two (2) external catchments of approximately 17.1 hectares to the east, with existing drainage occurring through natural depressions and localised overland flow paths in the absence of formal trunk stormwater infrastructure.

The existing groundwater conditions across the site show water levels varying between RL 58.4m AHD and RL 67.7m AHD, with groundwater generally encountered within the bedrock units rather than in



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

the overlying soil layers. At monitoring location MW01, groundwater was measured at RL 67.7m AHD (15.5m below surface) within bedrock, while MW02 showed shallow groundwater at RL 58.4m AHD (1.2m below surface), which is influenced by the adjacent water dam. The newly installed monitoring wells BH101 and BH102 recorded groundwater at RL 60.3m AHD (15.2m below surface) and RL 67.7m AHD (10.6m below surface) respectively, both within bedrock units.

Mamre Road Precinct Stormwater Scheme Plan

The Mamre Road Precinct Stormwater Scheme Plan (SSP) presents indicative regional trunk drainage infrastructure proposed by Sydney Water in the Mamre Road Precinct (**Figure 96**)



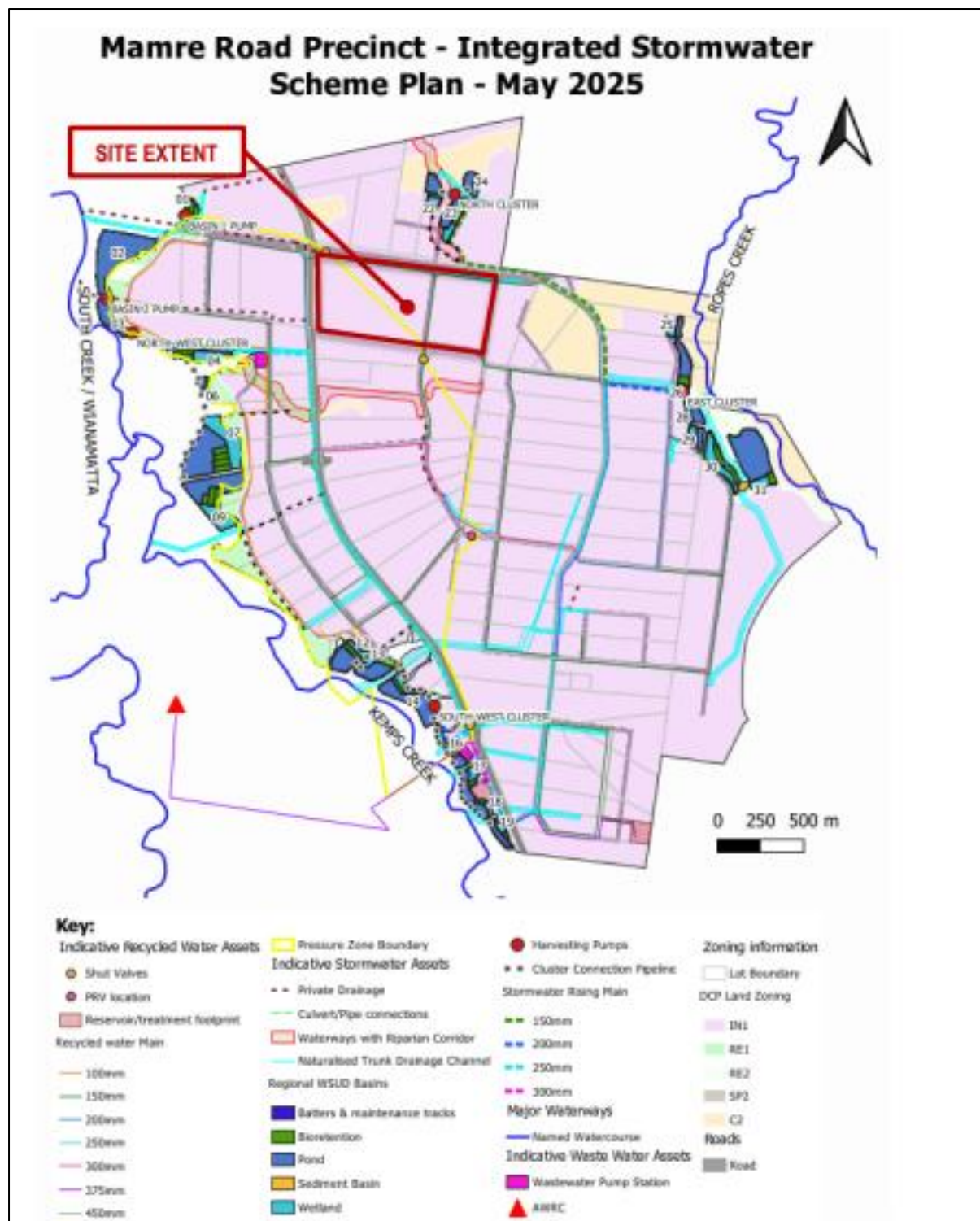


Figure 96. MRP Integrated Stormwater Plan

Source: Sydney Water, 2025

7.8.5 Assessment of Impacts

Connection to the Sydney Water Regional System

The Mamre Road Precinct SSP shows a naturalised channel along a portion of the northern boundary of the Site, nominally within the extent of proposed Parcels E and F. The proposed channel would have a variable width of between 15.5 metres and 19.5 metres and would drain from east to west towards the low point at Bakers Lane and ultimately through the unnamed tributary of South Creek. Further

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

design coordination will be required with Sydney Water and the developer of the adjacent Gibb Group Site to establish channel design parameters. In particular, hydrological and hydraulic modelling of channel flow will need to be undertaken to simulate post-development conditions for a range of design storm events, noting the proposed final landform and catchment delineation will be significantly different to the existing landform.

The water management strategy that will service the Mamre Road Data Centre Campus will be staged in line with the proposed development staging.

- Phases 1 to 4 inclusive will incorporate a series of interim stormwater management measures in advance of the delivery of and connection to Sydney Water's planned regional stormwater infrastructure. The stormwater management measures that are described herein refer to those that will service development of the site up to and including Phase 4.
- Development of the site beyond Phase 4 will rely on the delivery of and connection to Sydney Water's regional stormwater infrastructure.

Once the regional stormwater management infrastructure that forms part of the Mamre Road Precinct Stormwater Scheme Plan is in place, some of the interim measures that make up the stormwater management strategy within the Mamre Road Data Centre Campus will need to be decommissioned.

Water Demand

There are three (3) primary water demand categories for the proposal are set out below:

- Domestic water supply to meet demands typical of IN1 zoned land, including:
 - Amenities within the COSH Building (primarily kitchens and bathrooms).
 - Landscape irrigation.
- Mechanical water supply for cooling towers within the data centre parcels.
- Fire water supply to sprinklers and hydrants.

Water usage quantities are quantified based on the heat rejection strategy adopted.

Water Supply

Based on investigations and ongoing discussions with Sydney Water throughout design development for the Summit at Kemps Creek SSDA (**SSD-30628110**), it has been determined that connection to the Oakdale West potable water infrastructure would be utilised to provide water services to the site. As part of the Oakdale West Development, a Local Area Servicing Plan (LASP) was prepared and endorsed by Sydney Water that will provide additional trunk water infrastructure for the area. Included within these works is an extension of a 300mm diameter main from Lenore Drive through to Bakers Lane. Subject to Sydney Water approval and further modelling, it is proposed to extend this 300mm main along Bakers Lane to service the site. The main will be cross- connected to the existing water mains and connected to the existing two (2) x 150mm diameter main within Mamre Road. This main will be fully reimbursable, subject to Sydney Water approval.

A "third-pipe" reticulated recycled water network will supply non-potable water throughout the MRP. Non-potable water will be supplied from two (2) sources:

- Stormwater harvested within precinct-wide wetlands/ponds, to be delivered and operated by Sydney Water as part of a regional stormwater management scheme.
- Recycled water from the planned Upper South Creek Advanced Recycled Water Centre.



Sewage and Wastewater

Refer to **Section 7.21** for discussion regarding on-site sewerage management and wastewater. Refer to Appendix A of the Water and Stormwater Management Plan (**Appendix 37**) which includes a copy of the Feasibility Letter received from Sydney Water in May 2025.

On-Site Detention (OSD) Capacity

In advance of connection to the regional stormwater scheme infrastructure, the proposal incorporates two (2) OSD tanks designed to ensure post-development peak flow rates do not exceed pre-development rates for storm events between 50% AEP and 1% AEP. The OSD east tank within the proposal serves a 27.2 ha contributing catchment with a storage volume of 14,600m³, designed to receive peak 1% AEP inflows and restrict outflows. The OSD west tank within the proposal serves a 15.4 ha contributing catchment with a storage volume of 7,150m³, designed to receive peak 1% AEP inflows and to restrict outflows. It is also proposed that the OSD west tank is temporarily utilised to store stormwater for the irrigation of undeveloped areas on site. This interim measure helps reduce the total volume of water leaving the site by reusing some of it locally.

Surface and Groundwater Quantity Impacts

The proposal is expected to have low and temporary impacts on groundwater quantity. During construction, groundwater will likely be intersected in some areas due to the varied groundwater levels, while the final development level will be between RL 51.0m and RL 67.0m, meaning some excavations will occur below the water table. However, the volumes of groundwater encountered are expected to be low, and any water that is intercepted is expected to drain relatively quickly without requiring water licensing requirements, major pumping or dewatering systems.

The proposed stormwater drainage network within the Data Centre Campus has been designed to safely convey major and minor flows prior to discharging to neighbouring properties to the north of Bakers Lane and west of Mamre Road. The following criteria have been adopted for the proposed drainage system:

- Estate road stormwater drainage:
 - Major system (pit and pipe network, overland flow paths and channels): 1% AEP
 - Minor system (pit and pipe network): minimum 5% AEP and increased where required to address major system design requirements.
- Data Centre Campus stormwater drainage:
 - Major and minor system drainage: capture and convey peak flows up to and including the 1% AEP design storm event to ensure the safe operation of the Campus and to mitigate risks associated with local flooding within the site.

The post-development peak discharge rates will be maintained at or below pre-development rates for all assessed storm events and mean annual runoff volumes will remain below MRP DCP 2021 targets. Accordingly, the proposal will not adversely impact downstream flooding risk, channel stability or waterway geomorphic function, satisfying the stormwater quantity and runoff volume management objectives established in the MRP DCP 2021.

Surface and Groundwater Quality Impacts

A comprehensive stormwater treatment train is proposed to mitigate water quality impacts from the proposal:



- **Gross Pollutant Traps (GPTs):** positioned upstream of both discharge points to capture litter, debris, coarse sediment, oils and greases, with high-flow bypass set at the 4 EY (3-month ARI) peak flow rate.
- **On-Site Detention Tanks:** providing water quality treatment through settlement and pollutant uptake processes in addition to their primary flow attenuation function.
- **Interim Stormwater Retention with Treatment:** incorporating filtration and UV disinfection for water stored and reused through the irrigation system during Phases 1-4.

The Water and Stormwater Management Plan demonstrates this treatment train will achieve substantial pollutant load reductions:

- 97.2% reduction in total suspended solids
- 95.7% reduction in total phosphorus
- 92.7% reduction in total nitrogen
- 100% reduction in gross pollutants

These reductions result in residual pollutant loads well below the allowable thresholds established in the MRP DCP 2021, satisfying both Option 1 (annual load reduction) and Option 2 (allowable mean annual load) targets at both discharge points.

7.8.6 Management and/or Mitigation Measures

Water Use Minimisation

The following water use minimisation principles will apply to the proposal:

- Avoid using water where possible, such as sweeping hard surfaces instead of washing them.
- Reduce water use by installing water-efficient appliances and equipment (e.g., toilets, urinals, shower heads).
- Reuse water from manufacturing or cooling processes to toilet flushing, landscape irrigation and dust suppression.
- Implement best-practice cooling technologies, such as direct-to-chip cooling or immersion cooling.

7.9 Flooding

A Flood Impact and Risk Assessment has been prepared by AT&L in response to the SEARs, which is provided in **Appendix 20**.

7.9.1 Existing Environment

The site experiences shallow sheet flow flooding under existing conditions, with overland flows moving across the undeveloped land toward Mamre Road and Bakers Lane. TUFLOW modelling indicates this flooding is generally classified as H1 (low) hazard category for storm events up to and including the 0.2% AEP (1 in 500 year) event. The flooding is entirely from local catchment overland flows rather than mainstream waterway flooding. Importantly, the site is located outside the extent of mainstream flooding from both Kemps Creek and Wianamatta-South Creek and sits above the Probable Maximum Flood (PMF) level for these major waterways. The site is also positioned outside the flood planning area defined in the PLEP2010.

Under existing conditions, the site exhibits relatively low flood risk characteristics. The eastern portion of the site is more susceptible to inundation during extreme events, with the local catchment PMF potentially causing flooding from run-on from external catchments to the east. However, for more frequent events (5% AEP, 1% AEP, and 0.2% AEP), the flood depths remain shallow and hazard levels low. The flood behaviour is characterised by rapid response times typical of local catchment flooding,



with water flowing across the site's gradual topography before discharging toward existing road infrastructure. Recent developments in the surrounding area have altered local drainage patterns, though the site itself remains in its undeveloped state with natural surface characteristics.

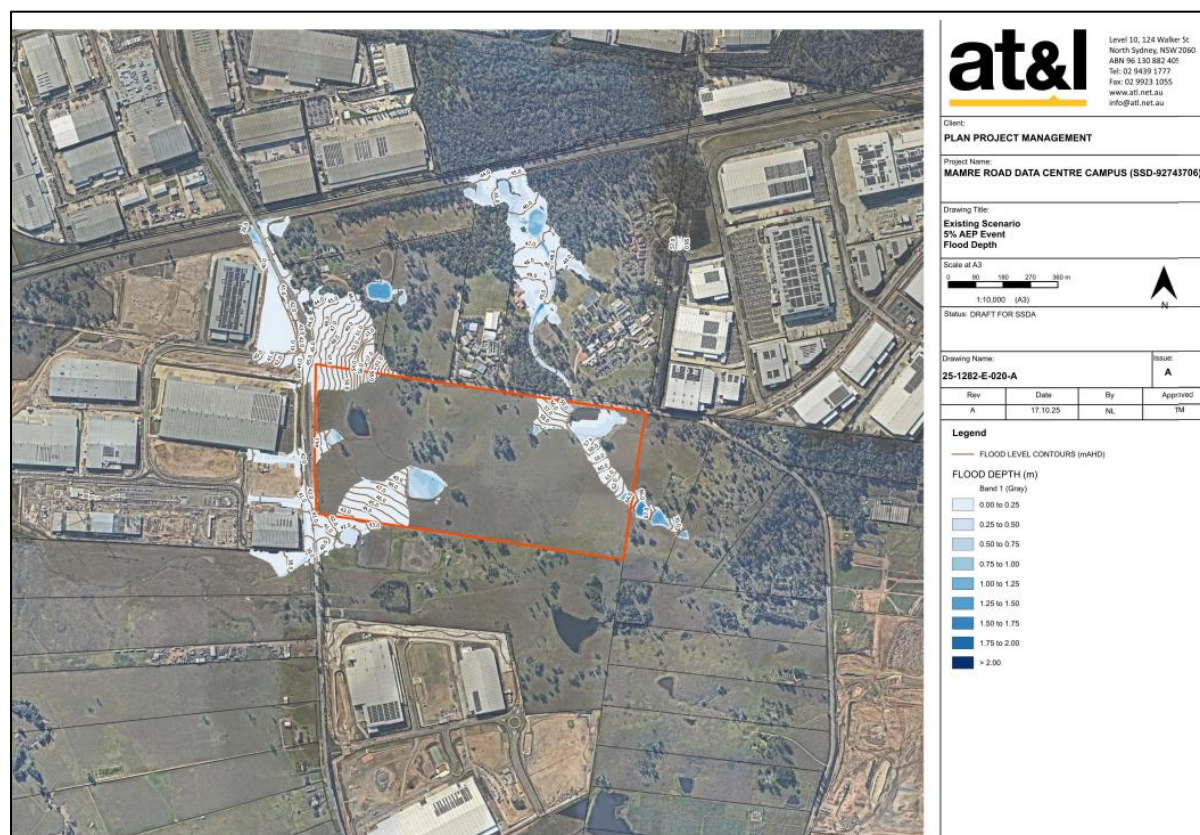


Figure 97. Site Flood Affection

Source: AT&L 2025

7.9.2 Assessment of Impacts

The proposed data centre buildings have minimum finished floor levels set at 500mm above the 1% AEP flood level, providing appropriate freeboard and ensuring buildings remain flood-free during design storm events. The site does experience local overland flooding, with shallow sheet flows toward Mamre Road and Bakers Lane generally classified as H1 (low hazard) category. TUFLOW modelling demonstrates that underdeveloped conditions, overland flows up to and including the 0.2% AEP will be conveyed through the site without interacting with any built form, and peak flood extents will be generally less than existing conditions outside the site, indicating negligible adverse impacts on downstream flood levels. The proposal incorporates comprehensive stormwater management infrastructure including on-site detention basins, naturalised trunk drainage channels, and enhanced drainage networks that ensure post-development flow rates will be equal to or less than pre-development rates for the 50% to 1% AEP events. The enhanced infrastructure also reduces downstream flow velocities, provides water quality treatment, and offers ecological benefits through vegetated drainage channels, while fully complying with requirements that flood levels not increase by more than 10mm on surrounding properties and flows not be redistributed by more than 15%.

The potential impacts of climate change on flood behaviour have been comprehensively assessed through modelling of the 0.2% AEP design event as a proxy for climate change-induced increases in rainfall intensity. The 0.2% AEP design rainfall intensities are approximately 20-25% greater than the 1% AEP design intensities, representing a reasonable projection of future rainfall increases under climate change scenarios. At the same time, sea level rise is not relevant for this inland location. The modelling demonstrates that the proposal can accommodate flows up to the 0.2% AEP event without

inundating any built form, with all buildings remaining flood-free even under increased rainfall intensity scenarios. The design approach of setting finished floor levels at 500mm above the 1% AEP flood level provides sufficient resilience to accommodate potential climate change impacts throughout the operational life of the proposed development, while the comprehensive stormwater management infrastructure has been designed with the capacity to manage increased flow volumes associated with more intense future rainfall events.

Localised flood level increases occur in the drainage channel north of Bakers Lane, affecting portions of 61-109 Bakers Lane, though this land is zoned IN1 General Industrial and allocated for future regional stormwater infrastructure and likely redevelopment with improved drainage. The proposal forms part of broader Mamre Road Precinct transformation including the Yiribana Logistics Estate, planned Mamre Road upgrade, and future Yiribana West development that will cumulatively enhance surface water conveyance throughout the precinct, representing a net improvement in flood risk management while fully complying with all flood planning controls and maintaining acceptable risks to the proposed development and surrounding properties under current and future climate conditions.

7.9.3 Management and/or Mitigation Measures

The eastern portion of the site (Parcels E and F) is within the flood fringe category of the local catchment PMF event, and due to rapid local catchment response times, sheltering in place within the four (4) storey data centre buildings or within the three (3) storey COSH Building, all with second storeys located above the PMF level, is more practical than evacuation during extreme events. A Flood Emergency Response Plan will be prepared prior to occupation to address warning times, isolation periods, and evacuation procedures, while all critical infrastructure, including diesel fuel storage, will be located above the 1% AEP flood level in bunded tanks.

7.10 Contamination and Remediation

A DSI has been carried out on the site by JBS&G and is provided at **Appendix 23**. The recommendations of the DSI include that a Remedial Action Plan (RAP) be prepared due to identified contamination and to close out data gaps.

A RAP has been prepared in support of the proposal and is provided at **Appendix 24**.

The RAP has been developed to address the contamination identified as part of the DSI, with consideration of the future proposed land use. The specific objectives of this RAP are to:

- Characterise and document the known extent of environmental/aesthetic impact within the site via presentation of a conceptual site model (CSM);
- Identify the remedial strategy(ies)/framework to be adopted by an assessment of remedial options and development objectives; and
- Document the procedures and standards to be followed in order to remove the risks posed by contaminated soils and aesthetic impacts to make the site suitable for the proposed commercial/industrial land use, while ensuring the protection of human health and the surrounding environment.

Based on the assessment provided in the DSI, and taking into account the data gaps identified in the DSI surrounding existing sewerage infrastructure and underlying the manmade bore which needs to occur during remedial works, the site remediation areas have been defined within the RAP. The remediation areas have been identified below:

- **AEC 1:** Friable asbestos (AF/FA) impacted fill material at location RZ10 in the residential area of the property exceeding the adopted health criteria;
- **AEC 2:** Bonded Asbestos Containing Material (ACM) impacted fill material:
 - fill within the residential zone at the site surface and to a depth of 0.3 m;



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- mounded fill material in the central south (approximately 850 m³);
- **AEC 3:** Surface building rubble applied to the upgradient embankments of several retention ponds identified to contain (or to potentially contain) bonded ACM (refer below);
- **AEC 4:** Hydrocarbon impacted/stained soils beneath a petroleum style drum at sample location TPI30 considered to pose an aesthetic issue; and
- **AEC 5:** Sub-surface/in-situ anthropogenic waste within the residential zone and in mounded material in the central south (co-mingled with asbestos) and identified at the site surface at isolated locations across the broader site which are considered to pose a potential aesthetic issue.

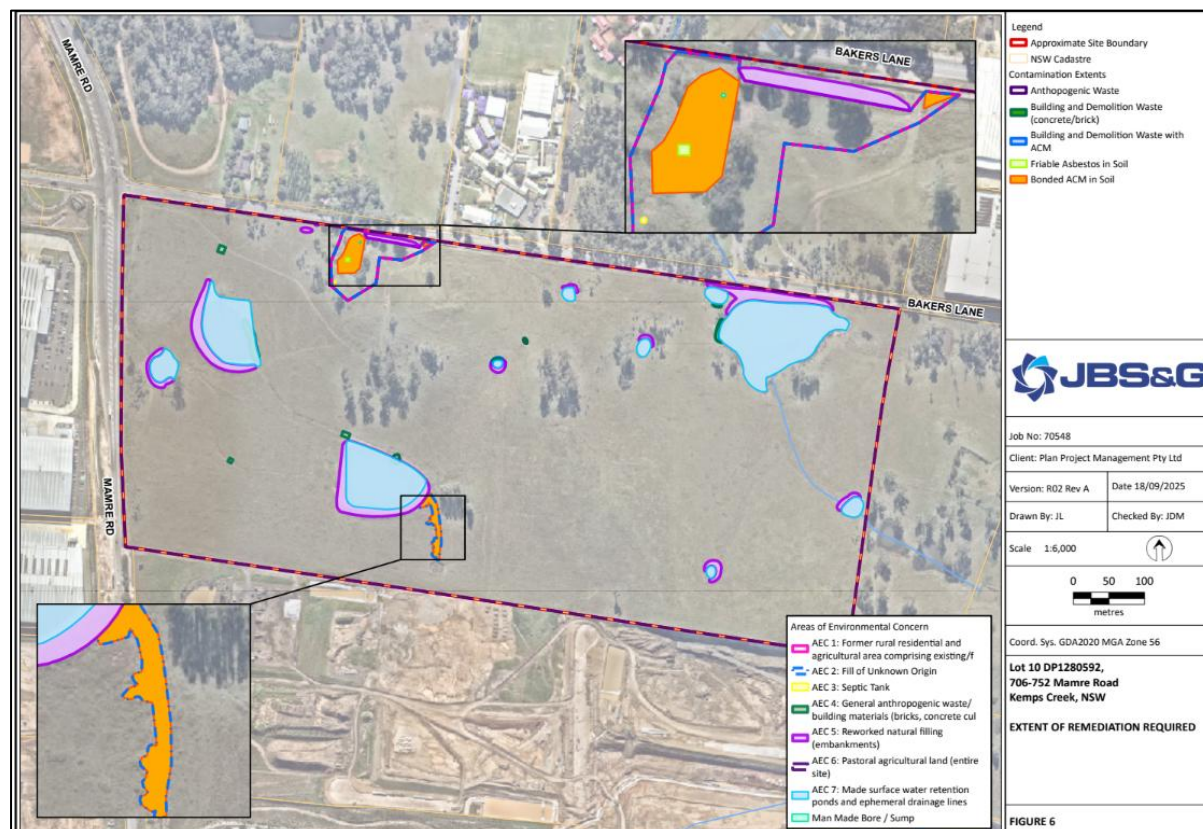


Figure 98. Proposed Campus Operations and Support Hub Materials

Source: JBS&G, 2025

The preferred strategies are outlined in **TABLE 59** below:

TABLE 59: PREFERRED REMEDIAL STRATEGY	
Media and Contaminants	Preferred Strategy
Fibrous Asbestos/Asbestos Fines (AF/ FA)	Excavation and off-site disposal of AF/FA impacted fill at RZ10.
ACM	Excavation of material identified to contain bonded ACM for off-site disposal.
ACM	Inspection and removal of ACM from surface building rubble identified adjacent to retention pond embankments across the site.
Anthropogenic Material	Removal of surface and sub-surface anthropogenic material considered to pose an aesthetic issue and considered not suitable for on-site retention to a landfill/licensed waste facility

TABLE 59: PREFERRED REMEDIAL STRATEGY

Media and Contaminants	Preferred Strategy
	and/or relocation and retention on site at depth/in inaccessible areas, where appropriate.
Stained/Odororous Soils	Excavation of stained/odorous soils at TP130 and management of the material (re-location) to a designated portion of the site such that the material does not pose an aesthetic issue under the proposed development scenario.

7.10.1 Management and/or Mitigation Measures

Subject to the successful implementation of the measures described in the RAP and the recommendations below, it is concluded that the site can be made suitable for the intended uses and that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment.

The processes outlined in the RAP will be implemented and the following documentation be developed and implemented to ensure the risks and impacts during remediation works are controlled in an appropriate manner:

- A REMP (Remediation Environmental Management Plan), to document the monitoring and management measures required to control the environmental impacts of the works and ensure the validation protocols are being addressed; and
- A WHSP (Work Health and Safety Plan) to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.

7.11 Trees and Landscaping

An Arboricultural Impact Assessment (AIA) has been prepared by Creative Planning Solutions (CPS) and is attached at **Appendix 12**. A summary is provided in the following sections.

7.11.1 Existing Environment

A total of 215 trees and groups of trees were observed within and adjoining the site. Of those trees assessed 212 trees and groups of trees fell within the boundaries of the site. The remaining three (3) trees were observed outside the site boundaries and within the neighbouring allotment to the east at 1-22 Bakers Lane.

The site presents as a greenfield allotment with highly disturbed conditions following localised demolition of built structures from its former use.

7.11.2 Assessment of Impacts

The assessed trees comprised predominantly locally indigenous species, along with other Australian native and exotic species. Many of the trees are species consistent with the Critically Endangered Ecological Community (CEEC): Cumberland Plain Woodland in the Sydney Basin Bioregion.

A total of 215 trees (within the site and adjoining) are proposed to be removed due to project impacts. This comprises:

- 156 trees and groups of trees due to falling directly within the footprint of the proposed bulk earthworks.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- 56 trees and groups of trees due to falling directly within the footprint of the proposed roadways including the future Southern Link Road, Road No.1 and Mamre Road widening works.
- 3 neighbouring trees which are be subject to 'Major' and 'Moderate' encroachment to their respective Notional Root Zones (18-35%) and Structural Root Zones (0-15%).

7.11.3 Management and/or Mitigation Measures

A Tree Management and Protection Plan is not applicable to this development application as no trees are proposed to be retained on the subject site. All existing trees within and adjoining the site will be removed to facilitate the proposed development.

7.12 Climate Change

A Greenhouse Gas (GHG) Assessment Report has been prepared by E-LAB Consulting in support of the proposal and is provided in **Appendix 36**. The GHG Assessment Report has been prepared in accordance with EPA's NSE Guide for Large Emitters, the National Greenhouse and Energy Reporting (NGER) Measurement Determination, and the Intergovernmental Panel on Climate Change (IPCC) 2006 Guidelines

7.12.1 GHG Emissions Assessment

The assessment boundary for the GHG Assessment Report considers all major operational activities across the campus excluding particular minor activities. Emissions sources include direct (Scope 1) emissions from on-site back up fuel use, indirect (Scope 2) emissions from purchased electricity, and indirect (Scope 3) emissions from supply chains, waste, and employee travel. The emissions assessment establishes a comprehensive quantification of the proposal's GHG emissions across Scopes 1, 2, and 3 throughout the operational lifecycle, providing the evidence base required to demonstrate compliance with NSW large emitter guidelines and applicable legislative frameworks. The assessment forms the foundation for identifying targeted mitigation measures and offset requirements to support the proposal's net zero commitments in alignment with national and state climate policy objectives.

TABLE 60 below describes the estimated emissions predicted for the data centre campus. It is important to note that these emissions have been identified for the peak emissions year which as per staging plans and assumptions, this is expected to be 2032. Additionally, cumulative total emissions have been identified below.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Estimated annual Operational Scope 3 emissions at peak operational capacity are presented in **TABLE 60** and **61** below in their respective categories.

TABLE 60. EMISSION ESTIMATES						
Stage	Scope 1 (t CO₂-e/year)	Scope 2 (t CO₂-e/year)	Total Scope 1+2 (t CO₂-e/year)	Operational Scope 3 (t CO₂-e/year)	Illustrative Construction Scope 3 (t CO₂-e/year)	Total Scope 1, 2 and 3 (t CO₂-e/year)
Peak Scope 1, 2 and 3 Emissions (2032)						
Operations – Maximum capacity	998.8	1,699,710	1,700,709	307,998	23,288	2,031,994
Operation – Planned throughput	998.8	1,296,029	1,297,028	235,133	23,288	1,555,449
Total Scope 1, 2 and 3 Emissions (2025-2080)						
Operations – Maximum capacity	79,091	27,785,264	27,864,355	4,932,159	244,519	33,041,033
Operation – Planned throughput	79,091	23,495,081	23,574,172	4,231,121	244,519	28,049,812
TABLE 61. OPERATIONAL SCOPE 3 EMISSIONS (2032)						
Scope 3 Category	Max Capacity (t CO₂-e/year)		Operational Throughput (t CO₂-e/year)			
Upstream fuel & energy-related activities	84,986		64,801			
Embodied IT & capital goods	203,965		155,523			
Upstream transport & freight	8,499		6,480			
Operational waste	8,499		6,480			
Business travel	850		648			
Employee commuting	1,200		1,200			
Total	307,998		235,133			

Illustrative estimated annual Construction-Related Scope 3 emissions are presented in **TABLE 62** below, provided for a high-level understanding of construction related impacts:

TABLE 62. ILLUSTRATIVE CONSTRUCTION SCOPE 3 EMISSIONS (2025-2080)	
Year	Total Construction Scope 3 (t CO₂-e/year)
2025	0
2026	19,794
2027	19,794



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

2028	27,945
2029	27,945
2030	27,945
2031	27,945
2032 (Peak Scope 1 and 2 emissions year)	23,288
2033	23,288
2034	23,288
2035	23,288
2036 onwards to 2080	0
Total	244,519

The assessment establishes a robust baseline for emissions management across the proposal's lifecycle, identifying both peak operational impacts and long-term emissions trajectories that inform the proposed developments' pathway toward net zero commitments.

7.12.2 Offset Strategy

To achieve net zero commitments, the below offset strategy is proposed to be implemented:

- **Residual Emissions and Offset Requirements:** Despite best-practice design, efficiency measures, and renewable electricity procurement, residual greenhouse gas emissions will remain primarily from backup diesel generation, fugitive refrigerants, and embodied carbon in construction materials. Preliminary modelling indicates residual Scope 1 emissions requiring offsetting are approximately 1,623.0 tCO₂-e/year during peak operations at maximum capacity, with cumulative requirements estimated at 79,091 tCO₂-e, over the proposed development's operational life.
- **Offset Selection and Integrity Principles:** The proposed development will prioritise high-quality Australian Carbon Credit Units (ACCUs) that deliver measurable environmental outcomes and co-benefits to local communities, including native forest regeneration projects in NSW and Indigenous fire management projects in the Northern Territory. Where practical, international Verified Carbon Units (VCUs) from Asia-Pacific conservation projects may supplement the strategy. All offsets comply with the Commonwealth Carbon Credits Act 2011 integrity requirements, ensuring credits are real, additional, permanent, unique, transparent, verifiable, and conservatively accounted for.
- **Implementation Framework:** The offset strategy integrates into the Principal's broader Net Zero Carbon Strategy targeting residual Scope 1, including the following:
 - **Integration:** Applying offsets only to unavoidable residual emissions, including diesel back-up generation where renewable diesel is not utilised.
 - **Offset Selection & Due Diligence:** All offsets are sourced from accredited schemes with priority for NSW-based ACCUs, then ACCUs and then VCUs. Evaluation criteria include permanence and verifiable emission reductions, additionality beyond business-as-usual scenarios, social and biodiversity co-benefits, and alignment with the Principal's broader regional sustainability priorities.
 - **Procurement and Certification:** Carbon credits are procured through certified registries and reputable intermediaries ensuring transparent ownership and traceability. Credit retirement is undertaken annually to offset verified emissions.

The GHG Assessment Report has identified mitigation and offset strategies to support and actively combat GHG emissions from the construction and operation of the proposed development. This approach ensures credibility, transparency, and alignment with national and state climate policies while supporting biodiversity protection and regional economic development.



7.13 Ecologically Sustainable Development

An Ecologically Sustainable Development (ESD) Report has been prepared by E-Lab Consulting in support of the proposal and is provided at **Appendix 13**. The ESD Report presents a summary of the ESD strategies proposed and commitments made for the proposed development. The Proponent intends to deliver a sustainable outcome for the proposed development by demonstrating a strong commitment to sustainability through design, construction, and operation.

The ESD Report addresses the following matters as required by the SEARs for the proposal:

- Identification of how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design, construction and ongoing operation of the proposed development.
- Demonstration of how the proposed development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards, including a maximum Power Usage Effectiveness (PUE) of 1.3 and a minimum NABERS rating of five stars.
- Identification of the projected Water Usage Effectiveness (WUE) for the proposed development, compared against recognised 'best practice' benchmarks.
- Demonstration of how the proposed development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources.
- If Chapter 3 of *State Environmental Planning Policy (Sustainable Buildings) 2022* applies, include:
 - Demonstration as to how the proposed development has been designed to address the provisions set out in Chapter 3.2(1)
 - A NABERS Embodied Emissions Material Form to disclose the amount of embodied emissions attributable to the proposed development in accordance with section 35BA of the EP&A Regulation.

7.13.1 ESD Principles

The principles of Ecologically Sustainable Development to which the proposed development will adhere to have been set out in **TABLE 63** below.

TABLE 63: ESD PRINCIPLES	
Philosophy	Project Response
The Precautionary Principle:	
Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.	The proposal will employ relevant environmental protection measures and risk assessments to ensure no irreversible environmental harm is caused as a result of the construction or operation of the proposed development. Energy reduction, water consumption reduction and waste reduction are all project commitments to reduce damage.
Inter-Generational Equity:	
The present generation should ensure that the health, diversity, and productivity of the environment is maintained or enhanced for the benefit of future generations.	The proposal will ensure no irreversible environmental harm is caused as a result of the construction or operation of the proposed development. The design team will address key elements such as energy, water and material use to do all that is within the proposed development's control to ensure future



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 63: ESD PRINCIPLES

Philosophy	Project Response
	generations have equal opportunity and access to the environment.
Conservation of Biological Diversity and Ecological Integrity:	
Conservation of biological diversity and ecological integrity should be a fundamental consideration	The proposal is located largely within bio-certified land under the Cumberland Plain Conservation Plan to minimise biodiversity impacts. All residual impacts from the removal of 1.36 hectares of native vegetation will be offset through retirement of 84 biodiversity credits, achieving 'No Net Loss' under the Biodiversity Conservation Act 2016.
Improved Valuation, Pricing and Incentive Mechanisms:	
Environmental factors should be included in the valuation of assets and services. The users of goods and services should pay prices based on the full life cycle costs of providing goods and service.	The proposal is committed to minimising waste throughout development and operation by improving circularity and diversion rates. This will be achieved through data collection, identifying reuse opportunities, and exploring take-back programs with equipment suppliers to enable second-life use of equipment. These actions will help conserve resources, support decarbonisation, and reduce environmental impact.

7.13.2 ESD Design Initiatives

ESD design initiatives for the proposal include:

Energy

The design in the first instance must seek to remove the demand for energy consumption where possible through reducing the load. Beyond this, energy consumption can be made more conservative, through efficient lighting, mechanical systems, and other associated active services. Once the energy system has reduced all possible energy-consuming elements and made the remaining systems as efficient as possible, renewable energy sources will be prioritised through both on-site and off-site generation. Only after all the above steps have been implemented should carbon offsets be used to achieve operational neutrality

The following initiatives are to be implemented across the proposed development:

- Detailed Modelling – Energy modelling of the proposed development will be undertaken early during subsequent design stages to understand the opportunities and identify risks to overall energy performance and compliance with identified performance requirements. This will be used to inform and coordinate the wider project team to best align systems to reduce energy consumption as applicable.
- Renewable Energy – The proposal will implement a Renewable Electricity Procurement Strategy as part of the proposed development. This strategy forms a key component of the Proponent's broader commitment to achieve Net Zero (Scope 1 and 2) greenhouse gas emissions by 2030 and will be applied throughout the design, delivery, and operation of the proposed development. Under this strategy, the proposal will progressively match all operational electricity consumption with renewable energy through a combination of long-



term Power Purchase Agreements (PPAs), renewable energy certificates (RECs), and collaborative renewable energy procurement with tenants. The Proponent's current operational portfolio already achieves a 74% renewable electricity matching rate, providing a strong foundation for extending these measures to new developments. A Tenant Renewable Electricity Uptake Program will also be implemented to facilitate customer participation in renewable energy sourcing. This program will include mechanisms to verify renewable energy procurement, provide contractual flexibility to enable tenant-led renewable energy purchasing, and support joint renewable energy projects where feasible.

- **Power Usage Effectiveness (PUE)** - Lead the industry with best-in-class operational Power Usage Effectiveness (PUE) and 100% renewable energy matching at all sites by 2030, supporting the transition towards 24/7 clean energy. Continue to drive down PUE towards a long-term goal through innovation projects and deployment of novel technologies such as liquid cooling. Continual usage of optimisation programs will aid in the reduction of energy draw. Use of effective lighting controls and strategies in conjunction with low consuming lighting will contribute to the PUE.
- **Mechanical HVAC** - The heating, cooling and ventilation strategy for the campus will be designed to maximise energy efficiency. Operating schedules and control of the various spaces served will be designed to optimise efficiency by matching occupational profiles to ensure HVAC is not running unnecessarily and increasing energy demand. The data centre campus cooling system is supported by a high-reliability cooling system, comprising multiple closed-circuit cooling towers per building or air-cooled chillers, and dynamic pressure units with process water make-up and expansion tanks, integrated with condenser and evaporator loops. This configuration provides redundancy and operational flexibility, ensuring precise temperature control and uninterrupted performance of critical infrastructure. The system demonstrates energy-efficient operation through staged deployment of cooling towers and aligning equipment operation with real-time cooling demand. Closed-circuit cooling towers minimise water loss and mitigate fouling, maintaining optimal heat transfer efficiency. Dynamic pressure regulation optimises pumping energy, while air-cooled chillers provide supplemental cooling under controlled energy conditions. Furthermore, the adoption of water-efficient technologies, with integration of rainwater harvesting to supply the mechanical cooling system reduces reliance on potable water and enhancing overall environmental performance.
- **Commissioning and Tuning** - To ensure optimal operation of building services, commissioning to a recognised industry standard shall be undertaken during construction and before practical completion.
- **Equipment** - Evaluated all strategic equipment suppliers through the Supplier Relationship Management (SRM) program using ESG criteria. Partner with contractors and suppliers to cut embodied carbon by replacing high-carbon materials and optimising supply chains, manufacturing, and transport. Promote circularity by designing data centres to minimise waste, use recycled and low-carbon materials, enable take-back programs, and ensure equipment longevity and recyclability, building more resilient and sustainable infrastructure.
- **Low Emission Transportation** - Monitoring business travel, employee commuting, and supplier transportation will guide the proposed development to reduce any additional emissions. These activities form a key part of the embodied carbon reduction strategy for the proposed development, helping identify opportunities to cut emissions and drive reductions across every stage of the value chain.

Water



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

To achieve water resilience, the proposed development is committed to minimise water withdrawal, optimise water productivity through the deployment of measures to increase efficiency and enhance WUE, reducing energy use and carbon emissions. WUE for the proposed development will be identified and calculated, which will be compared against the benchmark for best practice. The client's portfolio has achieved a WUE of 0.89 L/kWh with 100% of campuses meeting design-defined limits. The Mamre Road Data Centre Campus is expected to achieve a better WUE performance of 0.1 L/kWh by deploying a series of measures.

- **Water Stress** – Using water for cooling increasingly dense computing deployments has the potential to save energy and reduce carbon emissions. To make sure water resilience is achieved, water in water stressed areas is monitored, measured by WSL.
- **Recycled Water** – The proposed development is committed to water recycling initiatives to supply the proposal or replenish local basins. As well as working with authorities and utilities to develop new sources and pushing to be an off-taker of existing recycled water schemes, reducing reliance on freshwater. Rainwater and recycled water infrastructure will be integral, with potential to supply at least 80% of non-potable demand, initially with rainwater tanks until recycled water schemes are operational.
- **Optimise water usage** – Deployed cooling solutions that maximise the use of free air cooling while maintaining optimal PUE performance. The proposed development will consistently track and report the WUE as a key metric to ensure responsible water usage, a commitment reflected in the SLL targets.
- **Integrated Water Cycle Management** – An integrated water cycle management strategy will ensure sustainable water use and protection of the South Creek catchment. The strict stormwater quality targets will be met, including a 90% reduction in total suspended solids and gross pollutants, 80% reduction in phosphorus, and 65% reduction in nitrogen, with flow targets enforced during both construction and operation. The strategy will incorporate MUSIC modelling, lifecycle costing, and maintenance plans.
- **Water Metering and Monitoring** – The ratio of wastewater to water that comes into site is estimated or metered by the local water authority. OSD tanks (eastern and western) will be provided in the design of the campus with initial studies considering wastewater discharge from cooling plant will be minimal, reducing concerns on both volume and pollutants. This includes Gross pollutant traps upstream of discharge points will capture litter, debris, coarse sediment, oils and greases before stormwater enters the estate-wide drainage system. Furthermore, a Interim stormwater retention systems will include automated irrigation controls with flow meters, moisture sensors and weather stations to monitor and manage water reuse across the site.
- **Fire Protection** – Reticulation of fire system test water will be investigated to minimise additional water loss.

7.13.3 Power Usage Effectiveness

The requirement of the MRP DCP states the building is only to be designed to meet a 4.5-star NABERS energy rating. However, in particular the SEARs requirements call for a PUE of 1.3 and a minimum 5-star NABERS energy. This will be achieved through working with the tenants when available to ensure the highest efficiency. Current site managed by the operator achieves an average PUE of 1.32, which aligns with a NABERS rating of 5 Star NABERS Energy. This will be aimed to be achieved above and beyond to meet the PUE requirement of 1.3 and the minimum 5-star requirement.



7.13.4 Water Usage Effectiveness

To optimise water consumption reduction, the following preliminary water consumption estimates have been conducted for the proposed development to inform the design. The methodology for these estimates rely on the client's estimated WUE of 0.1 L/kWh, which is an improvement on the portfolio wide WUE of 0.97 L/kWh.

As the methodology of this water consumption estimate is based on WUE of existing similar projects, it is necessary that the consumption of electricity use for the proposed development is estimated. This has been conducted as part of the GHG emissions assessment which has been undertaken in line with the NSW Guide for Large Emitters, the National Greenhouse and Energy Reporting (NGER) Measurement Determination, and the Intergovernmental Panel on Climate Change (IPCC) 2006 Guidelines.

Underlying assumptions include:

- Peak IT load of ~40MW per building within the campus. With 26 shells it is expected that the site has a total capacity of ~1.2GW (1200 MW) with an IT load of ~1.04GW
- Annual operational load factor is varied as per historical tenant utilisation. Provided by the Client the following identifies the load factor per shell once operational: End of Year 1 – 50% - End of Year 2 – 75% - End of Year 3 and onwards
- 90% ▪ Diesel back-up generators: 846 total generators for the proposed development. Estimated testing of all generators once annually with 60 minutes per test and 6 generators tested simultaneously. Projected 18,360 litres per shell per year.
- Assumed power usage efficiency (PUE) of 1.3 as per SEARs requirements and the principal's average PUE reporting of portfolio which includes similar projects.

Water consumption based on the operations at peak capacity and from commencement of construction in 2026 to decommissioning in 2080 is as follows:

TABLE 64. TOTAL WATER CONSUMPTION ESTIMATES		
Stage	Peak	Total (2026-2080)
Operations	22.4 ML/year	1,172.845 ML

7.13.5 State Environmental Planning Policy (Sustainable Buildings) 2022

All new non-residential developments must report on embodied emissions, where the NSW government's Sustainable Buildings SEPP applies. Chapter 3 – Standards for non-residential development of the Sustainable Buildings SEPP applies to the proposal.

Clause 3.2 - Development consent for non-residential development of the SEPP prescribes the following:

- *In deciding whether to grant development consent to non-residential development, the consent authority must consider whether the development is designed to enable the following—*
 - *the minimisation of waste from associated demolition and construction, including by the choice and reuse of building materials,*
 - *a reduction in peak demand for electricity, including through the use of energy efficient technology,*



- *a reduction in the reliance on artificial lighting and mechanical heating and cooling through passive design,*
- *the generation and storage of renewable energy,*
- *the metering and monitoring of energy consumption,*
- *the minimisation of the consumption of potable water.*
- *Development consent must not be granted to non-residential development unless the consent authority is satisfied the embodied emissions attributable to the development have been quantified.*

The ESD Report prepared in support of the proposal includes a number of target initiatives in relation to minimising waste, reduction in electricity, natural light and ventilation, storage and generation of renewable energy, extensive metering, and reduction in water use as described in **Section 7.13.4** above. The proposal is considered to be designed in a manner that is consistent with the requirements of Clause 3.2(1).

It is noted that pursuant to Clause 3.2(2) of the Sustainable Buildings SEPP, proponents for non-residential development types must complete the NABERS Embodied Emissions Material Form, including calculation of material quantities (and later embodied emissions) at the proposed development application stage, and again at the construction certificate stage. The embodied emissions attributed to the proposal are provided in the NABERS Embodied Emissions Material Form provided in **Appendix 14**.

7.14 Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment Report (ACHAR) (**Appendix 26**) and an Addendum ACHAR (**Appendix 27**) have been prepared by Biosis to inform the proposed development. Noting **SSD-30628110** on the site, which is currently under assessment, the requirement for an addendum ACHAR was established following discussions with Heritage NSW, Department of Climate Change, Energy, the Environment and Water (Heritage NSW) on 2 September 2025 and 2 October 2025. Heritage NSW advised that an addendum report in the form of a letter was sufficient to satisfy **SSD-92743706** submission requirements and provided the following advice:

- No requirement to restart the consultation process outlined in the Aboriginal Cultural Heritage.
- Consultation Requirements for Proponents 2010 (DECCW 2010) (consultation requirements).
- Use the existing Registered Aboriginal Parties (RAPs) associated with the original ACHAR and send the addendum ACHAR to this group.
- The addendum report would serve as an update to the RAPs, which would detail the proposal and recommendations.
- The addendum report would be sent out to RAPs for a 28-day consultation period, prior to being submitted as part of the SSD application.

Heritage NSW was supportive of this approach and confirmed the use of existing RAPs for the SSD application. As a result of this consultation with Heritage NSW, Biosis has prepared an addendum to the ACHAR to assess the new proposed works under **SSD-92743706**.

7.14.1 Existing Environment

An Aboriginal Heritage Information Management System (AHIMS) register search conducted on 3 June 2021 identified 102 Aboriginal archaeological sites within a 1.7km by 1.7km area centred on the site. Of these, nine (9) sites were recorded as being located within the study area itself. However, background research revealed that two (2) of these sites are located approximately 1km north of the site and have already been included in a Consent to Destroy Permit (#2188).



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

An archaeological survey was conducted on 11 June 2021, though its effectiveness was significantly limited by poor ground surface visibility due to extensive grass coverage, which hindered the identification of Aboriginal sites on the surface. During the survey, the locations of previously identified AHIMS sites were visited to confirm their current condition, but the artefacts recorded in the site cards could not be located due to the grass coverage. The inspection of the two (2) AHIMS sites described above confirmed that the GPS locations in the AHIMS database did not match the site descriptions in the site cards or associated reports. While no Aboriginal sites were identified during the survey, areas of minimal disturbance were assessed as containing Potential Archaeological Deposit (PAD).

Based on the survey results, a test excavation program was undertaken from 5 to 29 October 2021 to characterise the extent, nature, and archaeological value of Aboriginal cultural heritage within the identified Aboriginal sites and areas of PAD. This archaeological assessment identified an additional five (5) Aboriginal sites within the site.



Figure 99. Location of Aboriginal Sites

Source: Greenbox Architecture, 2025

7.14.2 Assessment of Impacts

The identification and assessment of cultural heritage values include the four (4) values of the Burra Charter: social, historical, scientific and aesthetic values.

Historical Significance

The historical significance refers to historic values and encompasses the history of aesthetics, science and society, and therefore to a large extent underlies all of the terms set out in this section. The site is not known to have any historic associations.

Social Significance

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The social significance refers to the spiritual, traditional, historical or contemporary associations and attachment that the place or area has for the present-day community. During consultation limited information was provided by RAPs in regards to the cultural values of the site, it was however indicated that the site has cultural significant to the RAPs.

Scientific Significance

The scientific significance refers to the importance of a landscape, area, place or object because of its archaeological and/or other technical aspects. An archaeological scientific assessment was undertaken for the site which identified four (4) sites that had been disturbed by the creation of a dam. The 10 others were relatively undisturbed with the only disturbance in the past 50 years in those areas identified as land clearing and cattle grazing. Five (5) sites contained sub-surface artefact scatters while the other nine were surface artefacts or scatters. It was determined that four sites have low scientific significance and nine have moderate scientific significance.

Aesthetic Significance

The aesthetic significance refers to the sensory, scenic, architectural and creative aspects of the place. The site has been disturbed through land clearance of remnant native vegetation. However, the overall landscape is a typical example of sloping landforms of the Bringelly Shale geological unit. The landscape of the site is linked with Aboriginal cultural values and provides context for Aboriginal sites that gives a strong sense of place. The vegetation clearance and other development surrounding the site indicates that the aesthetic values have been altered from the original landscape before European settlement and therefore has moderate aesthetic values.

The current proposed works within the site include activities which could impact Aboriginal heritage sites or objects. If not mitigated the impact may include:

- Bulk earthworks of the entire site, which will involve the removal of topsoil and subsoil.
- Construction of warehouses and associated services and infrastructure, which would involve subsurface excavations for foundations and services.

Left unmitigated, these activities have potential to completely remove or disturb archaeological deposits and Aboriginal objects. A summary of potential archaeological impact has been undertaken in **TABLE 65** below.

TABLE 65. SUMMARY OF POTENTIAL ARCHAEOLOGICAL IMPACTS						
AHIMS No.	Site	Site Name	Type of Harm Before Mitigated	Consequence of Unmitigated Harm	Degree of Harm	Consequence of Harm
45-5-5570		BakersLn PAD1	Moderate	Direct	Total	Total loss of value
45-5-5569		BakersLn PAD2	Moderate	Direct	Total	Total loss of value
45-5-5565		BakersLn PAD3	Moderate	Direct	Total	Total loss of value
45-5-5566		BakersLn PAD4	Moderate	Direct	Total	Total loss of value
45-5-5567		BakersLn PAD5	Moderate	Direct	Total	Total loss of value
45-5-4102		Kemps Creek IFI	Moderate	Direct	Total	Total loss of value



TABLE 65. SUMMARY OF POTENTIAL ARCHAEOLOGICAL IMPACTS

AHIMS No.	Site	Site Name	Type of Harm Before Mitigated	Consequence of Unmitigated Harm	Degree of Harm	Consequence of Harm
45-5-4103		Kemps Creek IF2	Low	Direct	Total	Total loss of value
45-5-4104		Kemps Creek (logosoc1)	Low	Direct	Total	Total loss of value
45-5-4105		Kemps Creek (logosoc2)	Moderate	Direct	Total	Total loss of value
45-5-5268		Kemps Creek IF-02	Low	Direct	Total	Total loss of value
45-5-5269		Kemps Creek IF-01	Low	Direct	Total	Total loss of value

7.14.3 Consultation

Consultation with the Aboriginal community was undertaken by Biosis in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a) (consultation requirements). The appropriate government bodies were notified and advertisements placed in the Western Weekender newspaper (4 June 2021).

A search conducted by the National Native Title Tribunal (NNTT) listed no Registered Native Title Claims, Unregistered Claimant Applications or Registered Indigenous Land Use Agreements within the site. The Office of the Registrar, *Aboriginal Land Rights Act 1983* did not provide a response. Heritage NSW, Department of Premier and Cabinet (Heritage NSW) provided a list of Aboriginal stakeholders for the region, which were invited to register an interest in the proposed development.

Upon registration, the registered Aboriginal parties (RAPs) were invited to provide their knowledge on the site and on the proposal provided in Methodology. The responses identify the site as significant due to the continued occupation and the complex sites located within close proximity. Responses from the RAPs are included in **Appendix 32**.

The outcome of the consultation process was that the RAPs considered the site to have a high level of cultural significance, although that significance was not clearly defined. The recommendations that resulted from the consultation process have informed the management and mitigation measures described in **Section 7.14.4** below.

7.14.4 Management and/or Mitigation Measures

Detailed management options and recommendations are included as part of the ACHAR and Addendum ACHAR which include:

- **Develop a Cultural Heritage Management Plan (CHMP)** to be prepared by a suitably qualified archaeologist in consultation with the RAPs for the proposed development.
- **Arrange community collection** to allow Aboriginal community members to collect surface artefacts from 7 identified AHIMS sites before development begins.
- **No further assessment needed.** Two (2) AHIMS sites (45-5-3036 and 45-5-3030) are outside the site and marked as destroyed or relocated.
- **Establish long-term care agreement** with Aboriginal groups for ongoing care of recovered artefacts, potentially returning them to the community.



- **Continue consulting Aboriginal groups** including, informing RAPs throughout the proposal and involve them in decisions about artefact management.
- **Create Aboriginal interpretation elements** through native gardens, Aboriginal artwork, and cultural designs.
- **Protocol for unexpected Aboriginal objects** will be employed in the vicinity and if Aboriginal objects are found; qualified archaeologist and potentially Heritage NSW would be immediately contacted.
- **Protocol for unexpected historical relics** will be employed in the vicinity and if historical relics are discovered; qualified archaeologist would be contacted and notification to the Heritage Council if assessed as significant.
- **Protocol for human remains** – Stop all work in the vicinity immediately, protect the remains, and notify Coroner's Office, NSW Police, Aboriginal parties, and Heritage NSW.

7.15 Non-Aboriginal Cultural Heritage

A Statement of Heritage Impact has been prepared by Biosis and is provided at **Appendix 28**. The Statement of Heritage Impact was undertaken to identify if there is potential for direct or indirect impacts on non-Aboriginal cultural heritage either on the site or within the vicinity of the site. An Archaeological Assessment was also carried out for the site and is provided at **Appendix 29**.

7.15.1 Existing Environment

The Statement of Heritage Impact notes that there are no heritage items or heritage conservation areas listed in the Industry and Employment SEPP or PLEP2010 located on the site or in the vicinity of the site. The site is situated within the broader vicinity of the following heritage listed items of local significance:

- The Fleurs Radio Telescope site (Item No. 832), which is approximately 1.7km south-west of the site.
- Leeholme Horse Stud Rotunda (Item No. 232), which is approximately 2.3km north-west of the site.
- Brick Farmhouse (Item No. 14/104), which is approximately 2.2km south-east of the site.
- Gateposts to Colesbrook (Item No. 13/105), which is approximately 1.7km south of the site.
- Bayley Park, house (Item No. 12/106), which is approximately 1.4km south of the site.

From an Archaeological perspective, the Archaeological Assessment identified two (2) structures for inspection based on background research undertaken for the site. These are set out below:

- **Large shed:** Possible construction date of pre-1947 and the probable features relate to foundations, footings, building materials, demolition debris and construction debris.
- **Residential service pipes:** Possible construction date of pre-1947 and the probable features relate to ceramic pipes and cut and fill deposits.

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

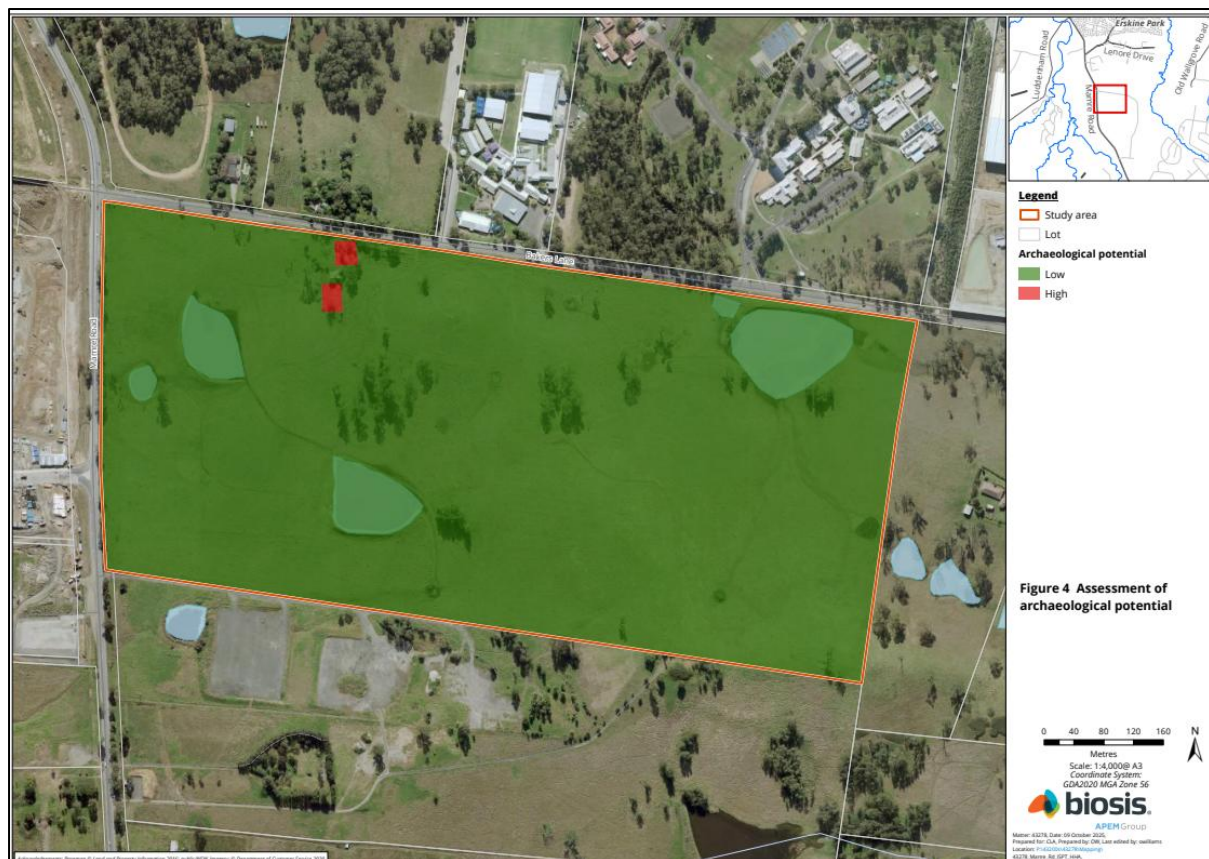


Figure 100. Archeological Potential Map

Source: Biosis, 2025

7.15.2 Assessment of Impacts

There are no heritage items or conservation areas within or near the site of the proposal. The nearest heritage items are over 1.4km from the site and are separated by residential and industrial developments. There are no known historical associations or current visual connections between the site and any heritage item. As such, there are no items of heritage significance within or adjacent to the site that will be impacted by the proposal.

From an Archaeological perspective, the archaeological resources associated with the large shed would not contribute further to an understanding of building techniques from this time. The building techniques and materials, and pastoral and agricultural processes are typical of this region and are thoroughly researched and well understood. There were no features of these structures to differentiate them from similar structures of this nature built during this period. An assessment of the readily available historical information has not identified a strong or special association with the life or works of a person or group of persons. The structural remnants of the large shed as observed during the physical inspection do not indicate they hold aesthetic or technical significance. While the official date of construction of the large shed cannot be definitively determined, the background research and physical inspection has concluded that the buildings were constructed prior to 1947. Given the known evidence of the structure and the wider occupation of the site, the resources of this structure would not demonstrate the use of the site. The archaeological resources associated with the large shed do not hold heritage significance at a local or State level.

The archaeological resources associated with the residential service pipes would not contribute further to our understanding of water and sewer management from this time. The infrastructure and materials are typical of this region and are thoroughly researched and well understood. There were no features of these structures to differentiate them from similar structures of this nature built during this period. An assessment of the readily available historical information has not identified a strong or special

association with the life or works of a person or group of persons. The residential service pipes as observed during the physical inspections do not indicate they hold aesthetic or technical significance. While the official date of construction of the residential service pipes cannot be definitively determined, the background research and physical inspection has concluded that the buildings were constructed prior to 1947. Given the known evidence of the structure and the wider occupation of the site, the resources of this structure would not demonstrate the use of the site. The archaeological resources associated with the residential service pipes do not hold heritage significance at a local or State level.

7.15.3 Management and/or Mitigation Measures

The Archaeological Assessment recommends the implementation of an unexpected find protocol. Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act. Should unanticipated relics be discovered during the course of the proposal, the following steps should be taken:

- If a find is identified, works should stop immediately around the find and the area should be protected.
- The find should be reported to the project manager or supervisor.
- A historical archaeologist should be contacted to identify the find.
- If the find is a relic, a mitigation strategy must be developed and implemented. This could include avoidance of the find, test excavation or other mitigation measures.
- If the find is a relic, notification to Heritage Council under Section 146 of the Heritage Act will be required.

7.16 Biodiversity

A BDAR has been prepared to inform the proposed development by Biosis and is provided in **Appendix 15** of this EIS.

7.16.1 Existing Environment

Native vegetation on the site is largely in fragmented patches, occurring as scattered trees over native grassland, with minimal shrubs in the mid-storey. The site appears to have been subject to historical clearing and currently features large areas of non-native grassland and exotic shrubs and tree species that have been planted around the site of a dilapidated human-made housing structure which was demolished during remediation works in September 2025. The site includes three (3) dams, one (1) large and two (2) small that have native fringing vegetation around the edges. The large dam in the east of the area of non-certified land connects to an unnamed non-perennial watercourse to the south that runs through the proposed development site to the east.

The site occurs within the Cumberland Plain (SB Cumberland) and Sydney Basin Diatremes (SB Volcanics) Mitchell Landscapes, with the former covering the majority of the site. The occurrence of Sydney Basin Diatremes is restricted to an area surrounding a dam/wetland along an unnamed Strahler Order 1 system within the site.





Non-Native Vegetation

A total of 5.36 ha of the site is mapped as exotic grasses, shrubs or trees that are not native and therefore meet the definition of non-native vegetation

Plant Community Types (PCTs)

The following PCTs were recorded within the site:

- PCT 3320 – Cumberland Shale Plains Woodland
- PCT 3975 – Southern Lower Floodplain Freshwater Wetland

In addition, PCT 4023 in low condition was recorded within the site outside of the area of non-certified land. As PCT 4023 is in the certified land under the Cumberland Plain Conservation Plan (CPCP) land, it is not the subject to this BDAR and this PCT is not discussed further.

Threatened Ecological Communities (TECs)

Vegetation to be impacted within the site was found to represent two (2) TECs listed under the BC Act, which are set out below:

- Cumberland Plain Woodland
- Sydney Freshwater Wetlands

The Cumberland Plain Shale Woodlands and Shale-Gravel Transition Forest is consistent with a TEC listed under the EPBC Act.

7.16.2 Assessment of Impacts

Avoid and Minimise Impacts

The measures undertaken to avoid and minimise impacts on biodiversity values, including prescribed impacts, are to be in accordance with the Biodiversity Assessment Method (BAM). The primary approach to reducing impacts on biodiversity values within the proposed development site has been through avoidance and/or minimisation of native vegetation and fauna habitat removal. The key measures have been set out below:

- The site has been strategically selected within the MRP, which predominantly comprises certified land identified for development as urban capable land under the Cumberland Plain Conservation Plan.
- The small area of non-certified land contains fragmented, disturbed patches of vegetation exhibiting limited connectivity within a highly modified landscape.
- Direct impacts to non-certified native vegetation have been limited to 1.35 hectares, with the majority of vegetation removal (18.03 hectares) occurring within certified land areas of the proposed development site.
- Access roads have been designed to utilise the existing Mamre Road corridor and new roads being delivered to the south of the site, thereby avoiding any exacerbation of existing vehicle strike risk to native fauna currently associated with adjacent roadways.
- Built infrastructure has been positioned centrally within the proposed development site to minimise edge effects.
- Landscaping has been strategically positioned along the external boundaries (northern, eastern, western, and southern perimeters) of the proposed development site.
- Post-construction landscaping will establish connectivity between the proposed development site and surrounding vegetation within the assessment area, including vegetation located north of Bakers Lane.
- The final development footprint has been designed through iterative planning to minimise impacts on biodiversity values throughout construction and operational phases.
- Prescribed impacts and indirect impact zones have been identified, mapped, and will be managed through targeted mitigation measures.

The proposal has sought to avoid and minimise biodiversity impacts through strategic site selection within CPCP-certified urban capable land and through careful development design that positions infrastructure to minimise impacts to adjacent biodiversity values. Whilst the proposal will result in the removal of the entire non-certified land area, including 1.35 hectares of native vegetation, comprehensive consideration has been given to avoiding and minimising indirect and prescribed impacts to biodiversity values in the broader assessment area. The mitigation and management measures detailed in **Section 7.16.3** will be implemented throughout pre-construction, construction, and post-construction phases to adequately address residual impacts associated with the proposal.

Direct Impacts

Direct impacts include vegetation clearing, dam infill and non-native vegetation removal calculated from the area of the proposal footprint in the area of non-certified land. Direct impacts arising from the proposed development include:

- Removal of 1.36 ha of native vegetation comprising:
 - 0.63 ha of PCT 3320 in Moderate (Regrowth) condition of which all is consistent with the BC Act listed CEEC *Cumberland Plain Woodland*. One patch of PCT 3320 in Moderate - regrowth condition (0.19 ha) is consistent with the EPBC Act listed CEEC *Cumberland Plains Shale Woodlands* as well as the BC Act CEEC.
 - 0.30 ha of PCT 3320 in Low condition consistent with the BC Act listed CEEC *Cumberland Plain Woodland*.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- 0.01 ha of PCT 3320 in DNG condition consistent with the BC Act listed CEEC *Cumberland Plain Woodland*.
- 0.40 ha of PCT 3975 in Moderate condition consistent with the BC Act listed EEC *Freshwater Wetlands on Coastal Floodplains*.
- Removal of Southern Myotis foraging habitat, consistent with PCT 3975 and PCT 3320 within 200 metres of dams including:
 - 0.01 ha of PCT 3320 in DNG condition.
 - 0.26 ha of PCT 3320 in Low condition.
 - 0.63 ha of PCT 3320 in Moderate - regrowth condition.
 - 0.40 ha of PCT 3975 in Moderate condition.
- (i) Removal of 0.40 ha of PCT 3975 of potential habitat for *Maundia triglochinos* and *Persicaria elatior* (assumed present).

These impacts will be permanent and will occur from the outset of the proposed development. Mitigation measures outlined in **Section 7.16.3** below will help to minimise the potential impacts to biodiversity values that remain present within the site.

Indirect Impacts

Potential indirect impacts from the proposal are outline in **TABLE 66** below



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
Inadvertent impacts on adjacent habitat or vegetation	▪ Adjacent native vegetation connectivity in the assessment area. ▪ Hollow-bearing trees – potential breeding habitat for common hollow dependent fauna species. ▪ Stick nests. ▪ Logs and organic litter. ▪ All ecosystem credit species assumed present in the surrounding assessment area.	▪ Connectivity to native vegetation and habitat to the north and east of the area of non-certified land. ▪ Any hollow-bearing trees or habitat for assumed ecosystem credit species in the assessment area. ▪ Southern Myotis habitat (treed areas) in locality.	One-off	Long-term	Construction / Operation	Low likelihood. Impacts to adjacent vegetation during construction and operational phases can be prevented or minimised through appropriate exclusion fencing, implementation of a CEMP detailing best practice environmental protection measures, strict water quality practices and stormwater controls, and by ensuring any lighting is directed towards the developed area, rather than towards the adjacent retained habitats.
Reduced viability of adjacent habitat due to edge effects	▪ Adjacent native vegetation connectivity in the assessment area. ▪ Hollow-bearing trees – potential breeding habitat	▪ Connectivity to native vegetation and habitat to the north and east of the area of non-certified land. ▪ Any hollow-bearing trees or habitat for	Ongoing	Short-term	Construction / Operation	Moderate likelihood. Adjacent habitats to the north and east of the area of non-certified land are currently subject to a high degree of edge effects due to prior clearing and surrounding existing industrial and agricultural land use. Since little (1.35 ha) vegetation is to be removed from the area of non-certified land and a



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
	for common hollow dependent fauna species. All ecosystem credit species assumed present in the surrounding assessment area.	assumed ecosystem credit species in the assessment area.				significant increase to edge effects is not expected to occur to the remnant vegetation surrounding the area of non-certified land, as a result of the proposal.
Reduced viability of adjacent habitat due to noise, dust or light spill	- Adjacent native vegetation connectivity in the assessment area. - Hollow-bearing trees – potential breeding habitat for common hollow-bearing tree dependent fauna species. - All ecosystem credit species assumed present in the surrounding assessment area.	- Connectivity to native vegetation and habitat to the north and east of the area of non-certified land. - Any hollow-bearing trees or habitat for assumed ecosystem credit species in the assessment area. - Southern Myotis habitat (treed areas) in locality.	Temporary	Short-term	Construction / Operation	Moderate likelihood. It is predicted that the adjacent habitat to the north and east of the area of non-certified land will be impacted in a small way by noise, dust and light spill, during construction and operation of the future development of the area of non-certified land. However, this will be managed via best practices outlined in a CEMP. The area of non-certified land also already occurs in an industrial and special use area, and light and noise pollution is most likely moderate currently. This will likely not substantially increase due to the proposed future development.
Transport of weeds and	Adjacent native vegetation	Connectivity to native vegetation	Ongoing	Long-term	Construction / Operation	Moderate likelihood. Weeds occurring within the area of non-certified land are



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
pathogens from the site to adjacent vegetation	connectivity in the assessment area.	and habitat to the north and east of the area of non-certified land.				common. Increased transport of pathogens and weeds that are not already within adjacent vegetation patches is unlikely to occur but will be managed by biosecurity measures outlined in the CEMP.
Increased risk of starvation, exposure and loss of shade or shelter	▪ Adjacent native vegetation connectivity in the assessment area. ▪ Hollow-bearing trees – potential breeding habitat for common hollow-bearing tree dependent fauna species. ▪ All ecosystem credit species assumed present in the surrounding assessment area.	▪ Connectivity to native vegetation and habitat to the north and east of the area of non-certified land. ▪ Any hollow-bearing trees or habitat for assumed ecosystem credit species in the assessment area. ▪ Southern Myotis habitat (treed areas) in locality.	Ongoing	Long-term	Construction / Operation	Low likelihood. The habitat present in the area of non-certified land is considered marginal for most fauna species given the disturbed condition, however, provides habitat for Southern Myotis (recorded in area of non-certified land) and as potential habitat for Maundia triglochinos and Persicaria elatior. The proposed future development will not result in an increased risk of starvation, exposure and loss of shade or shelter to native species due to the small total area of vegetation being removed in the area of non-certified land (1.35 ha) and it very small proportion of commensurate habitats available in the immediate vicinity.
Loss of breeding habitats	▪ Hollow-bearing trees – potential breeding habitat for common hollow-bearing	Hollow-bearing trees.	One-off	Long-term	Construction	Moderate likelihood. Specialist breeding habitat in the form of small to large hollows will be impacted by the proposed development. Retained vegetation in the assessment area provides higher quality



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
	tree dependent fauna species. ▪ All ecosystem credit species assumed present.					habitat and will not be reduced by the proposal.
Trampling of threatened flora species	▪ Not applicable.	Not applicable	Not applicable	Long-term	Construction / Operation	Moderate likelihood. No threatened flora species were found, but two species have been assumed present within the area of non-certified land (Maundia triglochinos and Persicaria elatior), and thus trampling of threatened flora species is possible. However, the whole area of non-certified land is proposed to be prepared for the construction of the proposed development.
Inhibition of nitrogen fixation and increased soil salinity	▪ Adjacent native vegetation connectivity in the assessment area.	Connectivity to native vegetation and habitat to the north and east of the area of non-certified land.	Unknown	Long-term	Construction / Operation	Moderate likelihood. Any future excavations or soil disturbance resulting from the future development of the area of non-certified land would be largely restricted to areas having undergone significant previous disturbance through grazing and clearing. As such it is not considered likely that the future development of the area of non-certified land would result in substantial changes to the level of nitrogen fixation or soil salinity in the locality.
Fertiliser drift	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Negligible likelihood. No fertiliser is proposed to be used.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
Rubbish dumping	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Negligible likelihood. Standard environmental controls for the proposed development will ensure potential impacts are minimised. Works will follow an approved CEMP or similar and specific waste and water management requirements.
Wood collection	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Negligible likelihood. The proposed development within the area of non-certified land is unlikely to increase access to any retained vegetation outside of the area of non-certified land, beyond current access capacity. Based on the future industrial use of the area of non-certified land, future landholders are not expected to be likely to undertake wood collection within the retained adjacent vegetation to a level that it will have a detrimental effect. Unauthorised access and collection of wood is expected to be minimal.
Removal and disturbance of rocks, including bush rock	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Negligible likelihood. The area of non-certified land does not support bush rock.
Increase in predators and pest animal populations	- All ecosystem credit species assumed present. - Common fauna species present.	Native vegetation within the surrounding assessment area.	One-off	Long-term	Operation	Moderate likelihood. The area of non-certified land already occurs within a semi-urbanised setting with pets, such as dogs and horses, and common pest species like rabbits and foxes are likely present. The



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
						area of non-certified land is already largely cleared. The remaining vegetation clearance proposed by the development and proposed land use is unlikely to increase predatory species populations.
Changed fire regimes	Adjacent native vegetation connectivity in the assessment area.	Native vegetation within the surrounding assessment area.	Ongoing	Long-term	Construction / Operation	The proposal occurs in a semi-urbanised area. Appropriate asset protection zones and fire mitigation systems will be implemented for the proposed development, and the proposal will not result in an increased risk of fire.
Disturbance to specialist breeding and foraging habitat, e.g. important mapped areas	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Negligible. No mapped important habitat occurs within the area of non-certified land.
Fragmentation of movement corridors	- Adjacent native vegetation connectivity in the assessment area. - Hollow-bearing trees – potential breeding habitat for common hollow-bearing tree dependent fauna species.	- Connectivity to native vegetation and habitat to the north and east of the area of non-certified land. - Any hollow-bearing trees or habitat for assumed ecosystem credit species in the assessment area.	One-off	Long-term	Construction/operation/rehabilitation	Moderate likelihood. Movement corridors are currently in the north and east towards vegetation and waterways/waterbodies in the locality. The proposed development will result in the removal of 1.35 ha of native vegetation that fringes the area of non-certified land to the north, west and east. The removal of vegetation along the north and east may fragment movement corridors; however, extensive remnant vegetation exists to the north of Bakers Lane (possible movement corridors),



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 66: ASSESSMENT OF INDIRECT IMPACTS						
Indirect Impact	Impacted Entities	Extent	Frequency	Duration	Project Phase	Likelihood and Consequences
	All ecosystem credit species assumed present in the surrounding assessment area.	Waterways and waterbodies.				which will not be impacted by the proposed development. Landscaping during rehabilitation of the site post-construction may strengthen connective habitat for generic, highly mobile fauna species.



Prescribed Impacts

Identification and assessment of prescribed biodiversity impacts are outlined and addressed in **TABLE 67** below.

TABLE 67: IDENTIFICATION OF INDIRECT IMPACTS			
Prescribed Impact	Description of Relevant Habitat Features	Threatened Species Likely to Utilise Habitat Features	Importance of Habitat Feature to Impacted Species
Karst, caves, crevices, cliffs, rocks and other geological features of significance	No karst, caves, crevices, cliffs rocks or other geological features of significance occur within the area of non-certified land.	Not applicable.	Not applicable.
Occurrences of human-made structures and non-native vegetation	One dilapidated building previously existed in the area of non-certified land but has since been demolished, therefore provides no habitat values. Non-native vegetation exists as exotic planted shrubs and trees around the demolished building site, as well as exotic grasses throughout the area of non-certified land.	The non-native vegetation within the area of non-certified lands is not likely to be utilised by threatened species.	Non-native vegetation in the area of non-certified land is unlikely to support key habitat requirements for fauna species.
Corridors or other areas of connectivity linking habitat for threatened entities	The area of non-certified land provides movement corridors from the northern and eastern vegetation and watercourses and waterbodies in the area of non-certified land.	All ecosystem credit species assumed present. Common fauna species.	Within the locality, the area of non-certified land is connected with some areas of uncleared vegetation and habitat, which also act as movement corridors.
Water bodies or any hydrological processes that sustain threatened entities	Three human-made dams and one unnamed non-perennial natural watercourse exist in the area of non-certified land in a degraded state. Nonetheless these areas provide generic fauna habitat values. Dams with fringing native vegetation (PCT 3975) conform with the BC Act listed <i>Freshwater</i>	Southern Myotis was recorded on site and is associated with areas of PCT 3975 and this EEC associated with the dams in the area of non-certified land.	This habitat is likely a small part of this highly mobile species' utilised habitats. Due to the minimal extent of vegetation removal on site compared to the broader locality's vegetation extent and available waterbodies, Southern Myotis is likely to utilise the habitat adjacent to the area of



TABLE 67: IDENTIFICATION OF INDIRECT IMPACTS

Prescribed Impact	Description of Relevant Habitat Features	Threatened Species Likely to Utilise Habitat Features	Importance of Habitat Feature to Impacted Species
	<i>Wetlands on Coastal Floodplains EEC.</i>		non-certified land after the proposal is finished.
Protected animals that may use the proposed wind farm development site as a flyway or migration route	Not applicable. The proposal is not for a wind farm development.	Not applicable.	Not applicable.
Where the proposed development may result in vehicle strike on threatened fauna or on animals that are part of a threatened ecological community	The proposed development will result in increased vehicle traffic during construction and operations. This increased vehicle traffic has the potential to impact native fauna species that are active during the day and evening, and generally with a higher potential for impact in areas where refuge/forage habitat exists immediately adjacent to areas where vehicle movements will occur (along Bakers Lane).	All ecosystem credit species assumed present. Common fauna species. Southern Myotis.	Non-threatened, ground dwelling fauna known to inhabit the general area, particularly common species such as Kangaroos and Emus are notoriously prone to vehicle strike. Low-flying ground-foraging birds are also prone to increased collisions due to an increase in traffic during construction. Vehicle strike is likely to be an existing impact, due to the existence of Mamre Road to the west and Bakers Lane to the north, which is unlikely to be significantly exacerbated during construction.

Serious and Irreversible Impacts

Cumberland Plain Woodland in the Sydney Basin Bioregion is considered to meet the principles for Serious and Irreversible Impacts (SAIL) and will be impacted by the proposal. The CEEC meets SAIL principles due to its rapid rate of decline, severe degradation through fragmentation, weed invasion, and structural changes, and restricted geographic distribution. The community has undergone large reductions in both geographic distribution and ecological function, with remaining patches typically small, isolated, and subject to ongoing threatening processes.

The proposal will impact 0.94 ha of this CEEC in the area of non-certified land, representing 0.004% of the community's total NSW extent. While this is a small proportional impact, the community's critically endangered status and demonstrated susceptibility to ongoing threats means any removal contributes to cumulative impacts on this highly threatened ecosystem. The impacted vegetation occurs in varying conditions and is already highly fragmented and edge affected. A detailed SAIL assessment addressing all four (4) SAIL principles has been included in **Appendix 4** of the BDAR.



7.16.3 Management and/or Mitigation Measures

Construction and operational management plans will contain an adaptive management component. Adaptive management strategies will be receptive to any new and relevant data that may arise through ongoing assessment and monitoring and are key to the successful implementation of crucial objectives yet also allow flexibility to changing dynamics and ongoing feedback and results. This includes measures to monitor predicted and uncertain impacts in the proposed development site which will trigger adaptive management actions and allow for effective and quick responses. Measures to mitigate or manage impacts have been set out below:

- Native vegetation removal and displacement of resident fauna including:
 - Implement Construction Environmental Management Plan (CEMP) with vegetation clearance, hollow-bearing tree removal, dam infill, and fauna injury protocols;
 - Two-staged hollow-bearing tree removal: ecologist inspection immediately before removal; and
 - Check all vegetation for fauna before clearing; implement unexpected species find procedure, if detected;
- Direct impacts to waterways and waterbodies including:
 - Appoint qualified Project Ecologist to oversee waterway/waterbody works;
 - Stop works if unexpected threatened species identified;
 - Install erosion and sediment controls; and
 - Implement dam dewatering plan.
- Introduction and spread of weeds including:
 - Implementation of the Weed Eradication and Management Plan (WEMP) (**Appendix 44**) directly after construction and considered during operation and construction works.
- Indirect impacts on native vegetation and habitat including:
 - Install stormwater and erosion controls throughout construction;
 - Install Tree Protection Zone (TPZ) exclusion fencing around retained trees;
 - Use "No Go Zone" signage; identify protected areas in site inductions;
 - Restrict stockpiles, parking, and machinery to cleared areas only; and
 - Mulch cleared native vegetation for re-use in landscaping.
- Mitigating prescribed biodiversity impacts including:
 - Prepare plans showing cleared vs. protected areas, exclusion zones, and habitat features; and
 - Develop clearing protocols for all vegetation removal.
- Adaptive management strategies proposed to monitor and respond to impacts on biodiversity values that are uncertain including:
 - Implement CEMP during works; and
 - Prepare Tree Retention Plan and Landscape Plan.

7.17 Human Health

A Human Health Impact Assessment (HIA) was prepared by E-Lab Consulting (refer **Appendix 45**), which integrates the findings of the relevant technical assessments in the EIS and has been prepared in accordance with the relevant NSW and national health guidance, including:

- enHealth Health Impact Assessment Guidelines (2018);
- enHealth EHRA Guidelines (2012); and
- Relevant EPA and NEPM air and noise criteria and other relevant legislation.

The purpose of the HIA is to evaluate potential human health impacts associated with the construction and operation of the proposed development. The HIA highlights that the potential impacts of the proposed development on community health and wellbeing include air quality, noise, and urban heat.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

The HIA integrates issues raised via the statutory EIS consultation process, including concerns from adjacent educational facilities, the Emmaus Retirement Village, and other neighbouring industrial users.

The HIA focuses on the plausible exposure pathways of environmental detriments on surrounding populations, including:

- Air quality: construction dust emissions and diesel generator emissions; and
- Noise and vibration: construction equipment, operational mechanical plant, and emergency/maintenance generator noise; and
- Urban heat: altered microclimate from large impervious surfaces and building mass.

7.17.1 Existing Environment

The site is located within the IN1 General Industrial zone within the MRP. Population density analysis using 2024 census data shows that the immediate site area has "very low" density (0-500 persons/km²), indicating a predominantly industrial area.

Identified Receivers

Receiver locations assessed in the NVIA, AQIA and Urban Heat Island Effect (UHIE) assessment include residential, educational, industrial, places of public worship, recreation, and childcare. The nearest sensitive receivers to the site are located to the north and include the Mamre Anglican School, Trinity Catholic Primary School, Emmaus Catholic College, Emmaus Retirement Village and some rural dwellings on sites transitioning to industrial uses.

The HIA notes that the NVIA categorisations for sensitive receivers are based on whether they are inside or outside the MRP rezoned area and if they are expected to exist in the long-term or only in the short term (transitioning to industrial uses or permanently relocating):

- Receiver catchments inside the MRP (long-term).
- Receiver catchments inside the MRP (short-term).
- Receiver catchments outside of the MRP.

The HIA also notes that the AQIA receptor locations are representative rather than exhaustive, chosen to reflect typical exposure conditions within their surrounding land uses. In areas where multiple sensitive uses occur close together (for example, a school adjacent to a retirement village), the receptor nearest to the emission source was selected to represent potential impacts for all nearby sensitive uses.

In terms of the potential for urban heat island effect (UHIE), the HIA notes that the site and the surrounding environment have the following characteristics:

- Local topography is generally flat to gently undulating.
- Prevailing winds are predominantly from the east during warmer months and from the west to northwest during cooler months.
- Land uses within the surrounding area are primarily industrial and semi-rural, with large impervious areas such as roads, hardstands, and warehouse roofs interspersed with sparse vegetation, which contributes to localised heat retention.

Overall, the HIA suggests the baseline microclimate of the Mamre Road site reflects a heat-prone environment.



7.17.2 Assessment of Human Health Impacts Associated with Air Quality

The HIA included a detailed review of the Air Quality Impact Assessment (AQIA) prepared by Northstar Air Quality. The potential air quality human health impacts associated with the proposed development are considered to be:

- Short-term respiratory effects (e.g. irritation, coughing, exacerbation of asthma) associated with elevated short-term concentrations of particulates and NO₂ during dust-generating construction activities or emergency generator operation.
- Nuisance impacts (e.g. visible dust deposition) near the site during construction if dust is not adequately controlled.
- Low long-term health risk from chronic exposure, as operational emissions under normal generator testing scenarios are limited in duration and predicted annual average concentrations comply with relevant NSW EPA and NEPM criteria.
- Negligible health risk from toxic air pollutants (BTEX, PAH, formaldehyde), which are predicted or assumed to be present at negligible background concentrations and assessed against conservative criteria.

The HIA includes an air quality risk assessment to determine the potential for the impacts mentioned above to adversely affect the health of sensitive receptors during construction, operation – emergency scenarios, and operation – maintenance testing. The results of the risk assessment are provided in **(TABLE 68)** and show that the inherent risks related to air quality impacts range from low to high; however, once the probability of occurrence and the proposed management and mitigation measures in the AQIA are taken into account, the residual risk levels are considered low or very low.

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 68: AIR QUALITY – HEALTH RISK ASSESSMENT

Risk	Consequence	Likelihood	Inherent Risk Level	Uncertainty	Health Risk Management / Controls	Residual Risk Level
Construction phase (scenario C1 and C2) ^{Note 1}						
Dust emissions, (from earthworks, haulage, and wind erosion)	Localised dust deposition and temporary increase in TSP, PM ₁₀ and PM _{2.5} . Short-term respiratory symptoms and nuisance dust at nearby receptors	Possible during high-activity construction periods. It's dependent on weather and activity level	Medium	Moderate – variable depending on concurrent nearby works, future construction staging and weather variability	Implementation of a Construction Air Quality Management Plan (CAQMP) including dust suppression (water sprays, water carts, covering loads), minimise drop heights, stabilisation of exposed surfaces, control of vehicle speed limits, air quality monitoring, and a Trigger Action Response Plan (TARP).	Low
Cumulative impacts from nearby developments	Potential additive increase in particulate and NO ₂ concentrations in the broader area	Possible depending on timing of regional construction and operation	Medium	Moderate – future development timing and intensity uncertain	Cumulative air quality modelling; regional planning controls; adherence to EPA and planning requirements	Low
Operation - Emergency (Scenario E1 to E6) Justified Worst Case Scenario						
Emergency generator operation during feeder failures	Potential acute exposure to elevated TSP, PM ₁₀ , PM _{2.5} , NO ₂ and CO under worst-case outage scenarios	Rare (multiple feeder failures highly unlikely)	High (inherent, before controls)	High – conservative modelling assumptions overstate duration of exposure	Network redundancy; short expected outage durations; emergency-only operation; EPA-compliant generator technology	Low
Operation - Maintenance testing Realistic (Scenarios M1 to M6)						



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Diesel generator emissions during maintenance (NO ₂ , PM ₁₀)	Short-term reversible respiratory effects; minimal long-term risk due to limited hours	Unlikely (scheduled, short-duration testing only)	Low - Medium	Low – based on EPA Tier 2 (other data centre impacts) generator performance and defined operating hours	Modern low-emission generators; limited operating hours; maintenance to ensure optimal combustion; compliance monitoring if required	Low
Cumulative impacts from nearby developments	Potential additive increase in particulate and NO ₂ concentrations in the broader area	Possible depending on timing of regional construction and operation	Medium	Moderate – future development timing and intensity uncertain	Cumulative air quality modelling; regional planning controls; adherence to EPA and planning requirements	Low
Exposure of sensitive receptors (residential, educational, medical, recreational)	Short-term respiratory irritation in more vulnerable populations during peak events	Possible but short-duration and infrequent	Medium	Moderate – variability in time spent at each location	Use of worst-case receptor locations in modelling; dust and emissions controls; communication of high-impact events via site management if required	Low
Toxic pollutants (BTEX, PAH, formaldehyde)	Minimal health risk due to predicted negligible concentrations	Rare to negligible	Low	Low – conservative criteria and limited emission potential	Design to meet NSW EPA toxic pollutant criteria; periodic review of emission factors; additional monitoring if required by regulators	Very Low
Odour emissions (construction fuel spills + diesel exhaust odour from)	During construction: Slight, temporary odour if accidental fuel spill occurs.	Construction: Rare due to infrequent spills. Operation: Unlikely during	Low - Medium	Low-Moderate individual odour sensitivity varies;	Spill kits deployed onsite to manage accidental fuel spills; rapid response procedures; EPA-compliant diesel generators; very limited operating hours; VOC and odour assessment completed against relevant criteria showing compliance	Very Low



testing/emergency operation	During operation: Mild diesel odour during brief generator testing or emergency use; VOCs (toluene, xylene) assessed within odour criteria	testing; Possible during emergency generator use		emergency duration uncertain		
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7.17.3 Assessment of Human Health Impacts Associated with Noise

The HIA included a detailed review of the Noise and Vibration Impact Assessment (NVIA) prepared by Renzo Tonin & Associates. The potential construction phase noise-related human health hazards associated with the proposed development are considered to be:

- Airborne construction noise from high-noise plant.
- Out of hours work.
- Construction traffic noise.
- Cumulative construction noise if works overlap with other major project construction in the locality.

The potential operational phase noise-related human health hazards associated with the proposed development are considered to be:

- Continuous noise emissions from cooling systems, transformers and other mechanical plant.
- Noise associated with the regular testing of diesel generators
- Noise associated with emergency events (power failure).
- Low frequency noise (LFN)

These construction and operational noise hazards could cause human health impacts, including low-level annoyance, reduced outdoor or indoor acoustic amenity, reduced speech intelligibility outdoors, temporary stress responses during generator testing and mild stress responses among noise-sensitive individuals (e.g., children, elderly residents).

The HIA includes a noise risk assessment to assess the potential impacts of the above-noted hazards on the health of sensitive receptors during construction and operation. The results of the risk assessment are provided in **TABLE 69** and show that the inherent risks associated with noise impacts range from low to high, however, once the probability of occurrence and the proposed management and mitigation measures in the NVIA are considered, the residual risk levels are all low-medium or low.

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 69: NOISE- HEALTH RISK ASSESSMENT

Health Risk Description	Potential Health Consequences	Likelihood	Inherent Risk Level	Uncertainty	Health Risk Management / Controls	Residual Risk Level
Construction phase						
Daytime construction noise at nearest receptors	Short-term annoyance, irritation and reduced amenity; difficulty concentrating or conducting conversations indoors/outdoors; transient stress responses.	Likely for nearest residences (NCA01/NCA03) during specific high-noise activities and phases; Unlikely-Possible for more distant receivers where predicted levels are below NML.	Medium-High	Moderate - Variability of construction activities, noise sources, locations, occupant sensitivity, and concurrency of activities	- Adopt Standard construction hours, - Prioritise quiet plant selection, - Implement general engineering noise control like acoustic enclosures/barriers - Optimised worksite layout and traffic flow, - CNVMP implementation, including monitoring and adaptive management.	Low-Medium for nearest residences Low for more distant receivers
Daytime construction phases overlap noise at schools and childcares	Intermittent interference with speech communication, teaching, and outdoor play; short-term annoyance and	Possible-Likely during periods of high-noise works when two overlapping phases or activities are occurring	Medium	Moderate dependant on detailed school timetables and exact	- Schedule highest-noise works away from key teaching/exam periods where practicable, in	Low-Medium -short-term disruption possible but manageable, with no



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	distraction among students and staff.	Unlikely during typical construction activities when predicted levels are below NML.		sequencing of works. Variability of construction activities, noise sources, locations, occupant sensitivity, and concurrency of activities	consultation with schools/childcare. - Maintain plant as far as practicable from school boundaries; use barriers/acoustic screens where effective. - Use quieter methods/equipment and throttle down or switch off plant when idle. - Provide advance notification so schools can plan indoor activities during short high-noise periods.	anticipated long-term health consequences.
Construction traffic noise on Mamre Road and access routes (residences along routes)	Slight increase in annoyance and perceived traffic noise, particularly during peaks of construction traffic; minor interference with conversation in outdoor areas.	Possible – traffic volumes on key routes will increase during peak construction but from an already road-influenced baseline.	Low-Medium	Moderate depends on final haul routes, staging and construction traffic management.	- Use agreed haul routes and times; avoid sensitive night-time periods where possible. - Apply standard construction traffic management measures and vehicle maintenance (e.g. mufflers, speed control). - Coordinate deliveries to	Low – incremental change relative to existing road noise, mainly noticeable during peak construction periods.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

					reduce clustering of heavy vehicles, especially if OOH works occur.	
Construction vibration at nearby residences, schools and industrial buildings (human annoyance)	Perception of vibration and rattling; concern about potential property damage; annoyance, discomfort, interference with concentration and anxiety about structural damage . Health impacts are primarily stress and anxiety rather than direct physical injury.	Possible when vibration-intensive plant operates within human-annoyance minimum working distances, particularly for rollers and hammers.	Medium	Moderate depends on detailed selection and location of plant and ground conditions.	– Apply vibration minimum working distances and screening assessment; adjust plant type or location where necessary. – Undertake vibration testing at start of vibration-intensive activities; implement on-site vibration monitoring with alert thresholds. – Conduct pre-construction dilapidation surveys; implement clear vibration complaints procedure and responsive mitigation (change methods, buffer zones, time restrictions).	Low- vibration may still be perceptible at times, Residual health risk is mostly occasional annoyance and short-term stress rather than long-term morbidity.
Cumulative construction noise from the proposal and other MRP projects	Increased frequency and duration of noisy	Possible - overlapping	Medium	Moderate - High -	– Coordinate construction	Low-Medium-



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	periods, potentially leading to prolonged annoyance and reduced perception of respite for some residents and school users.	construction stages may increase noise levels by up to ~3 dB(A) and extend impact periods.		depends on timing and intensity of other projects beyond the control of this proposal.	activities across nearby projects to manage concurrent noise levels. – Apply all feasible and reasonable noise mitigation measures consistently across the proposal (engineering controls, layout, scheduling). – Consider cumulative effects when planning high-noise tasks. – Ongoing communication with community and coordination with nearby major projects where possible. – Prepare a detailed Construction Staging Plan (CSP)	some persistent annoyance possible for small subset of nearest receivers, but significant or long-term health impacts are not expected.
Operational phase						
Chronic exposure of long-term residential and institutional receivers (outside MRP) to operational plant noise	Continuous/long-term noise from cooling systems, chillers, transformers and ventilation plant can	Possible near the project without mitigation, given the large amount of high-level	Medium-High – without mitigation,	Low-Moderate	– Set and apply PNTLs for all NCAs, derived from NPfl and MRP DCP amenity	Low. After mitigation, Residual health risk is low-level



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	lead to noise annoyance, reduced outdoor amenity, interference with conversation and relaxation, and potential modest long-term stress reactions if above or close to NPfI PNTLs.	rooftop and substation plant.			criteria (including cumulative industrial noise). - Apply comprehensive built-in noise mitigation measures, ensuring transformers meet AS60076.10 limits, and orienting vents and louvres away from sensitive receivers - Apply annoying-characteristics corrections (tonality, low-frequency, intermittency) in design/assessment and ensure operational levels including penalties still meet PNTLs. - Undertake noise compliance monitoring after commissioning and as part of ongoing management, with corrective actions if levels exceed PNTLs.	annoyance potential, not significant morbidity.
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ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Chronic exposure of short-term receivers within the MRP (existing residences + Mamre Anglican School) to operational noise, including residual exceedances	For existing residential and school receivers inside the rezoned MRP, operational noise can cause mild-moderate annoyance, reduced outdoor amenity, and potential interference with teaching and learning (for the school) if present over extended periods.	Likely that these specific short-term receivers will experience Marginal residual impacts (≤ 5 dB above PNTL) for parts of the development staging, assuming they remain in place.	Medium-High	Moderate	- Maintain and enforce design-embedded mitigation for all plant. - Use negotiated at-property mitigation (e.g. façade upgrades, acoustic glazing, ventilation enhancements) or agreements for these short-term receivers until existing residential/school uses cease or relocate - Review residual impacts during detailed design and when tenant loads are known; refine plant selection and control strategies if monitoring shows higher than predicted levels.	Low-Medium. Residual exposure is limited to a small number of short-term receptors, with impacts classified as Marginal by NPfI. With at-property treatments and eventual relocation, long-term health risk is low; primary residual effect is annoyance / reduced amenity while the uses remain.
Night-time operational noise events (plant changes, vehicle movements, occasional air-brake events) - sleep disturbance at residences	Intermittent night-time events (e.g. truck movements, air-brake events, some plant changes) could cause sleep disturbance (awakenings, difficulty	Possible in absence of design/management, but Unlikely given predicted LA_{max} values below 52 dB(A)	Medium - chronic night-time sleep disturbance would be a high-	Low-Moderate NVIA uses worst-case assumptions and conservative	- Design and operate plant such that PNTLs are met, which automatically ensures LA_{eq}-based sleep	Low. NVIA explicitly concludes that sleep disturbance impacts are not



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

	initiating or maintaining sleep). NVIA assesses this against L_{max} screening (NPf / RNP) and awakening thresholds and finds that predicted maximum levels are below both screening and awakening criteria at all residential NCAs for the fully developed campus.	external and below awakening criteria.	consequence health issue, but probability is low with compliant L _{max} .	outside-to-inside attenuation; actual internal levels may be lower (e.g. closed windows, heavier facades).	disturbance criteria are satisfied. – Ensure night-time L_{max} from the loudest predictable events (vehicles, air-brakes, plant changes) remain below screening and awakening thresholds – Minimise noisy truck manoeuvres at night near sensitive receivers and manage loading docks/carparks to reduce late-night braking/reversing events – Maintain operational noise management plan with monitoring and complaint-response mechanisms for night-time noise.	predicted, with all modelled L_{max} values below the screening and awakening criteria at residential locations. Residual health risk is minimal.
Low-frequency and tonal noise from plant and equipment	Headaches, sleep disruption, “vibration” perception, stress-related symptoms	Likely	Medium	Moderate - High – depends on final plant selection	– Require LFN analysis; apply tonal penalties; specify non-tonal operating modes	Low-Medium



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

						and spectral data		
Operational road traffic noise (staff, service and delivery vehicles on Mamre Road and new access roads)	Increases in road traffic from the data centre can incrementally increase roadside noise exposure, contributing to annoyance, communication interference and (if large enough) sleep disturbance for residents along Mamre Road and connecting roads.	Unlikely – Possible. NVIA shows that predicted changes in construction and operational traffic noise are <2 dB(A) at the nearest sensitive receivers, which is generally not perceptible and complies with RNP.	Low-Medium – road traffic noise is a known chronic health burden, but the incremental change from this project alone is small.	Low-Moderate. Based on traffic forecasts and conservative routing assumptions (all traffic assumed to pass the nearest receivers), but actual traffic growth in the corridor may differ.	- Design site access and internal roads to minimise heavy vehicle movements near existing residences where practicable; use roundabout and access configuration as modelled. - Implement traffic management measures (routing, speed control, scheduling of heavy vehicle movements outside night hours where possible). - Periodically review traffic volumes and, if necessary, revisit road traffic noise assessment and consider further	Low. Incremental changes in traffic noise from the proposal are expected to be below perceptible levels for residents and within RNP criteria; therefore the additional health impact above existing and future background traffic is negligible.		



					mitigations (e.g. façade treatments on affected dwellings per RNP practice).				
Short-term elevated noise from generator testing and operation			Short, intense bursts can interrupt teaching, concentration, or rest. Startle response; temporary discomfort; short-term stress Outdoor conversations, instruction, or recreation may be disrupted.		Possible	Medium	Low - predictable and manageable with scheduling	- Daytime-only testing; acoustic walls; generator enclosures and mufflers	Low



The HIA concludes that while the facility will introduce continuous and intermittent noise sources typical of a data centre, the majority of sensitive long-term receptors are not expected to experience adverse health effects due to the significant mitigation incorporated into the design. Minor, short-term impacts may occur for transitional residential receivers within the MRP, primarily in the form of annoyance, reduced amenity, or temporary stress responses during generator testing or emergency scenarios. These impacts are limited in duration, scope, and intensity, and do not pose significant long-term health risks.

7.17.4 Assessment of Urban Heat Island Impacts

UHIE refers to the phenomenon where urbanised areas experience higher ambient temperatures than surrounding rural or vegetated regions. UHIE mainly results from heat-absorbing materials like concrete and metal surrounded by limited vegetation. The gradual release of heat from these surfaces can increase nighttime temperatures, resulting in higher cooling energy requirements and affecting occupant comfort.

The HIA used a microclimate simulation that integrated geometry, building features, and meteorological data to estimate surface heat fluxes and radiative balance related to the proposed development. The model details for the proposed development noted that post-development, the site would contain the following characteristics:

- Footprint density 24%
- Façade to site ratio 61%
- Vegetation cover 36%

The simulation found that the maximum daily air temperatures across the site would remain essentially unchanged, but the proposed development would contribute to minor localised nighttime warming.

To better understand the potential human health impacts associated with the UHIE, the HIA included a Universal Thermal Climate Index (UTCI) assessment. Indicative views of the UTCI are provided in **Figure 102**, which shows that the proposed landscaping of the site reduces urban heat at the boundaries and around the buildings, but hardstand areas, including internal roads and carparks and the future Southern Link Road would cause increased temperatures. Overall, the UTCI concluded that the potential UHIE of the proposed development has been effectively mitigated through site layout and landscaping but recommended some additional measures to further reduce the urban heat caused by hardstand areas with little shading.

**Figure 102. Typical Summer Midday UTCI**

Source: Blackash, Bushfire Consulting, 2025

7.17.5 Management and Mitigation Measures

The HIA reviewed the comprehensive management and mitigation measures proposed in the AQIA and NVIA and concluded that these measures would effectively reduce air and noise impacts to acceptable levels, thereby decreasing the potential for human health impacts in the surrounding area. The HIA did not recommend any additional mitigation measures related to air and noise impacts.

Based on the outcomes of the UHIE and UTCI analysis, the HIA concluded that some minor additional mitigation measures can be integrated into the design to minimise the proposed development's contribution to local heat build-up. The proposed mitigation measures and strategies include:

- Incorporation of high reflectance roofing materials to reduce surface heat gain.
- Utilisation of permeable and lighter-coloured paving materials for roads and hardstand areas.
- Providing shading structures in high-activity outdoor zones.

These measures would be implemented as part of the detailed design of the proposed development carried out as part of the construction certificate documentation.

The HIA concluded that implementing these measures would improve local thermal comfort and reduce the proposed development's overall UHI impact, supporting long-term environmental and operational performance objectives.

7.18 Social

Social impacts are generally experienced when a new project brings change. The social impact of a proposal includes the direct and indirect effects on people and their communities throughout the proposed development's lifecycle. A Social Impact Assessment (SIA) is an independent and objective study that identifies, analyses, assesses, manages, and monitors a project's social impacts, both positive and negative. These impacts have been assessed in accordance with the DPHI's Social Impact Assessment Guidelines (2025).

Within the context of the site and its surroundings, the transformation of the Mamre Road Precinct from rural to industrial land use represents one of the most significant cumulative development programmes in Western Sydney. The concurrent delivery of multiple industrial developments, including data centres, warehousing facilities, and supporting infrastructure, requires coordination among private developers, state agencies, and local governments. As such, the technical analysis of key issues such as air quality, noise, stormwater and traffic issues has taken the wider context into account. A key aspect in evaluating the significance of impacts has been the consultation with, and consideration of, the schools to the north of the site as sensitive receptors. As noted in the supporting Engagement Report, these considerations included reorganising the Site Plan to facilitate larger setbacks to the schools, as well as reducing traffic impacts on Bakers Lane to focus access to the site from the emerging road network south of the site. Open communication has been successfully established to facilitate ongoing consultation throughout construction and operation periods.

Overall, the proposal will deliver significant positive social impacts aligned with strategic planning objectives, including:

- Economic Investment in Digital Infrastructure: With an estimated development cost for the 1.2 GW facility of approximately \$9 billion, this proposal will deliver hyperscale digital infrastructure, contributing to the economic use of land in the Mamre Road Precinct.
- Activation of land in the Mamre Road precinct: Contributing to the vision for the globally competitive Western Sydney, and approximately 10,570 construction jobs and 800 ongoing jobs
- Transport Connectivity: Delivering land dedication and new roads supporting the delivery of the precinct; and
- High-quality industrial development: Contributing to regional stormwater, tree canopy and amenity in the precinct.

The assessment identified impacts during the construction period, whilst these are temporary in nature, due to the size of the site, there is a ten-year construction timeframe with distinct phases 0-7. In this context, it is important to consider the staged development of each of the six land parcels within the site and the ability to manage construction impacts in a staged way. These impacts are assessed as manageable and rely on the implementation of a wide range of measures, including the following mitigation measures identified for impacts of medium to very high significance.

Construction Phase

Recommendation 1: Prior to construction commencement, prepare and implement a comprehensive Construction Environmental Management Plan (CEMP), to:

- Ensure effective environmental and social management of the site during all construction phases, including bulk earthworks, road construction, and infrastructure delivery.
- Address the social impacts identified in this SIA, particularly those relating to noise and vibration, dust and air quality, and traffic, to minimise disruption to the amenity, health and wellbeing of surrounding residents (including adjacent schools) and other stakeholders.
- Implementation of staged management of stormwater throughout the construction phases to meet Sydney Water requirements.
- Include construction schedules, sequencing of works, approved hours of operation, environmental control measures, and a communications protocol for nearby schools, residents and businesses.
- Coordinate dust suppression and air quality monitoring protocol in response to construction activity on site, noting concurrent activities with adjacent developments
- Establish construction noise coordination protocols requiring notification to neighbouring sites before high-noise activities and staggered scheduling of impact equipment operation.



- Implement the Construction Air Quality Management Plan (Northstar) measures, including water carts, solid screening barriers, progressive stabilisation, and speed limits on sealed surfaces.

Recommendation 2: Develop and implement a Construction Traffic Management Plan in conjunction with the CEMP, to:

- Identify designated heavy vehicle routes and manage construction-related traffic movements.
- Minimise disruption to road users by scheduling deliveries outside peak hours.
- Incorporate traffic control measures at key intersections and access points to ensure safety for all road users.
- Include site induction and training protocols on traffic safety for all workers.
- Provide consistent, accessible communication to local residents and stakeholders about anticipated traffic conditions, access limitations, and construction updates.
- Coordinate heavy vehicle movements with concurrent nearby projects to avoid cumulative impacts during network peak hours

Recommendation 3: Implement Aboriginal cultural heritage management measures as outlined in the Aboriginal Cultural Heritage Assessment (Biosis) through:

- Development of a Cultural Heritage Management Plan in collaboration with Registered Aboriginal Parties prior to ground disturbance.
- Coordination with adjacent developments to prevent consultation fatigue and ensure consistent engagement protocols.
- Provision of community collection opportunities for the seven identified AHIMS sites before bulk earthworks commence.
- Integration of heritage interpretation elements into the landscape design in partnership with local Aboriginal stakeholders.

Recommendation 4: Implement the measures outlined in the Landscape Plan (Geoscapes), and Arboricultural Impact Assessment (Creative Planning Solutions), to:

- Offset for the non-certified land as has been identified
- Appropriate planting and landscaping vegetation to create the desired local character as envisioned in the DCP for Mamre Road Precinct
- Create a cohesive, resilient, and locally responsive environment within the site in line with the DCP requirements as well as the proposed development requirements (as Data Centre Campus require specific functional and security requirements)
- Street trees to be planted that align with the Mamre Road Penrith Council's Street Tree Masterplan to create a cohesive public domain outcome

Recommendation 5: Maintain effective community and stakeholder relations to ensure effective long-term environmental management and integration:

- Establish a program for community liaison meetings addressing construction / operational impacts and emerging concerns.
- Participate in precinct-wide infrastructure planning where relevant to address cumulative impacts/demands of infrastructure/servicing.

Operational Phase

Recommendation 6: Operational noise impacts across the data centre campus are to be managed by:



- Implement the acoustic attenuation measures as specified in the Noise and Vibration Impact Assessment (Renzo Tonin and Associates), including acoustic screening, attenuators and enclosed plenum spaces.
- Maintain a complaints register to address any noise-related queries from neighbouring properties
- Restrict concurrent generator testing to a maximum of six units and coordinate with adjacent facilities to prevent overlapping test schedules.

Recommendation 7: Urban heat island effects and climate resilience to be addressed through implementation of measures outlined in the ESD Report (E-Lab Consulting), including:

- Achievement of increased tree canopy coverage, prioritising western and northern boundaries.
- Installation of high-albedo surfaces on all rooftops and extensive paved areas to reduce heat absorption.

Recommendation 8: Once the data centre is fully operational, the infrastructure in the precinct will continue to be delivered, including the future Southern Link Road, the potential Western Sydney Freight line and the associated Intermodal and regional stormwater systems. To ensure coordinated delivery, it is recommended that the proponent continue:

- To engage with TfNSW, considering the realisation of the complete road network envisaged for the Mamre Road Precinct
- To engage with Sydney Water to coordinate matters regarding the realisation of the Precinct's complete stormwater management and detention systems

Recommendation 9: Maintain effective community and stakeholder relations by recalibrating the program established during construction, as needed, for community liaison to address operational matters, such as testing of backup power systems.

The long-term success of the Mamre Road Precinct is dependent on precinct transformation, which requires ongoing coordination of State and local Government and the private sector over the coming decades. In particular, support for the relocation of schools should be considered as part of the wider transformation of the precinct, particularly as the precinct-level regional stormwater system and regionally significant future freight line and associated intermodal impacts are progressed.

7.19 Airport Safeguarding

An Airport Safeguarding Assessment has been prepared by L+R Airport Consulting and provided as **Appendix 34**. The Airport Safeguarding Assessment has undertaken an assessment against the relevant guidelines as they relate to the Western Sydney International (Nancy-Bird Walton) Airport (WSI).

7.19.1 Assessment of Impacts

National Airports Safeguarding Framework

The National Airports Safeguarding Framework (NASF) is a national land use planning framework that aims to:

- Improve community amenity by minimising aircraft noise-sensitive developments near airports including through the use of additional noise metrics and improved noise-disclosure mechanisms; and



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

- Improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions through guidelines being adopted by jurisdictions on various safety related issues.

An assessment of the proposal against the NASF Guidelines has been undertaken in **TABLE 70** below.

TABLE 70: ASSESSMENT OF NASF GUIDELINES		
Guideline	Function	Compliance
Guideline A Measures for managing impacts of aircraft noise	The purpose of Guideline A is to provide guidance to Commonwealth, State, Territory and Local Government decision makers to manage the impacts of noise around airports including assessing the suitability of developments.	While the proposed site is outside the 20 ANEC as published on the Western Parkland City SEPP Noise Exposure Contour Map, it is also worth noting that the site is outside the draft EIS 20 ANEC for all scenarios assessed in the draft EIS except the 2055 ANEC 20 contour when the preferred runway direction is Runway 05. In this instance, the site is within the 20 – 25 ANEC 2055. However, as described above 'Light Industrial' is 'acceptable' in less than 30 ANEF and 'commercial buildings' 'acceptable' in less than 25 ANEF in accordance with the AS 2021:2015.
Guideline B Managing the risk of building generated windshear and turbulence at airports	The purpose of Guideline B is to assist land use planners and airport operators in their planning and development processes to reduce the risk of building generated windshear and turbulence at airports near runways.	The proposal at 706-752 Mamre Road, Kemps Creek is outside the assessment trigger areas as defined in Guideline B. Therefore, no further assessment is required.
Guideline D Managing the risk of wind turbine farms as physical obstacles for air navigation	The purpose of Guideline D provides guidance to State/Territory and local government decision makers, airport operators and developers of wind farms to jointly address the risk to civil aviation arising from development, presence and use of wind farms and wind monitoring towers.	The proposed development plans provided do not indicate the installation of any wind turbines or wind monitoring towers.
Guideline G Protecting aviation facilities – Communication, Navigation and Surveillance (CNS)	The purpose of Guideline G is to formalise the protection of CNS facilities in land use planning decisions. This Guideline provides land use planning guidance to better protect CNS facilities which support the system and processes in place by various agencies to safely manage the flow of aircraft into, out of and across Australian airspace. The Guideline also informs procedures which ensure development associated activities within Building Restricted Areas (BRA) of CNS facilities do not adversely affect the facility or	The proposal is outside the Glide Path and Localiser Building Restricted Areas.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 70: ASSESSMENT OF NASF GUIDELINES

Guideline	Function	Compliance
	cause interference for air traffic controllers or aircraft in transit.	
Guideline H Protecting strategically important Helicopter Landing Sites (HLS)	The purpose of Guideline H is to provide guidance to state/territory and local government decision makers as well as the owners/operators of identified Strategically Important Helicopter Landing Sites (SHLS) for the ongoing operations and to ensure SHLS are not compromised by any proposed development. For the purposes of this Guideline, an SHLS is an area not located on an aerodrome.	A SHLS is identified as being of strategic importance and associated with a hospital, elevated in a populated area and/or subject to instrument flight procedures. The flight path protection areas extend 3.5 km from the SHLS. The proposal does not appear to be within 3.5 km of any existing hospitals.
Guideline I Public Safety Areas (PSAs)	The purpose of Guideline I is to provide guidance on approaches for the application of Public Safety Areas (PSA) planning framework in Australian jurisdictions. The Guideline is intended to ensure there is no increase in risk from new development and assist land-use planners to better consider public safety when assessing development proposals, rezoning and the proposed development of strategic land use plans.	The site is outside the PSAs as defined by the Western Parkland City SEPP Public Safety Area map and the Airport Plan 2021.

Plume Rise Assessment

Any plume rise that exceeds the critical velocity of 4.3 m/s at the point of exit must be assessed by CASA. The AQIA at **Appendix 16** details that CASA has reviewed the proposal and confirmed that *“the plume from this development will not be a hazard to aircraft operations and no CASA mitigation are required. CASA has no objection to the proposal as detailed below.”*

Lighting

The proposal is situated outside the light control zones and outside the 6km assessment trigger radius, as such there is no further action required.

Prescribed Airspace

The site is within the WSI OLS and at a maximum elevation of 107.5 m AHD would remain below the OLS. The PANS-OPS airspace protections are not yet published for the airport however it is expected the OLS would be lower.

Construction Impacts

Any penetrations of prescribed airspace by construction plant and equipment during construction constitutes a controlled activity under the *Airports (Protection of Airspace) Regulations 1996*. Construction equipment and methodologies will need to be assessed, and any penetrations of prescribed airspace will require approval under the *Airports (Protection of Airspace) Regulations 1996*.

7.19.2 Management and Mitigation Measures

Wildlife Hazards



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kempas Creek NSW 2187 (Lot 10 DP 1280592)

The proposed development site is situated within the wildlife management area, Area B. The proposal as provided does not include specified uses that require referral to WSI however, in accordance with the Western Parkland City SEPP and the MRP DCP 2021:

- All waste bins are designed and installed with fixed lids;
- Any bulk waste receptacle or communal waste storage area is contained within enclosures that cannot be accessed by birds or flying foxes;
- Any stormwater detention (include the basins during the phased construction) is designed to fully drain within 48 hours after a rainfall event;
- Buildings and structures are designed to minimise the opportunity for roosting areas; and
- Appropriate landscape species should be planted and when the landscaping plan is developed in detail it should be submitted to WSI for approval.

7.20 Bush Fire

As identified in **Figure 103** below, the site is mapped as Category 3 Vegetation and Vegetation Buffer land and is therefore bushfire prone land.

A Bushfire Hazard Assessment has been prepared by Blackash Bushfire Consulting in support of the proposal and is provided at **Appendix 31**.

The proposal is categorised by the NSW Rural Fire Service (NSW RFS) planning policy document *Planning for Bush Fire Protection 2019* (PBP) as “other” development and must meet the aim and objectives of the PBP.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)



Figure 103: Bush Fire Prone Land

Source: Blackash Bushfire Consulting, 2025

7.20.1 Assessment of Impacts

The Bushfire Hazard Assessment recommends the following bushfire measures for the proposal which are based upon the relevant provisions of the PBP, as set out below:

- **Asset Protection Zones:** At the commencement of building works and in perpetuity, the site shall be maintained as an Asset Protection Zone (APZ). The APZ shall be established and maintained as an inner protection area as outlined within PBP and the NSW RFS document 'Standards for Asset Protection Zones'.
- **Fire Hydrants:** Fire hydrants are provided in accordance with Building Code of Australia E1.3, AS2419.1:2005, including the ring main requirements for large, isolated buildings and those identified in Section 9.
- **Compliance with Relevant Standards:** The part of buildings affected by BAL (Figure 8) is to be constructed to comply with the National Construction Code (2019), Australian Standard AS 3959:2018, *Construction of buildings in bush fire-prone areas* and/or NASH Standard (1.7.14 updated), *National Standard Steel Framed Construction in Bushfire Areas – 2014*, and Section 7.5 of PBP on a prescriptive (deemed to satisfy and/or acceptable solution) basis and/or performance basis.
- **Roads:** All proposed roads within the site must comply with section 5.3.2 of PBP, as appropriate.

The relevant aims and objectives of the PBP are addressed in **TABLE 71** below:

TABLE 71: COMPLIANCE WITH PBP	
Objective	Comment
Aims	
The aim of PBP is to use the NSW development assessment system to provide for the protection of human life (including fire fighters) and to minimise impacts on property from the threat of bushfire, while having due regard to development potential, onsite amenity and the protection of the environment.	Landscaping, defensible space, access and egress, emergency risk management and construction standards are in accordance with the requirements of PBP, and the aims of PBP have been achieved.
Objectives	
Afford occupants of any building adequate protection from exposure to a bushfire.	The proposed development provides opportunity for all occupants to be shielded from any external bushfire. Construction will comply with the NCC and AS3959 (2018).
Provide for a defensible space to be located around buildings.	Defensible space is provided around the building.
Provide appropriate separation between a hazard and buildings, which, in combination with other measures, prevent the likely fire spread to buildings.	The building is separated from the vegetated areas and provide APZs and commensurate construction in accordance with the NCC.
Ensure that safe operational access and egress for emergency service personnel and occupants is available.	The site has direct access to public roads, and access and egress for emergency vehicles and evacuation is adequate.
Provide for ongoing management and maintenance of bushfire protection measures.	The site will be managed including all APZ and landscaping in accordance with PBP.
Ensure that utility services are adequate to meet the needs of firefighters.	Utility services are adequate to meet the needs of firefighters (and others assisting in bushfire fighting).



7.21 Waste Management

A Waste Management Plan (WMP) has been prepared by MRA Consulting Group in support of the proposal and is provided at **Appendix 25** of this EIS.

7.21.1 Assessment of Impacts

Construction and Demolition

The likely waste streams to be generated during construction and demolition activities associated with the proposal are anticipated below:

- Excavated Soil.
- Green waste.
- Building materials including metals, wood waste, bricks/blockwork, asphalt, concrete, glass, ceramics, plasterboard and plastics.
- General refuse including food waste.
- Optic fibre and electrical wiring.
- Other electronic waste.

TABLE 72 details the expected waste materials and management systems for the demolition phase of the proposal. **TABLE 73** details the expected waste materials and management systems for the construction phase of the proposal.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 72: ESTIMATED DEMOLITION WASTE GENERATION

Type of Material	Estimated volumes (m3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)		Estimated % Landfill	Estimated % of landfill diversion	Methods for re-use, recycling or disposal
Timber	-	-	Yes	Yes		<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse removed to C&D facility for recovery where possible.
Metal	-	-	Yes	Yes		<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse or removed to C&D facility for recovery and recycling.
Vegetation	300-450	Yes	Yes	Yes		0%	100%	Onsite: Mulched / chipped on site and used for landscaping. Offsite: Removed landscaping contractor facility for chipping / mulching and re-use.
Residual waste	5-10	-	-	-		100%	-	Resource recovery dependant on facility destination capability.
Total % Diversion from Landfill Estimated							>80%	



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 73: ESTIMATED CONSTRUCTION WASTE GENERATION							
Type of Material	Estimated volumes (m3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Estimated % Landfill	Estimated % of landfill diversion	Methods for re-use, recycling or disposal
Timber	335,000	Yes	Yes	Yes	<5%	>95%	Onsite: Reuse for fill and levelling. Offsite: Removed from site for reuse as recycled fill material or soil. Disposal: Removal of any contaminated material for appropriate treatment or disposal.
Bricks/ Pavers	10-20	Yes	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Concrete	200-300	Yes	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for filling, levelling or road base. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Tiles	<10	Yes	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Timber (clean)	10-20	-	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible to improve resource recovery.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

							Offsite: Returned to supplier for reuse removed to C&D facility for recovery where possible.
Timber (treated)	10-20	-	Yes	Yes	50%	50%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse removed to C&D facility for recovery where possible.
Plasterboard	10-20	-	Yes	Yes	<10%	90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier or removed to a C&D/plasterboard recovery facility for recovery where possible.
Glass	<10	Yes	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Metals (ferrous) Metals (non-ferrous)	10-20	-	Yes	Yes	<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse or removed to C&D facility for recovery and recycling.
Floor covering	10-20	Yes	Yes	Yes	<10%	>90%	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D processor: recovery and recycling.
Fixtures and fittings	<10	Yes	Yes	Yes	-	-	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

							C&D processor: recovery and recycling.
Electronic waste	<100	-	Yes	Yes	<10%	>90%	Offcut wires and electronics separated where possible or returned to supplier for reuse.
Packaging materials (pallets, wrap, cardboard, etc)	200-300	-	Yes	Yes	<10%	>90%	Returned to supplier where possible or separated by material type for resource recovery.
Residual waste	50-100	-	Yes	Yes	100%	-	Resource recovery dependant on facility destination capability.
Total % Diversion from Landfill Estimated							>90%



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

Operation

The proposal relates to a data centre and as such the key waste generation areas will be in the office and administration areas. The MRP DCP 2021 does not specify generation rates for specific commercial uses. Available rates are taken from NSW EPA's *Better Practice Guide for Resource Recovery in New Developments* (2019).

Waste generation rates are broken down into the campus office and technical office, and calculations are based on a seven (7) day per week operation for the proposed data centre facility. **TABLE 74** below presents the waste generated from the campus office building.

TABLE 74: CAMPUS OFFICE WASTE GENERATION				
Use	Unit of Measure	Waste Stream	Generation Rate	Total Weekly Generation (L)
Office	4,1000m²	General waste	10L/100m²/day	1,435
		Recycling	10L/100m²/day	1,435
		Paper and Cardboard	-	1,435
		Food waste	-	1,435
Warehouse	1,000m²	General waste	25L/100m²/day	1,750
		Recycling	15/100m²/day	1,050
		Paper and Cardboard	-	1,050
Canteen (treated as café)	506m²	General waste	300L/100m²/day	5,313
		Recycling	200L/100m²/day	3,542
		Paper and Cardboard	-	3,542
		Food waste	-	5,313
Accommodation	Four (4) rooms	General waste	5L/day/bed	140
		Recycling	5L/day/bed	140
TOTALS		General Waste		8,638
		Recycling		6,167
		Paper and Cardboard		6,027
		Food Waste		6,748

TABLE 75 below presents the waste generated from the campus office building.



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

TABLE 75: TECHNICAL OFFICE WASTE GENERATION

Use	Unit of Measure	Waste Stream	Generation Rate	Total Weekly Generation (L)
Office	1,650m ²	General waste	10L/100m ² /day	1,155
		Recycling	10L/100m ² /day	578
		Paper and Cardboard	-	578

TABLE 76 presents Office Waste Storage requirements for the site:

TABLE 76: CAMPUS OFFICE WASTE STORAGE

Waste Stream	Waste Generation (L week)	Waste Management (bins and collection frequency)	Min Storage Area (m²)*
General	8,638L	2 X1,100L bin collected up to four times	5.3
Recycling	6,167L	2 X1,100L bin collected up to three times	5.3
Paper and Cardboard	6,027L	2 X1,100L bin collected up to three times	5.3
Food Waste	6,748L	8 X 240L bins collected four times	3.25
Bulky / Other	Other waste streams serviced as required		10
Bin Tug	Mechanical carting assistance		2
Total minimum space requirement:		~31	

TABLE 77 presents Data Centre Waste Storage and Collection Frequency requirements for the site:

TABLE 77: DATA CENTRE WASTE STORAGE AND COLLECTION FREQUENCY

Waste Stream	Waste Generation (L week)	Waste Management (bins and collection frequency)	Min Storage Area (m²)*
Data Centre Building			
E-Waste	Fluctuates weekly	1 x 660L bin collected as required	1.7
Technical Office			
General Waste	1,155L	1 X 1,100L bin collected once per week	2.6
Recycling	578L	1 X 660L bin collected once per week	1.7
Paper & Cupboard	578L	1 X 660L bin collected once per week	1.7
Bulky/ Other Wastes	Other waste streams serviced as required		10
Bin Tug	Mechanical carting assistance		2
Total minimum space requirement:			~20

In relation to temporary, e-waste and bulky waste storage, the waste storage strategy establishes a hierarchical system from point-of-generation to final collection, ensuring operational efficiency across all waste streams. Temporary storage at source (daily-capacity bins in offices, kitchens, and back-of-house areas) feeds into centralised main bin storage areas through daily cleaning staff collection rounds. Specialised streams, including e-waste (660L bins with flexible collection frequencies during



maintenance or upgrades) and bulky waste (ground-level WSRA storage with prompt contractor removal), are managed separately to prevent cross-contamination and maintain storage capacity. This integrated approach provides adequate segregation, convenient access points, and scalable capacity responsive to operational fluctuations while preventing overspill and maintaining campus amenity.

7.21.2 Management and/or Mitigation Measures

The Waste Management Plan has identified internal management protocols to ensure waste is suitably managed as part of the proposal, broken down into the various collection waste streams expected to be generated at the site:

- **General Waste:** General waste will be placed within a tied plastic bag prior to transferring into collection bins. For collection purposes, general waste shall be stored within a mobile garbage bin.
- **Commingled Recycling:** All recyclables will be stored in commingled bins (mixed plastic, paper, cardboard, glass, aluminium, steel). All recyclables should be decanted loose (not bagged) with containers un-capped, drained and rinsed prior to disposal into the recycling bin. Paper should be flattened and placed in paper and cardboard bin if applicable.
- **Paper and Cardboard:** Should large quantities of paper and cardboard waste be generated from proposed site uses a separate service may be suitable for application at the site. The contracted waste service provider may be able to provide separate paper and cardboard bins for the source separation and collection of paper and cardboard waste.
- **Garden Waste:** It is expected that landscaping at the site will be maintained by an external contractor who will remove all vegetation waste from ongoing maintenance activities.
- **Food Waste:** Arrangements for separate collection of food organics can be made with the waste management contractor. Food waste can be stored in 240L sealed bins or refrigerated waste storage prior to collection.
- **Secure Documents:** Separate bins for secure document waste may be retained in office spaces, to be serviced by a specialist secure document destruction contractor.
- **E-waste:** E-waste generated from the data centre buildings and inventory warehouse will be managed through a dedicated e-waste collection and recycling contract, or by returning materials directly to product suppliers.
- **Plastic packaging waste:** Soft plastics and expanded polystyrene (EPS) can be consolidated and sent to specialist soft plastic and EPS recyclers.
- **Wooden packaging waste:** Bulky packaging waste such as wooden pallets and timber crates shall be managed through either internal reuse, return to supplier or sent to pallet recovery companies.
- **Other (Problem) Waste:** The disposal of hard, bulky, liquid or potentially hazardous wastes shall be organised by the site user as necessary.

The above measures would ensure that the proposal is consistent with the aims, objectives and guidance in the *NSW Waste and Sustainable Materials Strategy 2041*.

7.22 Cumulative Impacts

In accordance with DPHI's Cumulative Impact Assessment Guidelines for State Significant Projects, projects and land uses within proximity to the site have been considered in the potential cumulative impacts of the proposal. Key cumulative impacts include traffic, noise and vibration, air quality, visual amenity, and construction works have been assessed, and mitigation measures have been recommended.



7.23 Planning Agreement and Development Contributions

Based on the current framework, it is understood the various contributions will be in force at the time of determination of the subject proposal:

TABLE 78: SUMMARY OF CONTRIBUTION	
Policy	Rate
Penrith City Council's Mamre Road Precinct Development Contributions Plan 2022	\$721,238/ha (payable prior to subdivision or construction certificate)
Housing Productivity Contribution (if paid from 1 July 2026 onwards)	\$15/m ² GFA (payable prior to construction certificate)
Housing Productivity Contribution Strategic Biodiversity Component (if paid from 1 July 2026 onwards)	\$30/m ² GFA (payable prior to construction certificate)

It is considered that Roads 1 and 2 may be delivered through a Works In Kind Agreement (WIKa) as both roads are identified in the Mamre Road Precinct Development Contributions plan to be dedicated to Council. The WIKa may be negotiated prior to determination of the proposal.

In terms of state contributions, further negotiation is required to determine if there is opportunity for Works in Kind or a similar agreement can be entered into for land dedication to provide for state infrastructure such as Mamre Road and the future SLR. However, only projects listed in the Infrastructure Opportunities Plan will be eligible. As the framework and mechanisms are unclear at this stage further investigation is to be carried out.

PART 8: PROJECT JUSTIFICATION

8.1 Overview

The proposal is justified on environmental, social and economic grounds and is compatible with the locality in which it is proposed. The proposal would enhance the site from an otherwise vacant landholding to a productive employment generating facility.

This EIS is submitted on the following basis.

8.1.1 Supports State, Regional and Local Planning Objectives

The proposal is consistent with the objectives, provisions and vision contained within A Metropolis of Three Cities – Greater Sydney Region Plan; the Western City District Plan; and the Industry and Employment SEPP. The proposal would contribute to employment generation in an area already earmarked for employment through both State and Regional planning policies.

Data centres are critical infrastructure to support secure regional and national government and businesses. The proposed development aligns with the Greater Sydney Commission's standards, objectives, and priorities. Additionally, it offers several advantages, including facilitating a distributed work model, reducing travel distances and associated costs for local workers, creating new employment opportunities, and contributing to the local economy through job creation near residential areas.

8.1.2 Demonstrates an Appropriate Use of a Permissible Development

The proposed development would retain and contribute to the growth of new industry for the immediate locality and the wider region. The proposed development would be a highly appropriate and compatible (given its contiguousness to other existing industrial developments) response to the strategic goals and objectives of the whole region as set out in A Metropolis of Three Cities – Greater Sydney Region Plan and the Central District Plan, which all envisage employment-generating land uses at this location.

The permissibility of development for six (6) data centre buildings, and associated infrastructure is prescribed by the Industry and Employment SEPP which describes such development as permitted with consent in the IN1 General Industrial zone. Furthermore, pursuant to Section 2.31 of the Transport and Infrastructure SEPP, development for the purposes of data centres is permitted with consent in the IN1 General Industrial zone which is a prescribed zone for the purposes of this section.

8.1.3 Minimises Environmental Impacts

Specialist consultants have assessed the potential impacts of the proposed development, determining that it could be undertaken with minimal environmental impacts. The commissioned reports have collectively concluded that no significant risk to the locality would result from the proposed development. Where impacts have been identified, these fully-developed strategies are set out in detail for management and mitigation.

8.1.4 Addresses the Likely Impacts of Development

Where impacts are identified, this EIS and accompanying technical reports explain why they are acceptable and how they can be mitigated. Environmental impacts on both the natural and built environments, and social and economic impacts in the locality have been considered and addressed.



8.1.5 Delivers Ecologically Sustainable Development

The principles of ESD as outlined in Clause 193 of the EP&A Regulation have been carefully considered in the formulation of this proposal and are addressed in **Section 7.13** of this EIS.

8.1.5.1 The Precautionary Principle

The proposal will employ relevant environmental protection measures and risk assessments to ensure no irreversible environmental harm is acted as a result of the construction or operation of the proposed development. Energy reduction, water consumption reduction and waste reduction are all project commitments to reduce environmental impact.

8.1.5.2 Inter-Generational Equity

The proposal will ensure no irreversible environmental harm as a result of the construction or operation of the proposed development. The design team will address key elements such as energy, water and material use to ensure intergenerational equity is achieved.

8.1.5.3 Conservation of Biological Diversity and Ecological Integrity

The proposal is supported by a BDAR to support removal of some vegetation that falls outside of the certified land. Offset credit obligations will be satisfied prior to the construction of the proposal to ensure suitable management of impacts.

8.1.5.4 Improved Valuation, Pricing and Incentive Mechanisms

The proposal is committed to minimising waste throughout construction and operation by improving circularity and diversion rates. This will be achieved through data collection, identifying reuse opportunities, and exploring take-back programs with equipment suppliers to enable second-life use of equipment. These actions will help conserve resources, support decarbonisation, and reduce environmental impact.

8.1.6 Investment into Australia's Digital Economy

The proposal is a multi-billion-dollar investment in NSW's digital economy that is necessary to ensure Australia continues to remain competitive in the data storage sector within the APAC region. The global market value is estimated at US\$384 billion (AU\$582.4b), and looking forward, the demand for data centre capacity is expected to require almost US\$7 trillion in capital investment. Whilst Australia is a smaller player in the global data centre market (accounting for 3% of total supply), it is poised to rapidly grow in response to consumer, industry and government-led demand. By 2030, it is projected to require an almost doubling in its capacity (MW), necessitating AUD\$26 billion in data centre investment. Data centres are critical to advanced economies and modern cities. Cities and countries with lower levels of data centre infrastructure and investment will undoubtedly struggle to remain competitive, attract investment and grow.

The proposal is committed to aligning with the strategic goals and planning priorities within the MRP and WSEA whilst ensuring environmental impacts and planning considerations are adequately addressed when delivering the data centre campus. The proposal will harness large-scale processing and storage to remain competitive and boost the data storage sector in Western Sydney.

8.1.7 Suitability of the site

The proposals consistency with applicable regional and local strategies is demonstrated in the comprehensive environmental assessment, provided in **Part 7** of this EIS, which includes an analysis of all potential impacts, which has been informed by the relevant consultant reports. Accordingly, the



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road, Kemps Creek NSW 2187 (Lot 10 DP 1280592)

environmental assessment prescribes recommendations and mitigation measures (where necessary), to account for all identified potential impacts, by the proposal.

Having regard to the characteristics of the site and its location, the proposal is suitable for the site for the reasons outlined in **Section 3.3**.

The technical assessments prepared in support of the proposal have concluded that the site is suitable for the proposal.

8.1.8 Public Interest

The proposal is in the public interest as:

- It provides employment opportunities in a zone that is intended for such development.
- It can suitably co-exist with other land uses.
- The proposal provides a significant economic injection as the EDC of the proposed development is \$9 Billion.
- All environmental impacts can be suitably managed, thus ensuring the zone objectives are satisfied.
- The proposed development will support IT computing requirements for businesses and households, thus providing greater efficiency in how we work and live.



APPENDIX A
SEARS TABLE



ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

SEARS COMPLIANCE TABLE

Issue and Assessment Requirements	Satisfied by
1. General Requirements	
▪ comply with these assessment requirements	Entire EIS
▪ meet the form and content requirements in sections 190 and 192 of the Environmental Planning and Assessment Regulation 2021 (the Regulation)	Entire EIS
▪ have regard to the Department's State Significant Development Guidelines.	Entire EIS
▪ a clear comprehensive description of the proposal for the site, including details of all activities and processes proposed to be carried out as part of the development	PART 4: PROJECT DESCRIPTION
▪ consideration of issues discussed in the public authority responses to request for key issues	PART 6
▪ a detailed assessment of the key issues specified below, including: ○ a description of the existing environment, using sufficient baseline data ○ an assessment of the potential impacts of all stages and activities that form part of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes ○ a description of the measures that would be implemented to avoid, minimise, mitigate and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage significant risks to the environment.	PART 7: ASSESSMENT AND MITIGATION OF IMPACTS
▪ high quality files of maps and figures of the subject site and proposal	Appendix 3
▪ an Estimated Development Cost (EDC) Report prepared in accordance with the relevant planning circular using the Standard Form of EDC Report	Section 2.5
▪ an estimate of the retained and new jobs that would be created during the construction and operational phases of the development, including details of the methodology to determine the figures provided	Section Key Project Details4.2
▪ an estimate of the development's total power consumption, inclusive of both the Information Technology (IT) load and the supporting infrastructure and services load	PART 4: PROJECT DESCRIPTION
▪ details on any staging of the construction and / or operation of the development	Section 4.5
▪ certification that the information provided is accurate at the date of preparation	
▪ a declaration from a Registered Environmental Assessment Practitioner that your EIS includes the	Page i

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

information specified in the Department's Registered Environmental Assessment Practitioner Guidelines.	
2. Statutory and Strategic Context	
▪ Statutory and Strategic Context – including: ○ a detailed description of the history of the site, including the relationship between the proposed development and all development consents and Page 2 of 14 approved plans previously and/or currently applicable to the site (including SSD-30628110) ○ demonstration that the proposal is consistent with all relevant planning strategies, environmental planning instruments, adopted precinct plans, draft district plan(s) and adopted management plans and justification for any inconsistencies. This includes, but is not limited to: – State Environmental Planning Policy (Biodiversity and Conservation) 2021 – State Environmental Planning Policy (Industry and Employment) 2021 – State Environmental Planning Policy (Planning Systems) 2021 – State Environmental Planning Policy (Resilience and Hazards) 2021 – State Environmental Planning Policy (Sustainable Buildings) 2022 – State Environmental Planning Policy (Transport and Infrastructure) 2021 – State Environmental Planning Policy (Western Parkland City) 2021 – Greater Sydney Region Plan: A Metropolis of Three Cities – Our Greater Sydney 2056: Western City District Plan o Future Transport Strategy 2056 – Mamre Road Precinct Structure Plan – Mamre Road Precinct Development Control Plan (MRP DCP) – Cumberland Plain Conservation Plan (CPCP).	Section 2.10 PART 3: STRATEGIC CONTEXT PART 5: STATUTORY CONTEXT
3. Suitability of the Site	
▪ detailed justification for the proposal and that the site can accommodate the proposed development having regard to its potential environmental impacts, effect on neighbouring sites, strategic context and existing site constraints, including: ○ consistency with the relevant height control under the MRP DCP ○ potential land use conflicts with sensitive receivers to the north of the site ○ the future Southern Link Road ○ widening and upgrade of Mamre Road ○ the integrated freight network identified in the Mamre Road Precinct Structure Plan and the MRP DCP	Section 3.2.9 & 3.3

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

an options analysis of the proposed bulk earthworks to seek to deliver balanced cut and fill and minimise the height and visual impact of the development and proposed retaining walls, with consideration of proposed works and levels on adjoining properties	
detailed justification that the proposal is permissible with consent, including a robust demonstration of its strategic merit and alignment of each component of the development with the statutory objectives of each land use zone.	Section 1.6
4. Community and Stakeholder Engagement	
- a community and stakeholder engagement strategy consistent with the Department's Undertaking Engagement Guidelines for State Significant Projects for all stages of the development, including (but not limited to): - evidence of direct, ongoing consultation undertaken with nearby sensitive receivers, including the nearby schools, childcare centre and aged care facility located directly north of Bakers Lane - details of how issues raised, and feedback provided during engagement activities have been considered and responded to in the development - details of the proposed approach to future community and stakeholder engagement based on the results of consultation.	PART 6: COMMUNITY ENGAGEMENT
5. Plant and Equipment Systems	
- detailed justification for the chosen back-up power, load smoothing and grid stabilisation systems, including: - a comprehensive assessment of alternative commercially available technologies (e.g. solar power, large-scale batteries, hydrogen cells, etc) - demonstration of a commitment to continual improvement with respect to the design of the back-up power system and its associated emissions	Section 7.1.8 & 7.1.9
- a detailed overview of the proposed back-up generator system (if chosen), including: - number and individual capacity of each generator (in terms of megawatts and megajoules per second) - maximum operating time during a power outage event Page 3 of 14 - testing procedure (including whether testing will be carried out individually or in clusters), frequency and duration (including confirmation and, if necessary, justification of the need to test during sensitive time periods)	Section 7.1.10
- a detailed justification for the chosen data hall cooling system, including: - a comprehensive assessment of alternative commercially available technologies (e.g. evaporative cooling, immersion cooling, direct-to-chip cooling, etc)	Section 7.1.11

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

o demonstration of a commitment to continual improvement and consideration of retrofitting with respect to new and efficient data hall cooling systems	
▪ a detailed overview of the proposed data hall cooling system, including: - o the number and details of associated plant and equipment (cooling towers, evaporative chillers, etc) - o the energy and water demands of the proposed data hall cooling system	Section 7.1.11
▪ demonstration the placement of mechanical plant and equipment has considered the impact of heat rejection on habitable rooms and communal open spaces, including those of neighbouring properties.	Section 7.7
6. Noise and Vibration	
▪ details of noise monitoring surveys and background noise levels at the most-affected residential, educational and aged care receivers	Section 7.2
▪ establishment of suitable project noise trigger levels at all nearby sensitive receivers, including consideration of clustering of noise-generating industry within the Mamre Road Precinct, appropriate amenity noise levels, and any applicable external façade to internal space corrections for educational and childcare facilities (supported by robust evidence, preferably using noise measurements)	Section 7.2
▪ identification of realistic assessment scenarios for both construction and operation of the development (including potential impacts associated with traffic generation)	Section 7.2
▪ details of manufacturer specifications for plant and equipment and an associated noise source inventory for each scenario (demonstrating worst case modelling of plant and equipment)	Section 7.2
▪ an assessment of all 'worst case' noise emission scenarios (including testing of any back-up power system and a critical power failure scenario), supported by: - o noise contour maps and a detailed sleep disturbance assessment - o a cumulative impact assessment inclusive of impacts from other proposed and approved developments in the Mamre Road Precinct and adjoining areas (including, but not limited to, other data centre developments in the vicinity of the site) - o if operation of the development is staged, an assessment of each stage in isolation to accurately represent the predicted noise impacts of each stage	Section 7.2
▪ consideration of annoying characteristics of noise (including, but not limited to, low frequency noise) and prevailing meteorological conditions in the study area	Section 7.2
▪ details and analysis of the effectiveness of proposed 'feasible and reasonable' management and mitigation	Section 7.2

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

measures to adequately manage identified impacts, including a clear identification of residual noise and vibration impacts following application of these mitigation measures and details of any proposed compliance monitoring programs.	
7. Air Quality	
details of a proposed trigger action response plan (TARP) to be implemented during construction, using mitigation, management and monitoring measures supported by the cumulative quantitative assessment, that are part of an integrated and coordinated plan to manage cumulative dust impacts	Section 7.3
modelling of emissions and air pollutants from predicted operations, including consideration of generator testing, routine maintenance works that require use of generators and emergency scenario/s	Section 7.3
a cumulative assessment that considers all proposed and approved developments in the Mamre Road Precinct for both construction and operation (including, but not limited to, other data centre developments in the vicinity of the site)	Section 7.3
if operation of the development is staged, an assessment of each stage in isolation to accurately represent the predicted the air quality impacts of each stage	Section 7.3
a description and appraisal of best practice air quality impact mitigation, management and monitoring measures.	Section 7.3
8. Traffic and Transport	
details of the likely construction trip generation, construction vehicle routes, access and parking arrangements during construction works and measures to mitigate any construction traffic and parking impacts, detailed in a draft Construction Traffic Management Plan	Section 7.4
details of all daily and peak traffic volumes likely to be generated during all key stages of operation, including a description of key access / haul routes, vehicle types and potential queuing impacts	Section 7.4
demonstration that the proposed access arrangements can adequately accommodate all vehicle movements generated during construction and operation of the development, while ensuring the development does not adversely impact upon the orderly development of land within the surrounding area	Section 7.4
an assessment of the predicted impacts of development traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts on existing performance levels of nearby intersections, using a calibrated SIDRA (or similar) traffic model. This is to include the identification and consideration of approved and proposed developments and road upgrades in the	Section 7.4

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

Mamre Road Precinct and evidence of agreement with TfNSW in relation to the assessment approach	
- identification and assessment of any required road upgrades, interim works, new roads or access points necessary to service the development or the broader Mamre Road Precinct, including: - details of the timing, staging, and delivery of the works (construction and operation) - evidence of consultation with TfNSW and Penrith City Council regarding these works, as well as any necessary land owner's consent - evidence of consistency with Section 3.4.1 of the MRP DCP, specifically in relation to the use of Bakers Lane to access existing land uses to the north and east of the site - detailed justification for any variation to the MRP DCP road network or road design within the site - evidence of compliance with sections 2.34 and 2.35 of State Environmental Planning Policy (Industry and Employment) 2021, specifically regarding the site's integration with the Mamre Road Precinct's dedicated freight corridor and delivery of the Southern Link Road - an update on the status of the planning agreement for the Land Owner Group – East (LOG-E) roadworks, including indicative timing for the delivery of associated road infrastructure	Section 7.4
plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network	Section 7.4
details and plans of any proposed internal road network, access points, loading dock provision and servicing, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards, the Austroads/TfNSW technical guidelines and the MRP DCP (as appropriate), including demonstration that driveways and internal circulation areas are designed to avoid conflict between heavy vehicles and light vehicle, pedestrian and cycle movements	Section 7.4
swept path diagrams for the largest vehicles manoeuvring through site access points, internal roads, hardstand areas and nearby intersections (where necessary).	Section 7.4
9. Built Form and Urban Design	
- demonstrates how the proposal responds to the urban design objectives and controls of the MRP DCP, including: - consistency with the relevant height control of 20 metres from existing ground level - provision of a setback of at least 20 metres to Mamre Road and the future Southern Link Road that does not include built form components, such as plant and equipment, driveways or fire access roads, in this area	Section 7.5
identifies design options considered during the iterative design process and demonstrates the proposed	Section 7.5

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

development has been optimised to provide an integrated landscape design and minimises amenity impacts by having regard to the relevant evaluation criteria in Better Placed (GANSW, 2017)	
demonstrates how the development will achieve good design in accordance with the seven objectives for good design in Better Placed	Section 7.5
demonstrates that Aboriginal culture and heritage is considered and incorporated holistically in the design proposal consistent with the NSW Government's Connecting with Country Framework (2023)	Section 7.5
explains and illustrates the proposed built form, including a detailed site and context analysis to justify the proposed site planning and design approach	Section 7.5
demonstrates how the building design will deliver a high-quality development, including consideration of façade design, articulation, materials, finishes, colours, any signage and integration of services	Section 7.5
assesses how the development complies with relevant accessibility requirements.	Section 7.5
10. Visual Impacts	
photomontages and perspectives of the development layout and design (buildings, plant and substation areas)	Section 7.6
- an assessment of the potential visual impacts of each stage of the development on the amenity of the surrounding area, including: - nearby public and private receivers (including, but not limited to, those located directly north of Bakers Lane) - significant vantage points in the broader public domain including, but not limited to, views from Mamre Road, Elizabeth Drive, Twin Creeks, Luddenham and Mount Vernon	Section 7.6
details of design elements and mitigation measures to minimise the visual impacts of the development	Section 7.6
11. Hazards and Risks	
details regarding the location and number of any proposed back-up generators, back-up fuel storage tanks and lithium-ion or other battery chemistries (with details of peak discharge rate in MW) to be installed to service the development	Section 7.7
detailed justification for the proposed location of any back-up generators, back-up fuel storage tanks and lithium-ion or other battery chemistries with regard to adjacent sensitive land uses, including a detailed options analysis considering alternative locations within the site	Section 7.7
a preliminary risk screening completed in accordance with State Environmental Planning Policy (Resilience and Hazards) 2021 and Applying SEPP 33 (DoP, 2011), that includes a clear indication of class, storage and handling	Section 7.7

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

quantities and location of all dangerous goods and hazardous materials associated with the development	
a Preliminary Hazard Analysis (PHA) prepared in accordance with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) and Multi-Level Risk Assessment (DoP, 2011), should the preliminary risk screening indicate that the proposed development is “potentially hazardous”	Section 7.7
demonstration that the relevant aspects of the FM Global Property Loss Prevention Data Sheet 5-32 – Data Centres and Related Facilities have been considered and could be implemented as part of the development	Section 7.7
- demonstration that the development would comply with the relevant aspects of the following standards: - o AS/NZS 4681 – Storage and handling of Class 9 (miscellaneous) dangerous goods and articles - o AS IEC 62619 – Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications - o AS 1940 – Storage and handling of flammable and combustible liquids.	Section 7.7
12. Infrastructure Requirements	
an assessment of impacts of the development on existing utility infrastructure and service provider assets surrounding the site	Section 7.7
a detailed written and/or graphical description of infrastructure required on the site, including the electrical substation/s and on-site switch yard/s	Section 7.7
details of the existing capacity of the site to service the proposed development and any extension or augmentation, property tenure or staging requirements for the provision of utilities, including arrangements for electrical network requirements, drinking water, wastewater and recycled water (where required)	Section 7.7
- the following information relating to potable water / wastewater consumption: - o staging of the development, showing the yearly demand, average day demand, maximum hour demand and high demand days (e.g. 95th percentile) - o the expected daily usage over a year and/or the expected monthly average daily usage over a year - o daily diurnal usage based on a typical ‘high demand’ day - o a description of the measures which would be implemented to ensure water supply resilience and operational continuity during water restrictions and/or drought conditions, including any additional on-site water storage or contingency arrangements	Section 7.7
a description of how any upgrades will be co-ordinated, funded and delivered on time and be maintained to facilitate the development	Section 7.7
identification of any existing infrastructure or easements on or off the site which may be impacted by construction or	Section 7.7

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

operation of the development and details of measures to be implemented to address any impacts	
details and demonstration that adequate provision of water tanks and fire hydrants for the purposes of fire fighting has been provided on-site.	Section 7.7
13. Soils	
impacts on soil erosion, salinity and acid sulfate soils	Section 7.8
details of earthworks, including cut and fill volumes, and how the earthworks strategy has been designed to appropriately integrate finished levels with surrounding properties, development and infrastructure and minimise amenity impacts from any boundary retaining walls	Section 7.8
a draft Erosion and Sediment Control Plan, prepared by a Certified Professional in Erosion and Sediment Control and in accordance with the Department's Technical guidance for achieving Wianamatta-South Creek stormwater management targets (Technical Guidance) and the MRP DCP.	Section 7.8
14. Water Management	
a detailed site water balance for the development, supported by an overview of its water demands and a breakdown of water supplies, measures to minimise water use and any water licensing requirements	Section 7.8
a description of groundwater and surface water conditions and all works/activities that may intercept, extract, use, divert or receive surface water and/or groundwater (both temporary and permanent)	Section 7.8
an assessment of potential surface and groundwater impacts (both quality and quantity) associated with the development, including potential impacts on watercourses, riparian areas, groundwater, and groundwater-dependent communities nearby in accordance with relevant EPA guidelines and the Department of Climate Change, Energy, the Environment and Water - Water Group (DCCEEW-Water) Groundwater Toolkit	Section 7.8
details of any surface or groundwater mitigation, management and monitoring activities and methodologies	Section 7.8
- a Stormwater Management Plan prepared in accordance with the Technical Guidance, the 'MUSIC modelling toolkit for Wianamatta-South Creek' and the MRP DCP, which includes: - details of the proposed stormwater/wastewater drainage design, including the capacity of any on-site detention system(s), on-site sewage management and measures to treat, reuse or dispose of water - evidence of completing a feasibility process with Sydney Water to ascertain servicing needs and resolve design requirements relating to the regional stormwater scheme	Section 7.8

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

○ details of how the proposed on-site system will connect to Sydney Water's regional stormwater system, including details of any interim solution and delivery of the 20-metre-wide naturalised trunk drainage channel along the site's north-eastern boundary ○ where water and drainage infrastructure works are required that would be handed over to the local council, or other drainage or water authority (i.e. Sydney Water), provide full hydraulic details and detailed plans and specification of proposed works that have been prepared in consultation with, and comply with the relevant standards, the local council or other drainage or water authority	
▪ details of provisions for supplying potable water and disposal of wastewater including any agreements entered into with relevant authorities such as Sydney Water and Penrith City Council.	Section 7.8
15. Flooding	
▪ identify any flood risk on-site (mainstream and overland) having regard to adopted flood studies, the potential effects of climate change, and any relevant provisions of the NSW Flood Risk Management Manual (2023)	Section 7.9
▪ assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions and operational procedures to mitigate flood risk where required	Section 7.9
▪ identify flood behaviour, flood constraints and risks on the site and adjoining areas including the potential impacts of climate change for the full range of events up to and including the probable maximum flood (PMF) event, supported by suitable mapping	Section 7.9
▪ include details of proposed management measures and controls to: ○ effectively address flood constraints to ensure the flood risks to the development and its users are acceptable ○ manage flood and associated emergency management impacts due to the development on existing communities and individual property owners / occupiers.	Section 7.9
16. Contamination	
▪ characterisation of the nature and extent of any contamination on the site and surrounding area	Section 7.10
▪ a Detailed Site Investigation (DSI) and a Remedial Action Plan, if the Preliminary Site Investigation indicates contamination is present and a DSI is required.	Appendix 23
17. Landscaping	
• an arborist report, tree protection plan and vegetation management plan	Appendix 13
▪ detailed plans showing suitable landscaping which incorporates endemic species, heights of trees at maturity	Appendix 13

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

and proposed canopy coverage and location of trees to be removed and retained	
details of tree canopy cover, deep soils and pervious area to meet the requirements of the MRP DCP	Appendix 13
demonstration of how the development would contribute to the long-term landscape setting in respect of the site and streetscape, contribute to the objective of increased urban tree canopy cover, mitigate the urban heat island effect and maximise opportunities for green infrastructure consistent with Greener Places (GANSW, 2020) and having regard to any bush fire risk	Appendix 13
demonstration of consistency with the MRP DCP species list.	Appendix 13
18. Climate Change	
including the preparation of a Greenhouse Gas Assessment in accordance with the NSW Guide for Large Emitters (EPA, 2025).	Section 7.12
19. Ecologically Sustainable Development	
identification of how ESD principles (as defined in section 193 of the EP&A Regulation) are incorporated in the design, construction and ongoing operation of the development	Section 7.13.1
demonstration of how the development will meet or exceed the relevant industry recognised building sustainability and environmental performance standards, including a maximum Power Usage Effectiveness (PUE) of 1.3 and a minimum NABERS rating of five stars	Section 7.13.2
identification of the projected Water Usage Effectiveness (WUE) for the development, compared against recognised 'best practice' benchmarks	Section 7.13.4
demonstration of how the development minimises greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources	Section 7.13.3
- if Chapter 3 of State Environmental Planning Policy (Sustainable Buildings) 2022 applies, include: - demonstration as to how the development has been designed to address the provisions set out in in Chapter 3.2(1) - a NABERS Embodied Emissions Material Form to disclose the amount of embodied emissions attributable to the development in accordance with section 35BA of the EP&A Regulation.	Section 7.13.5
20. Aboriginal Cultural Heritage	
The ACHAR must identify, describe and assess impacts on the Aboriginal cultural heritage values that exist across the development site	Section 7.14.1
provide evidence and details of adequate and continuous consultation with Aboriginal people in accordance with	Section 7.14.3

ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010)	
include results of an archaeological survey and test excavations (where required), undertaken in accordance with the relevant guidelines.	Section 7.14.4
21. Non-Aboriginal Cultural Heritage	
a non-Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must detail potential impacts on heritage assets and any proposed management and mitigation measures.	Section 7.15
22. Biodiversity	
an assessment of the proposal's biodiversity impacts in accordance with the Biodiversity Conservation Act 2016, including the preparation of a Biodiversity Development Assessment Report (BDAR) where required under the Act, except where a waiver for preparation of a BDAR has been granted. This includes any works within land identified as 'excluded' or 'avoided' under the CPCS.	Section 7.16
23. Human Health	
including an Environmental Health Risk Assessment and a Health Impact Assessment prepared in accordance with the relevant National Health guidance, with a focus on environmental noise, air quality and the urban heat island effect.	Section 7.17
24. Social	
including a social impact assessment in accordance with the Department's Social Impact Assessment Guideline that is targeted and proportionate to the development's context and likely impacts.	Section 7.18
25. Airport Safeguarding	
including a risk assessment of the proposed development on the Western Sydney Airport operations and addressing related matters in the Western Sydney Aerotropolis Plan, State Environmental Planning Policy (Western Parkland City) 2021 and the National Airports Safeguarding Framework and associated guidelines, including (but not limited to) a plume rise assessment and consideration of wildlife hazards, lighting and the prescribed airspace.	Section 7.19
26. Bush Fire	
a bush fire assessment report that addresses the aims and objectives of Planning for Bush Fire Protection (RFS, 2019).	Section 7.20
27. Waste	
the quantities and classification of all waste streams to be generated on site during construction and operation of the development, including e-waste	Section 7.21
waste storage, handling and disposal	Section 7.21
the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste and Sustainable Materials Strategy 2041.	Section 7.21.2
28. Planning Agreement/ Development Contributions	

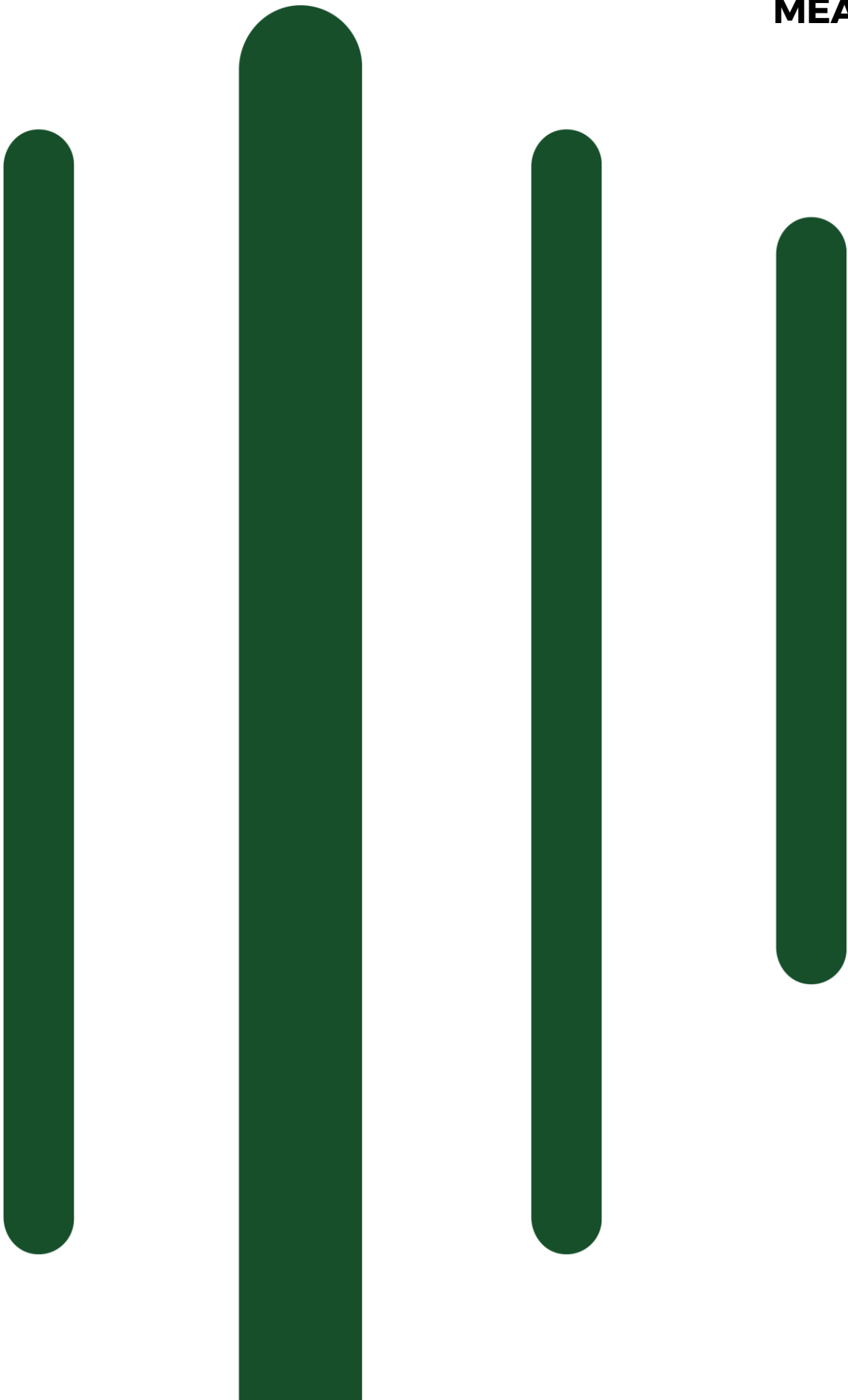
ENVIRONMENTAL IMPACT STATEMENT

Mamre Road Data Centre Campus

706-752 Mamre Road NSW 2187 (Lot 10 DP 1280592)

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| <ul style="list-style-type: none">including consideration of any applicable State and local development contributions, such as the Western Sydney Aerotropolis Special Infrastructure Contribution, the Housing and Productivity Contribution and / or the Mamre Road Precinct Development Contributions Plan. | Section 7.22 |
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APPENDIX B
MITIGATION
MEASURES



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