ARUP

Penrith Lakes Development Organisation

Penrith Lakes

Response to submissions received against DA2 Modification 12 and DA3 Modification 10

December 2025

Job number 303207-00

Arup Australia Pty Ltd | ABN 76 625 912 665

Arup Australia Pty Ltd
Level 5
151 Clarence Street
Sydney
NSW, 2000
Australia
arup.com

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Executive summary

Penrith Lakes Development Corporation (PLDC) is seeking approval for two modification applications to continue the long-standing rehabilitation of the Penrith Lakes Scheme. The modifications do not introduce any new land uses, expand the footprint of approved works, or intensify operations. Rather, they allow additional clean excavated material to be imported so that the approved interim landform can be completed in accordance with the Penrith Lakes Deed and the site's Water Management Plans.

The rehabilitation of Penrith Lakes has occurred progressively for decades, and the staged importation of clean material remains essential to rebuilding the former quarry landform to a safe, stable and flood-compatible profile. Sydney's major infrastructure projects continue to generate large quantities of clean spoil, and Penrith Lakes is one of the State's few lawful destinations for this material.

Environmental impact assessment process

Modification reports for DA2 and DA3 were prepared to address Department of Planning, Housing, and Infrastructure (DPHI) requirements and exhibited for public comment in November 2024. The modification reports outlined the purpose of the works, the background to the Penrith Lakes approvals, the rehabilitation obligations under the Deed, and the environmental assessments undertaken to support the proposals.

The exhibition period allowed nearby residents, Government agencies, councils, and stakeholders to review the proposals and lodge submissions. Submissions raised issues relating to flooding, drainage, heritage, visual outcomes, dust, noise, traffic, and long-term intentions for the site.

Consultation during exhibition

During exhibition, DPHI made the modification documentation available online to ensure transparency and accessibility. Community members and stakeholders were able to review the material and provide feedback. Government agencies, including NSW Reconstruction Authority, State Emergency Services, and various teams in the Department of Climate Change, Energy, the Environment and Water (DCCEEW), were provided with the opportunity to comment, and several issued detailed technical requests which have since been addressed.

Actions taken since submission

This submissions report presents PLDC's response to the issues raised during exhibition and outlines the design refinements made since the modification applications were originally submitted. All submissions have been reviewed and, where appropriate, the project design has been updated to address specific concerns raised by agencies, councils and the community. Key refinements include adjustments to the landform profile in several locations to improve surface drainage, a reduction in the total volume of imported material *from 9.7 million tonnes* to **6.8 million tonnes**, and modifications to batter shaping to better integrate with the surrounding topography and heritage curtilages. The stormwater design around The Poplars and McCarthys Cemetery has also been refined to resolve existing ponding issues and ensure long-term drainage performance.

In parallel with these design changes, PLDC has undertaken a suite of updated technical studies to incorporate the latest modelling, data and engineering design. This includes a fully updated and independently validated

flood impact assessment, additional heritage analysis, refined drainage investigations, and new landscape and visual assessment work. These updates were specifically requested by government agencies and prepared to ensure the Department's assessment is based on the most accurate and contemporary information available. Together, the design refinements and technical updates demonstrate that the modifications remain safe, environmentally acceptable and consistent with the long-standing intent of the Penrith Lakes rehabilitation program.

Key issues raised and how they have been addressed

Flooding and drainage

A fully updated and independently validated flood model has been completed using the latest Hawkesbury–Nepean flood information using the revised landform and material import volumes. The modelling confirms that the revised landform does not meaningfully increase flood levels, redirect floodwaters, or create any new above-floor flooding. Minor changes that do appear are extremely small and occur only in flat, open areas where they have no practical effect on safety or evacuation. Key evacuation routes continue to perform as they do under current conditions, including in the worst-case flood scenario. No flood-compensation works are required, and regional flood risk remains unchanged.

Heritage

A detailed heritage assessment confirms that the works do not physically affect McCarthys Cemetery or The Poplars, the two State heritage items within the site. Updated drainage works address existing ponding at The Poplars and ensure a stable, free-draining outcome consistent with the Conservation Management Plans. Views, access, and setting are preserved, and no additional heritage mitigation is required.

Landscape and visual

The landscape and visual assessment confirms the proposed landform can be absorbed into the wider rehabilitation setting. Height changes are modest across such a large site, and long-term visual outcomes will be softened through the planting of endemic grass species as required under the Deed. Long-range views, including toward the Blue Mountains, remain unaffected.

Dust, noise, and traffic

The modifications do not increase truck numbers, change haul routes, extend operating hours or introduce any new equipment. As a result, dust, noise, traffic and related impacts remain consistent with existing approved operations. PLDC continues to operate under a comprehensive environmental management framework, including the environmental protection licence (EPL), consent conditions, and mandatory monitoring and audits.

Future development

Some submissions raised concerns about potential future development on the Penrith Lakes site. This matter is outside the scope of the modifications. Any future proposal would require a separate planning proposal, full consultation, and detailed assessment under contemporary planning and flood policy. The current modifications relate solely to completing the approved interim landform.

Environmental management measures

Because the modifications do not introduce new activities or increase impacts, all existing environmental protections remain in force. As noted above, these include the Penrith Lakes Deed, EPL conditions, monitoring programs, independent audits and the State's requirement for an operational review once every two years. No new mitigation measures are required beyond those already implemented and regulated.

Ongoing Consultation

Should the modifications be approved, PLDC will continue to engage with stakeholders, councils and the community as part of its existing communication and reporting obligations. The biennial review process will continue to provide transparency on performance, material volumes, and operational needs.

Conclusion

The modifications have been refined and strengthened in response to the submissions received during exhibition. Updated technical work confirms that the proposed interim landform is environmentally acceptable, does not change community flood risk, protects heritage items, maintains visual quality and preserves existing environmental performance.

The modifications remain consistent with the strategic intent and statutory framework of the Penrith Lakes Scheme. They allow rehabilitation to progress in a controlled and orderly manner, support Sydney's major infrastructure pipeline, and maintain the high standard of environmental management expected by NSW Government agencies and the community.

1. Introduction

In November 2024, Penrith Lakes Development Corporation (PLDC) applied to update two of its existing approvals so it can bring more clean fill material into the Penrith Lakes site, about 30 kilometres northwest of Parramatta. At the time the modifications sough to import an additional 9.7 million tonnes of material to the eastern part of the site. This extra fill would help raise the land, so it is better protected from a rare but severe flood, sometimes called a 1-in-500-year flood. This level of flood protection matches the standards set out in the site's Water Management Plans.

To do this, PLDC lodged two State Significant Development (SSD) modification applications with the Department of Planning, Housing and Infrastructure (DPHI). These applications sought to amend previously approved conditions issued on 30 June 2024. However, since submitting the applications, PLDC has carried out additional technical studies to minimise any potential increases in flood levels outside the site. This work resulted in a revised earthworks design that uses shallower fill levels than originally proposed, reducing the scale and extent of changes to landform and reducing the import to 6.8 million tonnes, which is the equivalent of around 3,097,000 m^3. This is discussed further in Chapter 3.

After lodging both applications they were publicly exhibited from 13 November 2024 to 26 November 2024 so that the community, agencies, and other stakeholders could review the plans and provide feedback. After the exhibition period, the Planning Secretary asked PLDC to prepare a formal response to the matters raised in the submissions. This is a requirement under Section 104 of the *Environmental Planning and Assessment Regulation 2021.* This Submissions Report has been prepared to respond to all the issues raised and to meet the requirements of the Regulation.

Both proposed modifications were prepared and placed on exhibition between 13 November 2024 and 26 November 2024. Following this, the Planning Secretary requested that PLDC submit a response to the issues raised in submissions as required under section 104 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation). This Submissions Report has been prepared in line with Section 3.2 of the SSD Guidelines for Preparing a Submissions Report, and it responds to all issues raised during the exhibition period.

1.1 What's changing and what will remain the same

The applications to modify the existing approvals were made under Section 4.55 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act, NSW). If approved, PLDC would continue to operate the site (shown in Figure 1-1) under the same consent conditions, commitments, mitigation measures, and management plans that already apply. This includes the pollution-control requirements in the site's long-standing Environment Protection Licence (EPL 2956), which has been in place since 2001.

Because the site is already operational, the required environmental management systems and controls are established and in use. The proposed modifications *do not* change how the site functions. The same activities would continue in the same locations and at the same scale as in previous years. PLDC is not seeking to increase the rate of material import, extend working hours, change traffic or haulage routes, or alter onsite access arrangements. Imported material would continue to be placed and managed in line with the Management Plan, which directs surface water towards the lakes on the western side of the site.

During the exhibition period, PLDC reviewed the potential flooding, visual, and heritage impacts raised in stakeholder submissions. As noted above, the proposal has been refined in response to this feedback reduce the total volume of imported material and make minor adjustments to the final landform. These refinements are discussed further in Chapter 3.

1.2 Structure of this submissions report

This Submissions Report sets out the issues raised during the public exhibition of the modification applications and provides PLDC's responses to those issues. Table 1-1 outlines how the report is organised.

Table 1-1: Structure of this report

Chapter	Description
Chapter 1	Introduction and background (this chapter)
Chapter 2	Analysis of submissions
Chapter 3	Actions taken since submission
Chapter 4	Response to agency and other submissions and information requests
Chapter 5	Response to government submissions and information requests
Chapter 6	Response to public submissions
Chapter 7	Updated project justification
Chapter 8	References
Appendix A	Public submissions register
Appendix B	Supporting information

Figure 1-1 Site layout

2. Analysis of submissions

This section analysis the submission received on the displayed modification applications.

2.1 Summary

The two modification applications were publicly displayed from 13 November to 26 November 2024. During this period, DPHI received 37 submissions in total: 20 relating to the modification of DA2 and 17 relating to the modification of DA3. This number includes agency responses that advised they had no comments. Table 2-1 summarises the types of submissions received. Seventeen (17) submissions were made to both applications.

After the exhibition period, further correspondence and information requests were received from various agencies between March 2025 and November 2025. These applied to both modification applications. They are also shown in the table below.

Table 2-1: Submission categorisation

Category	Number		Specifics
	DA2	DA3	
Submissions			
Public	11	8	Residents in Penrith, Cranebrook, Paramatta, Castlereagh LGAs
Agency	9	8	Crown Lands, DCCEEW (Biodiversity Conservation and Science, BCS), DCCEEW (Heritage NSW), DCCEEW (Water Group), NSW Environment Protection Authority (EPA), NSW Reconstruction Authority, State Emergency Services (SES), Transport for NSW, Water NSW.
Government	2	2	Hawkesbury City Council, Penrith City Council
Other	1	1	Endeavour Energy.
Information requests			
Government	3	3	DPHI (x3)
Correspondence during the response to submission period			
Agency	7	7	DCCEEW (Heritage NSW, x2), DCCEEW (Water Group), NSW EPA, SES
Government	2	2	Hawkesbury City Council, Penrith City Council
Total (submissions)	**23**	**19**	
Total (including RFIs/correspondence)	**35**	**31**	

Table 2-2 shows the dates when PLDC received the submissions, RFIs, and correspondence. These dates have been used to help respond to the submissions in Chapter 4 and Chapter 5.

Table 2-2: Dates received

	Submission date	RFI/correspondence date
Agencies		
Crown Lands	25-Nov-24	-
DCCEEW (BCS)	5-Dec-24	-
DCCEEW (Heritage NSW)	13-Nov-24	14-Mar-25 20-Jun-25
DCCEEW (Water Group)	25-Nov-24	21-Nov-25
NSW EPA	21-Nov-24	3-Apr-25
NSW RA	13-Jan-25	17-Apr-25
SES	19-Dec-24	26-Mar-25
Transport for NSW	22-Nov-24	-
Water NSW	19-Nov-24	-
Government		
Hawkesbury City Council	14-Jan-25	25-Mar-25
Penrith City Council	26-Nov-24	28-Mar-25
DPHI	-	31-Oct-24 18-Dec-24 16-Apr-25
Other		
Endevour Energy	19 December 2024	-

2.2 Breakdown of submissions and issues

Table 2-3 outlines the types of issues raised in the submissions, RFIs, and correspondence. While 30 of these were common to both applications, each has been considered separately for completeness.

Table 2-3: Submission, RFI and comment breakdown

Breakdown	DA2			DA3		
	Comment	Support	Object	Comment	Support	Object
Public	3	1	7	2	1	5
Agency	16	-	-	15	-	-
Government	6	-	-	6	-	-
Other	1	-	-	1	-	-
Total	**26**	**1**	**7**	**24**	**1**	**5**

In line with Section 3.2 of the SSD Guidelines for Preparing a Submissions Report, the submissions have been grouped into five main categories:

- Comments about the project itself
- Procedural or process-related issues
- Economic, environmental, or social impacts
- Project justification and evaluation
- Issues that fall outside the scope of the project.

Public submissions have then been further broken down into sub-categories. Agency and government submissions have been addressed individually. Where the same issues were raised across both applications, this has been flagged for completeness.

2.3 Analysis

A total of 63 issues were raised across agency, government, organisation, and public submissions, along with the RFIs issued during the assessment. These have been reviewed, categorised, and responded to in the following chapters.

2.3.1 Agency, government, and organisation submission and information requests

All agency and government submissions have been reviewed, and the issues addressed in Chapter 4 and Chapter 5 of this report. In total, *53* separate issues were raised across this stakeholder group. These have been categorised into the five standard issue groups described above and used throughout this report.

The largest groups were procedural or process-related matters *(16* issues) and economic, environmental, or social impacts (*15* issues). A further *six* issues related to project justification and evaluation, *five* issues were classified as comments about the project itself, and the remaining *11* issues were considered outside the scope of the project. This distribution shows that agency feedback was primarily focused on the adequacy of impact assessment, clarity of the proposed modification, and ensuring alignment with existing approvals and evaluation frameworks.

2.3.2 Public

Each public submission was reviewed to identify the issues raised. In total, *10* issues were identified across all public submissions. Again, these were grouped into the five standard categories.

The largest group of public issues related to economic, environmental, or social impacts (*four* issues), reflecting community interest in flooding, amenity, and landform outcomes. A further *three* issues were categorised as comments about the project itself, generally seeking clarification of design intent or how the modification interacts with future land uses. Procedural or process-related matters accounted for *two* issues, and *one* issue was considered outside the scope of the project.

These issues have been summarised in Chapter 6, along with detailed responses. Specialist input was sought where required. **Appendix A** lists each issue raised by the public and identifies where the corresponding

response is provided in Chapter 6. Where a respondent raised several points under the same issue, each point has been addressed individually.

2.3.3 Summary of issue distribution

Table 2-4 provides an overview of how the 63 issues were distributed across the five categories. While the mix varied between stakeholder groups, several clear themes emerged. Issues relating to potential economic, environmental, or social impacts and those concerning procedural or process-related matters together formed most of the submissions. These categories accounted for almost two-thirds of all issues raised, indicating that stakeholders were principally concerned with the technical adequacy of the assessment, the clarity of the information provided, and the rigour of the underlying modelling and approval processes.

Government stakeholders contributed most of the requests relating to evaluation and justification, reflecting their interest in how the modification aligns with the intent and scope of the original approvals. Public submissions, by contrast, focused more on localised context and potential impacts, including matters such as amenity, landform outcomes, and perceived implications for future land use. A smaller number of issues related directly to the design or purpose of the modification, while out-of-scope matters typically reflected broader strategic concerns not affected by the proposal.

Taken together, the distribution highlights a consistent emphasis on ensuring transparency, technical robustness, and clear delineation of what is and is not influenced by the proposed modification. These themes have shaped the structure of the responses provided throughout Chapter 4, Chapter 5, and Chapter 6.

Table 2-4: Key issues raised during the submissions

Category	Number of times raised				Percentage of total issues*			
	Agency**	Gov	Public	Total	Agency**	Gov	Public	Total
Comments about the project itself	4	1	3	*8*	13%	4%	**30%**	*13%*
Procedural or process-related matter	8	8	2	*18*	27%	**35%**	20%	*29%*
Economic, environmental, or social impact	9	6	4	*19*	30%	26%	40%	*30%*
Project justification and evaluation	-	6	-	*6*	0%	26%	0%	*10%*
Issues that fall outside the scope of the project.	9	2	1	*12*	30%	9%	10%	*19%*
TOTAL	**30**	**23**	**10**	**63**				**100%**

* Rounded values therefore not totalling 100%

**Includes Endevour Energy submission

Table 2-5 below breaks down the sub-issues raised.

Table 2-5: Summary of sub-categories for top five key issues raised

Category	Subcategories	
The project	• The extent of the modification footprint • Ongoing material imports onsite	• The modifications' characterisation and classification
Procedural matter	• Validity of the original impact assessment • Utility conditions and advice • Extent of consultation	• Landowner's consent • Consistency with plan instruments

Category	Subcategories	
Economic, environmental and social impacts		
Flooding	• Extent of the flood model and assessment • Offsite flood risk and impacts to surrounding residents • Flood prevention methods offsite	• Freeboard allowance • Modelling approach • Evacuation routes • Downstream impacts
Landscape and visual	• Impacts from Castlereagh Road	
Air quality	• Dust generation and offsite impacts	
Noise and vibration	• Noise impacts in general	
Non-Aboriginal heritage	• Impact to McCarthys Cemetery • Impact to The Poplars	• Vistas and views
Traffic & access	• Traffic impacts in general	• The ongoing movement of truck to and from site on public roads
Other	• Maintain existing easements and clearances	
Justification and evaluation	• Justification for continuing to import material	
Beyond the project scope/irrelevant	• The future use of the site.	

3. Actions taken since submission

This Chapter describes the actions PLDC has taken since lodging the modification applications.

3.1 Revised flood modelling

After PLDC lodged the DA2 and DA3 modification applications in November 2024, which included Water Technology's 2024 Flood Impact Assessment, several stages of follow-up work took place. These steps were aimed at responding to agency feedback, improving the flood modelling, and reducing any potential offsite flood impacts.

1. Initial Flood Impact Assessment (November 2024) | Water Technology prepared the first Flood Impact Assessment to support the modification applications. This relied on the 2024 Hawkesbury-Nepean River Flood Study model and assessed the proposed increase in fill across Lot 4. The results showed some small increases in flood levels in very rare events.

2. First Round of Agency Questions (Late 2024 – Early 2025) | After the applications were lodged, several agencies issued submissions and RFIs as described above in Section 2.1. Water Technology responded with a letter report on *7 March 2025* (see **Appendix B.3**), providing additional modelling information and clarifying elements of the original assessment.

3. Second RFI from NSW Reconstruction Authority (17 April 2025) | NSW RA raised further technical questions, particularly about model assumptions and potential impacts. Water Technology did *not* prepare a response to this RFI.

4. Worley Engagement and New Flood Modelling (from September 2025) | PLDC then engaged Worley Consulting to take over the flood work. Worley's role included:

- Reviewing the earlier modelling
- Updating the model to correct limitations and incorporate new information
- Designing a more flood-efficient fill layout for Lot 4

Key updates made by Worley included:

- Including the approved Nepean Business Park fill, which had not been modelled previously but affects local flood behaviour
- Correcting the width of the floodway across the middle of the site, which was underestimated by about 40 metres in earlier modelling
- Fixing stability issues in the 2024 Hawkesbury-Nepean River Flood Study hydraulic model to ensure reliable results
- Testing revised earthworks, including shallower fill in the northern half of Lot 4 to reduce flood level increases.

5. Updated Flood Impact Assessment (November 2025) | Worley prepared a new standalone Flood Impact Assessment (see **Appendix B.11**) that:

- Replaces the earlier Water Technology reports
- Incorporates refined modelling
- Responds to the NSW RA RFI of 17 April 2025
- Demonstrates reduced flood impacts compared with the 2024 Hawkesbury–Nepean Regional Flood Model with updates to include a new approved business park in the area.

3.2 Refinements or amendments

Following the additional flood modelling described in Section 3.1, PLDC has refined the proposed earthworks design to reduce potential offsite flood impacts.. These refinements were informed by feedback from DPHI, NSW RA, NSW SES, Penrith City Council, Hawkesbury City Council and members of the public, as well as by the updated hydraulic modelling undertaken by Worley.

The original proposal involved importing 9.7 million tonnes of material. While the 2024 design met the intent of the existing approval, the updated modelling identified opportunities to further reduce potential changes to predicted flood levels, particularly in larger, rarer flood events. In response, PLDC has amended the bulk earthworks strategy to create a more flood-efficient landform, with a focus on reducing the quantity of fill while maintaining the desired ground level outcomes across Lot 4.

3.2.1 Summary of landform changes

A comparison of existing ground levels and the revised proposed levels (refer Figures 3-1 and 3-2) shows a pattern of moderate increases across the site, with the amount of change varying in accordance with the natural topography:

- *Central north–south ridge*: Moderate level increases of approximately 1.5 to two metres, smoothing and lifting the existing ridge without raising the maximum site elevation
- *Northern half of Lot 4:* The application of shallower fill reduces earlier increases to approximately one to two metres, forming the primary area where material volumes have been reduced
- *Eastern side near the Duralia Floodway*: Minor changes, typically less than one metre, ensuring the floodway continues to perform as intended
- *Southern portion and areas around McCarthys Cemetery*: Generally, one to 1.5 metre increases, contributing to a more hydraulically efficient landform
- *Maximum elevation:* The highest point on the site remains 27.4 mAHD, with refinements focused on the platform form rather than increasing peak heights.

These refinements reflect a shift toward *a more balanced and less intrusive earthworks layout*, addressing agency feedback on localised redirection of flows and ensuring more predictable flood behaviour across a range of events.

3.2.2 Refined fill approach

A key revision involved reducing the depth of fill across the northern half of Lot 4, where earlier modelling indicated potential for more noticeable effects on flood levels and flow paths. The revised design applies shallower fill across the portion of the site on the northern side of the Duralia Lake to Main Lake floodway, adjusts platform gradients to improve transitions, and refines tie-in points to avoid unnecessary redirection of floodwaters. Together, these refinements reduce the overall importation requirement to around 6.8 million tonnes, providing a clearer and more efficient design outcome.

3.2.3 Supporting detail

Appendix B.11 provides further detail on how the landform has been reshaped in response to the updated modelling, agency RFIs and design workshops involving PLDC, Worley and J Wyndham Prince. Figure 3-1 shows the earlier landform changes assessed in the 2024 submission package, while Figure 3-2 presents the refined landform and the reduced importation volumes now proposed.

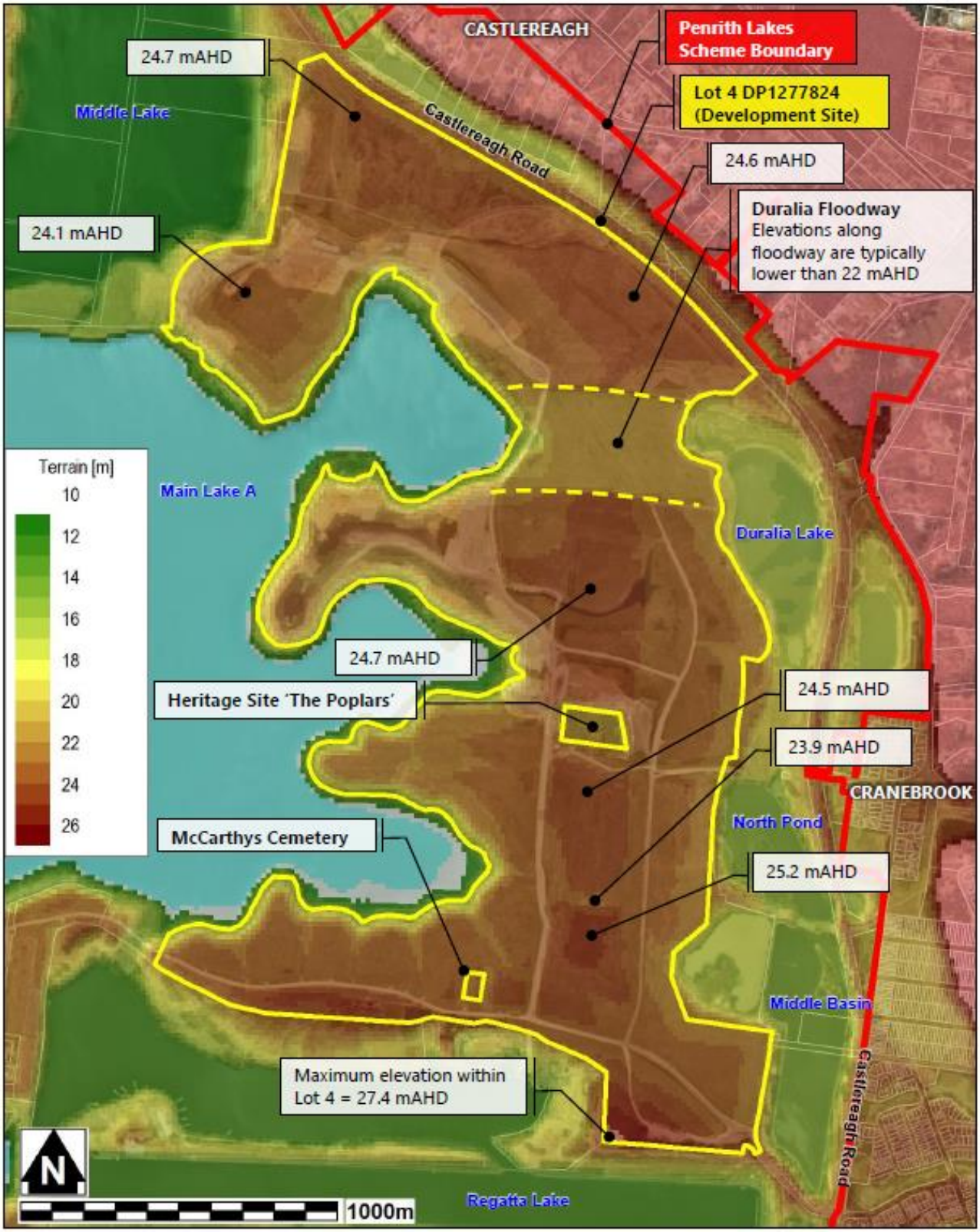

Figure 3-1 Heat map showing the relative increase in material import under the modification applications

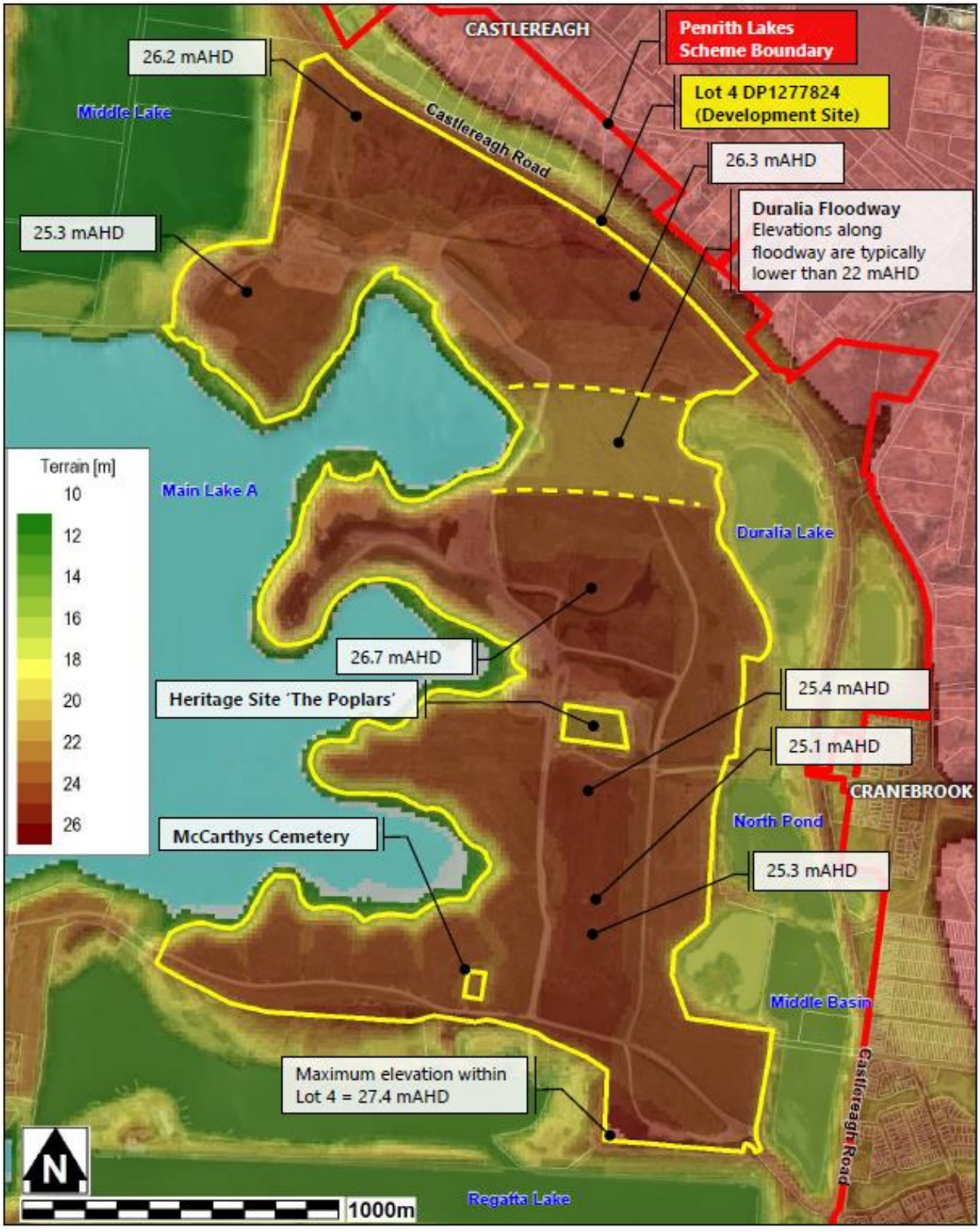

Figure 3-2 Heat map showing the relative increase in material import as amended

3.3 Community engagement

Following discussions with DPHI, it was confirmed that no additional community engagement was required to support the modification applications or the Submissions Report. This is consistent with SSD Guidelines –

Preparing a Modification Report (DPHI, 2022), noting that the modifications relate to the continued importation of material on an existing operational site and apply only to land owned by PLDC.

This does not alter PLDC's ongoing commitment to consultation, engagement and complaints management. PLDC continues to operate and advertise its community engagement hotline, through which it invites feedback and aims to provide a same-day response and resolution wherever possible.

More broadly PLDC has continued to engage with DPHI on matters over the intervening period, while meeting with key agencies including NSW Reconstruction Authority, whose role it is to provide expert oversight on flood risk, ensuring developments are resilient, do not worsen flooding elsewhere, and maintain safe evacuation and emergency response outcomes.

3.4 Additional impact assessment

Additional information has been prepared and provided to DPHI to directly address the submissions and RFIs. Some of this material was supplied before the Submissions Report was drafted, but it is included here for completeness. Table 3-1 summarises each piece of supporting information and explains how it responds to the relevant submission or RFI.

Table 3-1: Supporting information

Additional documentation	Context	Location
DPHI second RFI (18 December 2024)		
RFI response cover letter (Arup, 11 March 2025)	Cover letter for the appended technical notes	Appendix B.1
Letter and supporting figures (J Wyndham Prince, 25 February 2025)	Explaining the rationale for the fill above the 0.2% flood level	Appendix B.2
Memo and supporting figures (Water Tech, 7 March 2025)	Identification of which previously inundated properties would be subject to increased flood waters.	Appendix B.3
Letter (Western Sydney Lakes, 18 February 2025)	Explaining how long it would take to import the fill to site, while complying with current site operations and the timeline for the receipt of fill from key infrastructure projects.	Appendix B.4
Heritage Impact Assessment (Artefact Heritage and Environment, 10 March 2025)	A Heritage Impact Assessment that considers the impact on the two heritage features onsite (i.e., McCarthys Cemetery and The Poplars).	Appendix B.5
Landscape and Visual Impact Assessment (Arup, 7 March 2025)	A Visual Impact Assessment considers the impact of the raised landform from key vantage points.	Appendix B.6
DPHI third RFI (16 April 2025)		
Letter and appendix (Arup and J Wyndham Prince, 14 May 2025)	Providing further clarification on the visual impact assessment and the management of stormwater around McCarthys Cemetery and The Poplars. A bulk earthwork plan showing a heat map of the import levels across the site under the modification applications.	Appendix B.7
Heritage NSW (17April 2025)		

Additional documentation	Context	Location
Letter (J Wyndham Prince, 29 July 2025)	Demonstrating the work that has taken place around the Poplars to manage stormwater.	Appendix B.8
Figure (J Wyndham Prince, 29 July 2025)	The plan shows the proposed surface levels, catch drains, and stormwater drainage layout around The Poplars	Appendix B.9
NSW RA (17April 2025)		
Letter (Arup, 18 November 2025)	Cover letter for the appended technical notes and information.	Appendix B.10
Memo and supporting figures (Worley, November 2025)	Revised flood impact assessment.	Appendix B.11

4. Response to agency and other submissions and information requests

This Chapter sets out the response to agency and other submissions and information requests.

4.1 Crown Lands

Crown Lands is responsible for managing public reserves, foreshores, waterways, leases, licences, and access rights on behalf of the NSW Government.

4.1.1 Submission (25 November 2024)

Crown Lands confirmed it has read both proposed modifications and had no comments, requirements, or specific conditions as neither modification involves land, roads, or waterways under its jurisdiction.

4.2 DCCEEW Biodiversity Conservation and Science

DCCEEW BCS is responsible for biodiversity assessment, threatened species and ecosystems, ecological advice, and ensuring development complies with the *Biodiversity Conservation Act 2016* (NSW).

4.2.1 Submission (5 December 2024)

DCCEEW BCS confirmed it had read both modification applications and that flooding matters from their perspective were adequately addressed and that no biodiversity assessment (BDAR) was required, with no further issues raised.

4.3 DCCEEW Heritage NSW

Heritage NSW is responsible for protecting State-listed heritage items, archaeology, heritage curtilages and views, and providing statutory advice on the heritage impacts of development. It provided a submission on DA2 addressing the two heritage items on the site: McCarthys Cemetery and The Poplars. It did not provide comments on DA3 because that area contains no State-listed heritage items and no known historical archaeological sites.

For DA2, Heritage NSW agreed that the proposed modification would not directly affect either heritage item. It noted that raising the land would help protect them from severe flooding; however, it sought clarification that the works would not negatively affect the setting or views to and from these heritage places. Heritage NSW then provided two additional correspondence the first making recommendations against the heritage impact assessment prepared in March 2025 (see Section 3.4), and the second commenting on the approach to managing stormwater around the two State heritage listed items.

4.3.1 Submission (13 November 2024)

DCCEEW Heritage NSW confirmed it had read both proposed modifications and identified the following issues.

A.1: Need for additional heritage information (procedural or process related)

Heritage NSW advised that the modification report did not include a Statement of Heritage Impact and that they therefore required additional information before finalising their assessment.

A.1:Response

A full Heritage Impact Assessment, including a Statement of Heritage Impact, has now been prepared by Artefact Heritage (March 2025) under the requisite guidelines. This assessment covers both McCarthys Cemetery and The Poplars and addresses the information Heritage NSW requested. The assessment confirms that:

- No physical (direct) impacts will occur to either item because all works stay outside the heritage curtilages.
- The only impacts relate to minor visual changes to views between the two sites, and these have been assessed, documented and considered against the relevant Conservation Management Plans and heritage policies.
- Mitigation measures have been identified, including managing construction effects (dust, vibration, vehicle movements), maintaining access to the cemetery, and addressing existing ponding at The Poplars.

This information is sourced from the Heritage Impact Assessment, which is included in **Appendix B.5**.

A.2:Potential impacts on the setting and views of McCarthys Cemetery (economic, environmental, or social impacts)

Although the works would not directly affect the two heritage items, Heritage NSW advised that the proposed earthworks may affect McCarthys Cemetery's setting and views because of changes to surrounding topography and the location and height of embankments. Specifically, Heritage NSW asked for:

- Justification for why the 40-metre heritage buffer recommended in the Conservation Management Plan was not adopted
- Clarification of proposed changes to ground levels, especially along McCarthys Lane
- Explanation of how the relationship and access between the Lane and the Cemetery would be affected and managed.

A.2:Response

Retention of the heritage buffer: The existing buffer around McCarthys Cemetery is being fully maintained. The works do not intrude into the heritage curtilage or McCarthys Lane. The 40-metre buffer referenced in the Conservation Management Plan was developed for long-term masterplanning, whereas the current modification relates only to interim earthworks and is required to tie into existing site levels and boundaries.

This means the proposed earthworks stay outside the established buffer used in all previous approvals, and the detailed cross-sections confirm that no changes will occur within the heritage area itself (See Figure 29 and Figure 32 in the Heritage Impact Assessment).

Proposed changes to ground levels: The updated earthworks drawings now include detailed topographic transects across the southern edge of the cemetery. These show that:

- Ground levels at the buffer boundary remain unchanged
- From the edge of the buffer, the landform gradually rises over approximately 20 metres to about 1.5 metres above current levels.

This gradual transition was not illustrated in earlier documentation but now clearly demonstrates that there will be no abrupt embankments near the Cemetery and that its setting will remain open and legible (See cross-sections in Figures 29–33).

Relationship and access between McCarthys Lane and the cemetery: The modification *does not* alter McCarthys Lane, the Cemetery entry point, or its functional relationship with the heritage item. All access routes and surrounding grades remain as they are today. The Heritage Impact Assessment confirms that the proposed landform changes occur south of the buffer and do not affect the Lane's alignment, visibility, or accessibility (See Section 4.1 and site photos within the Heritage Impact Assessment).

Visual setting and views: The Heritage Impact Assessment identifies that the Cemetery already experiences some visual change from historic land raising and vegetation growth. The updated design avoids steep batters near the heritage item and helps retain the existing sense of openness. Minor visual impacts may occur from the broader landform changes, but these do not alter the Cemetery's immediate setting and remain consistent with the Conservation Management Plan's intent.

Future planning and long-term setting: Any permanent landform design, landscape treatment, or enhancement of the Cemetery's setting will be finalised through the future masterplan and planning proposal. The current modification deliberately avoids pre-empting those outcomes and is limited to interim earthworks only.

Flooding considerations: The updated Flood Impact Assessment (Worley, 2025) confirms that these localised earthworks do not produce adverse external flooding impacts and do not elevate flood risk at or around McCarthys Cemetery (See Worley Flood Impact Assessment in **Appendix B.11**).

A.3: *Potential impacts on the setting and views of the Poplars (economic, environmental, or social impacts)*

Although the works would not directly affect the two heritage items, Heritage NSW advised that the proposed earthworks may affect The Poplars setting and views because of changes to surrounding topography and the location and height of embankments. Specifically, Heritage NSW asked for:

- Justification for not providing a buffer zone around The Poplars
- Advice on mitigation options for earth embankments that could block key view lines
- Consideration of historically significant views (including between the two heritage items and toward the Blue Mountains and Cranebrook Terrace)
- Clarification on how access to The Poplars would be maintained after the works.

A.3: *Response*

Retention of the buffer zone: The existing buffer zone surrounding The Poplars is being fully retained. The engineering design avoids any fill placement within the heritage curtilage. The updated earthworks profile shows that fill will only begin outside the buffer zone and will transition gradually, rising approximately 1.5 metres above current levels over about 20 metres. This maintains the open setting around the item and

avoids any abrupt changes in topography adjacent to the site (See Figure 29 to Figure 33 of the Heritage Impact Assessment for cross-sections around The Poplars).

Mitigation of potential view obstruction: The Heritage Impact Assessment concludes that the modification would result in only a minor visual impact to The Poplars because key long-distance vistas have already been reduced by earlier approved landform changes and existing vegetation growth. Nonetheless, the design avoids steep embankments near the heritage item and uses gentle grading to maintain as much openness as possible.

Consideration of significant heritage views: Historically important view lines between The Poplars, McCarthys Cemetery, and towards the Blue Mountains/Cranebrook escarpment were reviewed in the Heritage Impact Assessment in accordance with the Statement of Heritage Impact guidelines, the significance criteria in the two Conservation Management Plans, and the visual requirements of Clause 5.38 of the Western Parkland City SEPP (WPC SEPP). Accordingly, this confirms that:

- View lines from The Poplars to McCarthys Cemetery are already largely screened by vegetation and previous filling, so the modification *does not* materially worsen the current situation.
- Major regional views to the Blue Mountains escarpment are already obstructed and would experience little to no additional adverse impact (See Heritage Impact Assessment Executive Summary and Section 7.1.2).

Future access arrangements: Access to The Poplars will continue from the south in the short term, consistent with current arrangements. The masterplan and future planning proposal for the precinct will formalise long-term access routes, ensuring continued public and maintenance access in accordance with the Conservation Management Plan. No part of the proposed earthworks would obstruct access (See site photographs and site context discussion in Section 4.1 of the Heritage Impact Assessment)

Flooding and earthworks: The updated flood impact assessment (Worley, 2025) demonstrates that the discrete changes in earthworks in the vicinity of The Poplars do not result in adverse changes to flood behaviour or increase flood risk at the site.(See Worley Flood Impact Assessment).

A.4: *Views between McCarthys Cemetery and The Poplars and beyond (economic, environmental, or social impacts)*

Heritage NSW also raised concern about the value of the views between McCarthys Cemetery and The Poplars, and wider vistas to the Blue Mountains and Cranebrook Terrace.

A.4*:Response*

The updated Heritage Impact Assessment includes a full analysis of the significant view lines between McCarthys Cemetery and The Poplars, as well as long-range vistas to the Blue Mountains and Cranebrook escarpment. It concludes that:

- Existing views between the two items are already limited by vegetation growth and historic landform changes, and the proposed works would result in only minor additional visual impacts
- The Poplars has already lost most of its long-range western views, and the modification would not materially change regional vistas that have been previously affected by earlier filling

- McCarthys Cemetery would experience a minor visual impact, but its principal heritage values remain intact, and the modification *does not* alter its relationship with the adjoining landscape (See Heritage Impact Assessment Executive Summary and Section 7.1.2).

The design has deliberately avoided steep or abrupt changes to topography between the heritage items and uses gentle grading outside the heritage buffers. This helps maintain the sense of open rural character that historically linked the two sites.

PLDC will address the longer-term restoration and enhancement of key view corridors, both between the items and to the Blue Mountains/Cranebrook Terrace, through the upcoming precinct masterplan and planning proposal, which must align with both Conservation Management Plans. Heritage specialists are already advising on this process.

4.3.2 Correspondence (14 March 2025)

Heritage NSW's correspondence of 14 March 2025 outlined a series of recommended measures to safeguard McCarthys Cemetery and The Poplars during the proposed works.

A.5: *Heritage Safeguards for McCarthys Cemetery and The Poplars (procedural or process-related)*

Heritage NSW recommended that PLDC implement a series of mitigation and management measures to protect McCarthys Cemetery and The Poplars during the proposed works. These included improving drainage around both heritage items to ensure they remain free-draining and protected from ongoing water damage, marking and protecting the southern boundary of McCarthys Cemetery, and ensuring no stormwater from surrounding works enters either curtilage. PLDC was also asked to maintain safe and uninterrupted access to both sites, manage dust, vibration and heavy-vehicle movements to avoid indirect impacts, and undertake regular monitoring during earthworks with clear stop-work procedures if any heritage impacts are detected. Heritage NSW also recommended that all site personnel working near either heritage item receive an appropriate heritage induction.

A.5*: Response*

PLDC accepts all of Heritage NSW's recommended safeguards and will implement them during construction. The measures are consistent with the findings and recommendations in the Heritage Impact Assessment. Specifically, PLDC commits to continuing to do the following as already covered under its existing site management plans and practices as set out in response to the existing conditions of consent:

- Protect existing drainage and achieve free-draining conditions around both heritage items, including resolving ponding at The Poplars and ensuring no runoff from the works enters either curtilage (See Section 8.3 Recommendations in the Heritage Impact Assessment and Section 4.3.3 below)
- Mark and fence the southern boundary of McCarthys Cemetery to ensure all construction personnel are aware of the curtilage limits
- Always maintain uninterrupted access to both heritage items, with no changes to the current access alignment during the modification works
- Manage dust, vibration and heavy vehicle movements, including speed controls, watering for dust suppression, and buffer zones that separate vehicles from the cemetery and The Poplars

- Undertake regular onsite monitoring by suitably qualified heritage specialists during earthworks. Clear stop-work procedures will be in place if any unanticipated heritage impacts are identified
- Provide mandatory heritage inductions for all staff, contractors and plant operators working near the heritage sites.

These safeguards will ensure that both McCarthys Cemetery and The Poplars are protected throughout the works

4.3.3 Correspondence (30 June 2025)

This correspondence related to Heritage NSW's review of the additional stormwater information submitted following the DPHI's RFI response detailed in Section 5.3.3 below (response **RFI3.4**), and its confirmation that no further heritage issues required assessment and the informal supplementary material provided to demonstrate resolution of existing ponding issues at The Poplars. Heritage NSW confirmed that no further heritage issues required assessment.

***A.6:** Heritage NSW confirmation of stormwater mitigation (comments about the project itself)*

Heritage NSW raised no new issues in its 30 June 2025 advice. It confirmed that the additional stormwater information submitted in response to **RFI3.4**, along with the supplementary clarification material provided afterwards, adequately addressed its earlier concerns. Heritage NSW agreed that the proposed drainage arrangements appropriately protect both McCarthys Cemetery and The Poplars, and it accepted the overall drainage strategy. Its only remaining recommendation was that existing ponding within The Poplars be resolved before any further land-raising occurs and that this requirement be included as a condition of consent.

***A.6:** Response*

The information provided by J. Wyndham Prince in **Appendix B.8** and **Appendix B.9** and the additional clarification material submitted after response to **RFI3.4** were provided to Heritage NSW to address its comments. Together, they provide a clear and functional drainage solution for The Poplars, consisting of:

- Two existing 175 mm poly pipes that drain the Poplars exclusion zone to Lake A (graded at 2.8 percent over 192 metres)
- A grassed V-drain outside the Poplars curtilage to capture and direct overland flow to the pipe system
- Catch drains at the top of the Poplars batter to prevent external sheet flow entering the heritage area and redirect excess flow toward the Eastern Lakes precinct (as shown on stormwater plan SK220 in **Appendix B.8**).

Heritage NSW confirmed that this drainage approach is appropriate and requires no design changes for the modification to proceed. Its only recommendation was to address existing ponding within The Poplars prior to further land-raising, and PLDC will implement this requirement. Implementing these stormwater measures in full will ensure that:

- The Poplars and McCarthys Cemetery remain protected from waterlogging and overland flow
- No stormwater from the surrounding works enters either curtilage
- Both heritage items remain free-draining and stable during and after the interim earthworks.

4.4 DCCEEW Water Group

DCCEEW Water Group is responsible for water policy, water planning, floodplain management advice, and ensuring developments align with NSW water legislation and strategic water outcomes.

4.4.1 Submission (22 November 2024)

DCCEEW Water Group confirmed it has read both proposed modifications and had comments, requirements, or specific conditions.

4.4.2 Correspondence (21 November 2025)

After reviewing the additional information from DPHI, the Water Group advised that it had no further comments, as no issues were raised at the EIS stage and the new material did not require additional consideration.

4.5 Environment Protection Authority

NSW EPA is responsible for regulating environmental impacts, issuing and enforcing Environment Protection Licences (EPLs), and overseeing compliance with pollution, waste, air, water, and noise management requirements.

4.5.1 Submission (21 November 2024)

NSW EPA confirmed it had read both proposed modifications and identified the following issues.

***B.1**: Need to demonstrate currency and adequacy of previous assessments (procedural or process related)*

NSW EPA questioned if the existing assessments were still valid given the longevity of the project and the nature and scale of the importation proposed under the two modifications.

***B.1:** Response*

PLDC has prepared the modification applications in accordance with the EP&A Act and EP&A Regulation. Section 6.2.1 of both applications explains the statutory requirements under Section 4.55 of the EP&A Act, including the need to demonstrate that each modification *"is substantially the same development as that for which consent was originally granted"*. Both applications confirm that the site remains suitable for the continued importation of material and that the proposed modifications satisfy all procedural requirements.

In reaching this conclusion, PLDC reviewed all previously approved environmental management controls and found them to remain adequate to support the ongoing works under the proposed modifications. This reflects the limited change in environmental impacts, the long-term proven effectiveness of site management practices, and over 20 years of continuous operational oversight by NSW EPA through the site's EPL. The EPL has been progressively varied to reflect ongoing activity on the site, providing NSW EPA with an active mechanism to ensure operations continue to comply with the *Protection of the Environment Operations Act 1997* (NSW) and associated Regulations.

Critically, while the total importation volume would increase, the operational footprint and nature of activities remain unchanged, and therefore the assumptions and mitigation measures in the original assessments continue to apply in most areas. Section 7 of the modification applications provides a detailed comparison of approved

versus modified conditions, confirming that in many instances the original assessments remain valid and continue to set effective environmental controls.

Where aspects of the modifications require contemporary analysis, PLDC has prepared and submitted updated technical studies to ensure impact predictions remain current and robust. These include:

- A new Flood Impact Assessment (Worley, 2025, See **Appendix B.11**), which replaces the earlier Water Technology model and incorporates all refinements requested by the NSW RA (See Section 4.6). The report confirms no unacceptable changes in regional flood behaviour.
- A new Heritage Impact Assessment (Artefact Heritage, March 2025, See **Appendix B.5**) addressing setting, views, stormwater interactions, and mitigation measures for McCarthys Cemetery and The Poplars.
- A new Landscape and Visual Impact Assessment (Arup, March 2025, See **Appendix B.6**) responding to Clause 5.38 of the WPC SEPP and demonstrating compliance with current visual planning requirements.
- Updated stormwater design for The Poplars, including drainage rationale and engineering plans (J Wyndham Prince, July 2025, See **Appendix B.8**), which confirm the functionality of the two existing 175 mm pipes, the proposed V-drain and catch drains, and the free-draining design of the Poplars exclusion zone (See SK220 in **Appendix B.9**).
- Supplementary submissions to DPHI and NSW RA, including the 11 March 2025 response package, which clarified fill rationale, landform development, stormwater, and visual impacts, and confirmed that no additional changes to impact predictions were required (See the DPHI Response Letter in **Appendix B.7**).

These updated assessments validate the continued applicability of the original environmental framework while providing contemporary verification wherever the modifications could influence environmental outcomes (for example, changes in fill volume, landform configuration or drainage behaviour). Overall, the evidence demonstrates that the core environmental risks remain consistent with those previously assessed, and all impact pathways with potential to change have been reassessed using current best-practice methods.

The site retains the capacity, infrastructure and management systems to safely accommodate the additional 6.8 million tonnes of material. The EPL, and its ongoing variation process, provide a contemporary regulatory safeguard ensuring environmental controls remain adequate throughout the life of the operations.

Accordingly, PLDC considers that the original assessments remain valid in all material respects, and that the supplementary studies demonstrate the continued adequacy and currency of the environmental impact predictions and management measures.

4.5.2 Correspondence (3 April 2025)

NSW EPA raised no new issues in its 3 April 2025 advice and confirmed that the additional technical studies had addressed its earlier comments. It then provided a set of standard recommendations for DPHI to consider as consent conditions, including verification of VENM/ENM sources, preparation of a Soil and Water Management Plan, application of best-practice erosion, sediment and dust controls and the use of shaker grids and wheel-wash systems for all trucks. Given that these measures are already required under the site's existing EPL and environmental management procedures, it is unlikely that DPHI would need to impose additional conditions. PLDC will continue implementing these controls as part of normal site operations.

4.6 NSW Reconstruction Authority

NSW RA is responsible for regional floodplain management, disaster risk reduction, evacuation planning, and assessing how development may affect community safety during major floods.

4.6.1 Submission (13 January 2025)

NSW RA confirmed it had read both proposed modifications and identified the following issues.

***C.1:** Flood modelling (procedural or process-related issues)*

NSW RA advised that the original Water Tech Flood Impact Assessment incorrectly applied a medium blockage assumption to the 0.2% Annual Exceedance Probability (AEP) flood event. NSW RA requested that the modelling be amended so the high blockage scenario is used for the 0.2% AEP event.

***C.1:** Response*

The flood modelling has been fully updated in accordance with NSW RA's request. The revised Flood Impact Assessment prepared by Worley (See **Appendix B.11**) replaces the 2024 Water Technology model and now applies a *high blockage assumption* to the 0.2% AEP event, this being a very rare flood with major debris blocking culverts and bridges. This ensures that the model reflects NSW RA's preferred conservative planning approach for critical infrastructure and evacuation assessment. Specifically, the updated modelling incorporates:

- Full redevelopment of the TUFLOW model, this being software used to predict flood water behaviour
- Updated boundary conditions and calibration
- Revised blockage assumptions
- A full suite of AEP events, including the required 0.2% AEP high blockage scenario.

PLDC considers that the revised assessment addresses NSW RA's request in full.

***C.2:** Non-compliance with the SEPP flood planning rules (procedural or process related)*

NSW RA stated that the proposed modifications *do not* comply with Clause 5.38 of the WPC SEPP. It raised concerns that:

- Modelling identifies up to 50 mm increases on surrounding properties in extreme floods
- Additional increases occur in smaller floods such as the 1-in-200 AEP event.

NSW RA concluded that the proposed fill, combined with already-approved fill, would further displace floodwaters onto neighbouring land.

***C.2:** Response*

The updated Worley modelling confirms that small, localised increases do occur in several AEP events. These changes are consistent with the site's existing approved landform, which already includes large areas of fill authorised under previous consents. Key points raised in the revised Flood Impact Assessment are:

- The updated modelling shows that the small flood level changes are well within the range normally expected for large-scale filling in this part of the floodplain

- Where increases do occur, they are very small, limited to flat areas, and do not change evacuation behaviour, flood storage, or the level of risk to people or property.
- The works stay entirely within the already approved footprint and simply adjust the height of areas that were always intended to be filled.

Clause 5.38 of the WPC SEPP must be interpreted in the context of an existing State-significant precinct with large pre-approved infill areas, and where the relevant consent authority must balance landform completion, floodplain management, and long-term strategic planning outcomes. These factors support the conclusion that the modifications remain consistent with the intended operation of Clause 5.38 as detailed in Section 5.1 of the revised Flood Impact Assessment in **Appendix B.11**.

C.3: *Safe occupation and evacuation (comments about the project itself)*

NSW RA argued that raising land levels could make a larger area *capable* of being developed in the future. Their concern is not about the current site operations, which do not generate any evacuation demand, but about a *hypothetical future population* that might one day occupy the raised land. NSW RA considered that if development were later approved, it would introduce more residents and therefore more vehicles needing to evacuate during major floods. Because evacuation routes in the Hawkesbury–Nepean Valley are already severely constrained, NSW RA stated that the modifications would not meet the SEPP requirement that development must:

- Not adversely affect safe occupation
- Not adversely affect the efficient evacuation of people
- Not exceed the capacity of evacuation routes for flood events up to the Probable Maximum Flood (PMF).

C.3: *Response*

NSW RA's concern is based on the idea that raising land levels will inevitably lead to more development and therefore more people needing to evacuate. However, the proposed modifications doesn't seek to modify land use. Under Section 4.55 of the EP&A Act, a modification must remain substantially the same development as the original approval, meaning it can only adjust the existing earthworks and cannot introduce, imply or anticipate new land uses, buildings, or bringing more people to live and work in the floodplain.

Because the modifications are limited to earthworks, they *do not* change zoning, *do not* permit new development, and *do not* create any entitlement to build future homes, businesses or other uses. Any future development proposal would require a separate application .

As a result, the modifications have no effect on:

- Safe occupation
- Evacuation network capacity
- PMF-event evacuation performance.

As neither modification increases the number of residents, vehicles or structures onsite, they *do not* change any aspect of regional evacuation risk.

4.6.2 Correspondence (17 April 2025)

NSW RA's correspondence of 17 April 2025 outlined several ongoing concerns with the proposed modifications, particularly relating to flood behaviour, evacuation capacity, and compliance with the WPC SEPP flood planning provisions.

C.4: *Non-compliance with the SEPP flood planning rules (procedural or process related)*

NSW RA advised that, even after reviewing the additional information, the modifications still do not comply with the flood behaviour and evacuation requirements of the WPC SEPP.

C.4: *Response*

As noted above in this section, the updated Worley Flood Impact Assessment demonstrates that the modification:

- Produces very small incremental changes over an already-approved landform
- Does not alter the hydraulic function of existing evacuation routes
- Does not affect any occupied land
- Does not bring more people to live and work in the floodplain to be exposed to flood hazards.

Furthermore, Clause 5.38 of the WPC SEPP applies to the modifications themselves, not to the approved baseline landform. DPHI cannot revisit or reassess historic landform changes already authorised under previous consents. The correct test under Section 4.55 of the EP&A Act is whether the modifications will materially worsen flood behaviour compared with what is already approved. The updated Flood Impact Assessment demonstrates that the proposed modifications *do not* result in any such worsening and therefore remains consistent with the objectives of Clause 5.38.

C.5: *Flood impacts remain unacceptable (economic, environmental, or social impacts)*

NSW RA noted that updated Water Tech modelling showed increases in flood depths of up to 34 mm on surrounding residential areas. NSW RA considered these increases unacceptable under Clause 5.38 of the above SEPP because:

- Many nearby residential areas would experience increases greater than 20 mm in several rare flood events (1:2,000, 1:5,000 and most of the 1:1,000 AEP event)
- Increases were also found south of the Nepean River, which were not previously documented
- The proponent had not clearly defined the *study area* in the reports.

NSW RA requested that flood increases between 0 to10 mm and 11 to 20 mm be shown separately (instead of being grouped), and that a clear map of the study area be provided.

C.5: *Response*

The revised Worley Flood Impact Assessment provides:

- A clarified study area boundary
- A full set of separate mapping bands (0 to10 mm, 11 to 20 mm, >20 mm)

- Updated hydraulic mapping
- A corrected 0.2% AEP high blockage scenario
- Revised difference mapping across both residential and rural areas.

The Worley modelling demonstrates:

- Most of the changes in flood levels are very small, generally less than 20 mm
- A few spots show slightly higher changes, but these occur in very flat areas where even tiny shifts in water volume appear on maps without increasing danger or flood risk
- These changes fall within the range already expected and allowed for under the original Penrith Lakes approvals.

The updated assessment therefore satisfies the technical issues raised by NSW RA and confirms that flood impacts remain manageable and acceptable.

C.6: *Concerns about increased developable area and evacuation capacity (issues that fall outside the scope of the project)*

NSW RA stated that increasing land levels would likely lead to a larger developable area, which would ultimately create additional vehicles needing to evacuate. Even though the modifications only support the import of fill, NSW RA maintained that approving it would create a false sense of development potential.

C.6: *Response*

The modifications do not alter any planning controls, yield, density assumptions, or development permissions. They do not create any new entitlement to develop as noted above under the response to C.4. Any future development would be subject to a separate assessment and SEPP compliance test. The modifications do not bring more people to live and work in the floodplain or additional evacuation demand. Evacuation capacity therefore remains unchanged.

C.7: *Concerns about increased developable area and evacuation capacity (issues that fall outside the scope of the project)*

NSW RA stated that increasing land levels would likely lead to a larger developable area, which would ultimately create additional vehicles needing to evacuate. Even though the modifications only support the import of fill, NSW RA maintained that approving it would create a false sense of development potential. NSW RA also advised that:

- Evacuation routes for nearby residential areas would experience the same flood-level increases shown in Table 2-1 of the Water Tech report
- Any increase in development would worsen evacuation performance
- Under current conditions, the maximum evacuation capacity for the Penrith Lakes precinct is about 1,000 vehicles
- Any additional development would exceed this capacity and result in thousands of vehicles unable to evacuate within 24 hours, creating significant life-safety risks.

***C.7:** Response*

NSW RA's concern assumes that raising land levels now will lead to more development later and therefore more vehicles needing to evacuate. NSW RA also referred to flood-level changes in the previous flood modelling and the current evacuation capacity of the Penrith Lakes precinct to illustrate how any future development could affect evacuation performance.

These are valid strategic considerations, but they relate to future development scenarios, not to the current modifications. As noted throughout this section, under Section 4.55 of the EP&A Act, a modification must remain substantially the same development as the original approval. This means DPHI can only consider whether the proposed changes to earthworks would materially worsen impacts compared with what is already approved. It cannot be used to approve, imply or anticipate new land uses, buildings, or bring more people to live and work in the floodplain. As the modifications are for earthworks only, they *do not*:

- Change zoning
- Grant development rights or development yield
- Add new residents or vehicles
- Alter evacuation routes or evacuation performance
- Increase the developable area in any statutory or planning sense.

Any future proposal that introduces more people living and working in the floodplain, must be assessed through a new DA or planning proposal, including full testing against Clause 5.38 of the WPC SEPP and updated PMF-event evacuation modelling. Therefore, while NSW RA's evacuation figures and strategic concerns are relevant to future planning, they do not apply to these modifications, which do not change any aspect of regional evacuation risk.

4.7 State Emergency Service

SES is responsible for flood response and evacuation planning, providing expert advice on flood risk, community safety and the operability of evacuation routes during major flood events.

4.7.1 Submission (19 December 2024)

SES confirmed it had read both proposed modifications and identified the following issues.

***D.1:** Concerns about increased developable area and evacuation capacity (comments about the project itself)*

SES asked for additional flood modelling to demonstrate that the proposed filling would not adversely affect the performance of regional evacuation routes during all flood events up to the PMF.

***D.1:** Response*

The flood modelling has been fully updated by Worley (2025), replacing the earlier Water Technology model. The revised model includes:

- A complete redevelopment of the TUFLOW model
- Updated hydrologic and hydraulic inputs

- Full recalculation of flood behaviour across the region
- Application of the *high blockage* scenario to the 0.2% AEP event, as required by NSW RA.

Evacuation route performance is a function of *regional flood behaviour,* not the proposed modifications. The updated modelling confirms that the modifications *do not*:

- Change the flood hazard, depth, or velocity on evacuation routes
- Alter the trigger-timing of route closure
- Bring new people to live and work in the floodplain that would require evacuation.

SES' concerns about evacuation capacity relate to *future hypothetical development*, which is out of scope for a Section 4.55 modification for the reasons explained above in Section 4.6. Neither modification alters regional evacuation route performance because the updated modelling confirms the changes *do not* alter flood behaviour, closure timing, or evacuation demand anywhere along the regional routes.

***D.2:** Safe evacuation from the site must be maintained (comments about the project itself)*

SES sought confirmation that the increased land levels would not reduce the ability of people on the site to evacuate safely, particularly during high-consequence events (i.e., rare, high-impact floods where evacuation routes are most vulnerable).

***D.2:** Response*

Neither modification brings more people to live and work in the floodplain, structures, or uses that require evacuation. The site remains an operational fill and rehabilitation area with no sensitive receivers. The updated Worley Flood Impact Assessment confirms that:

- Access routes remain unaffected by the modifications
- No changes occur to the timing or hazard category of nearby roads
- There is no impact on the safe movement of people working on the site.

Any future land use or development would require a separate application with its own evacuation assessment, as noted under Section 4.6. The modifications therefore have *no effect* on safe evacuation requirements under the WPC SEPP.

***D.3:** Potential impacts on surrounding residential areas (economic, environmental, or social impacts)*

SES noted the need to confirm that the proposal would not worsen flood depths or flood affectation on nearby residential properties because of displaced floodwaters.

***D.3:** Response*

The revised Worley Flood Impact Assessment provides updated flood depth, hazard and velocity mapping across the full surrounding residential catchment. The mapping shows that:

- Most flood level changes remain within 0 to 20 mm

- Localised areas may experience small increases in flood depths due to the combined effect of historical and currently approved fill
- These small differences show up on the maps in **Appendix B.11** because the land is very flat, but they do not increase flood depth, speed, hazard, or overall risk
- The modifications *do not* change how floodwaters behave in the residential areas to the west or east of the site.

As neither modification adds new buildings nor brings more people into the floodplain, they do not increase flood risk for nearby communities.

***D.4**: Need for post-development flood hazard mapping (procedural or process-related issues)*

SES recommended that the proponent provide post-development hazard mapping to clarify risks to life and property on the site under the modified landform.

***D.4:** Response*

The Worley Flood Impact Assessment includes updated flood hazard mapping across all AEP events, including the PMF. Hazard categories have been recalculated using current guidance and include:

- Separate mapping bands (0 to 10 mm, 11 to 20 mm, >20 mm)
- Revised depth–velocity product mapping
- Clarified study area boundaries.

These updated hazard datasets address SES's request for post-development hazard mapping.

***D.5**: Existing evacuation constraints in the Hawkesbury–Nepean Valley (issues that fall outside the scope of the project)*

SES highlighted that the Hawkesbury–Nepean Valley already has severe evacuation constraints and advised that any future development enabled by the filling must not further reduce the limited evacuation capacity available to the broader community.

***D.5:** Response*

PLDC acknowledges SES's concern. However, the modifications *do not* seek approval for development or land use changes and *do not* generate new residents, vehicles or evacuation demand. Any future development would undergo a separate approval process, during which SES, NSW RA and DCCEEW would be consulted in accordance with the SEPP. These regional evacuation constraints *do not* arise from the modifications and cannot be assessed under Section 4.55.

4.7.2 Correspondence (19 December 2024)

SES' correspondence of 19 December 2024 outlined several concerns about increased flood hazard, community safety, and the broader implications of the proposed fill for future development and evacuation across the Hawkesbury–Nepean Valley.

D.6: *Increased flood hazard for surrounding residential areas (economic, environmental, or social impacts)*

SES highlighted that the updated 0.2% AEP flood mapping shows a significant increase in flood hazard for properties west of the site (Wedmore Road, Russell Street and Old Bathurst Road) and for several properties east of the site on Lakeview Drive. In several cases, properties shift from no hazard or Hazard Category 1 (generally safe) to Hazard Category 3, which is unsafe for vehicles, children and older people.

D.6: *Response*

The updated Worley modelling clarifies that the hazard changes identified in early Water Tech outputs were influenced by mapping scale, blockage assumptions and model configuration. The revised assessment shows:

- Hazard changes are small, localised and occur along flat gradients
- No properties experience a material increase in life-safety risk resulting from the modification
- Most surrounding residential areas remain within the same hazard category when updated methodology and mapping bands are applied.

The modifications *do not* worsen hazard conditions in a way that would increase risk to life or property.

D.7: *Implications for community safety (economic, environmental, or social impacts)*

SES recommended that careful consideration be given to the safety risks posed to these existing communities, noting that the increased hazard levels mean residents would be more exposed to dangerous flood conditions because of the proposed fill.

D.7: *Response*

Community safety impacts arise from *population exposure*, which these modifications *do not* change as they *do not*:

- Introduce residents or workers into the floodplain
- Intensify land use
- Alter existing access or evacuation routes
- Change the conditions under which surrounding residents must evacuate.

The updated Flood Impact Assessment confirms that the modifications *do not* worsen regional hazard conditions in a way that would compromise public safety.

D.8: *Risk of facilitating future development and worsening evacuation (issues that fall outside the scope of the project.)*

SES raised concerns that the increase in fill levels is likely to increase the developable area of the site and therefore enable future development. SES warned that this could further impact flood behaviour, and worsen evacuation feasibility across the Hawkesbury–Nepean Valley, which already faces severe evacuation constraints.

D.8: *Response*

As noted throughout Section 4.6 above under Section 4.55 of the EP&A Act, future development scenarios cannot be assumed in a modification application as it need to be substantially the same as the approved development. In this case the modifications *do not* change zoning, land use permissibility or development yield. They *do not* create any entitlement to develop additional urban land. Any future development proposal would be subject to a new DA or planning proposal, including full flood, hazard and evacuation assessment with SES and RA involvement.

D.9: *Need for consultation before any future change in land use (procedural or process related)*

SES advised that if the filled land were to be used for future development, then SES, the NSW RA and the DCCEEW should all be consulted through a separate approval process, to assess the wider consequences for flood behaviour and evacuation.

D.9: *Response*

PLDC agrees. If any future application is lodged for the site, SES, NSW RA and DCCEEW will be consulted as required under the WPC SEPP. This future consultation does not form part of the current modification, which is limited to earthworks only.

4.8 Transport for NSW

Transport for NSW is responsible for managing the part of the State's road network, transport infrastructure, and access arrangements, and advising on how development may affect roads, traffic, safety and transport operations.

4.8.1 Submission (22 November 2024)

Transport for NSW confirmed it had read both proposed modifications and had no comments, requirements, or specific conditions as the changes do not alter the site's operating hours, truck movements, volumes, or access arrangements.

4.9 WaterNSW

WaterNSW is responsible for managing part of the State's water supply systems, including dams, bulk water infrastructure and catchments, and advises on how proposed development may affect water quality, water availability and the protection of drinking-water catchments.

4.9.1 Submission (19 November 2024)

WaterNSW confirmed it had read both proposed modifications and had no comments, requirements, or specific conditions.

4.10 Endeavour Energy

Endeavour Energy provided advice focused on protecting its distribution-network assets across its service area in western and south-western Sydney, the Blue Mountains, Southern Highlands, Illawarra and the South Coast, including zone substation equipment, overhead and underground lines, easements and associated access corridors.

4.10.1 Submission (19 December 2024)

Endeavour Energy confirmed it had read both proposed modifications and identified the following issues.

E.1: *No worsening of flood impacts on electricity infrastructure (economic, environmental, or social impacts)*

Endeavour Energy's primary concern is that the proposal must not worsen flood behaviour affecting any of its assets, including the Cranebrook Zone Substation and all distribution infrastructure located on or near the Penrith Lakes site.

E.1: *Response*

The updated Flood Impact Assessment by Worley (2025) shows that the proposed modifications do not change flood behaviour in a way that would affect any Endeavour Energy assets. While the report does not assess the Cranebrook Zone Substation specifically, the closest modelled areas in Cranebrook show only very small changes in water levels (around 10–20 millimetres) in rare events, and these are too minor to alter flood depth, hazard or velocity in a way that would impact infrastructure. Based on the modelling, there are no changes to flood behaviour that would affect the performance, access or flood immunity of any Endeavour Energy electricity assets on or around the Penrith Lakes site. Therefore, the proposal does not worsen flood impacts on any electricity distribution infrastructure.

E.2: *Potential dust impacts on electrical equipment (economic, environmental, or social impacts)*

Although Endeavour Energy recognise electrical infrastructure is not a *sensitive receptor* in the usual planning sense, it noted that excessive dust emissions could interfere with the performance and safety of its equipment and therefore need to be managed.

E.2: *Response*

Dust generation will continue to be managed under the site's long-standing mitigation framework and existing EPL controls. These include:

- Covering and containing loads entering and leaving the site
- Use of wheel washes at entry/exit points
- Watercart spraying on internal access roads
- Profiling, compaction and stabilisation of fill material to reduce dust lift-off
- Proactive dust monitoring and management to prevent offsite impacts.

These measures have been effective for more than two decades of operation and will continue unchanged under the modification, ensuring no unacceptable dust impacts on Endeavour Energy infrastructure.

E.3: *Extensive electrical assets across the site (issues that fall outside the scope of the project)*

Endeavour Energy advised that the Penrith Lakes area contains multiple high-voltage, transmission and low-voltage assets, and provided site plans identifying these.

***E.3:** Response*

PLDC acknowledges the presence of Endeavour Energy's assets and will continue to coordinate closely during works. The proposed modifications *do not* alter the approved construction footprint, haul routes, or disturbance areas, and therefore *do not* introduce any new interaction with electrical assets. If detailed plans or asset confirmations are required during the works, PLDC will request them directly from Endeavour Energy.

***E.4:** Works affecting protected electrical infrastructure (issues that fall outside the scope of the project)*

Endeavour Energy highlighted that all distribution assets on private land, even without easements, are treated as *protected works* under Section 53 of the *Electricity Supply Act 1995* (NSW). Any temporary or permanent activity that encroaches on or affects these protected works must be referred to Endeavour Energy's Easements Officers for assessment.

***E.4:** Response*

PLDC acknowledges the legislative requirements that apply to Endeavour Energy's protected works. While no impacts to electricity infrastructure are expected as part of the proposed modifications, PLDC will refer any temporary or permanent activity that may affect Endeavour Energy's protected works to Easements Officers for assessment in accordance with the *Electricity Supply Act 1995* (NSW) and Endeavour Energy's standard protocol. Further, these modifications *do not* introduce new works near electrical assets, but PLDC will continue to engage with Endeavour Energy as required.

***E.5**: Requirement for Accredited Service Providers (ASPs, issues that fall outside the scope of the project)*

Where connection upgrades, load assessments or adjustments to supply are required, the applicant may need to engage an Accredited Service Provider of the correct class.

***E.5**: Response*

The modifications seek approval for earthworks only and does not require any changes to electrical supply, connections, or load. Should future works (outside this modification) trigger the need for an ASP, PLDC would engage a suitably qualified provider in accordance with Endeavour Energy's requirements.

***E.6:** Minimum safety clearances around overhead powerlines (issues that fall outside the scope of the project)*

All works near overhead powerlines must comply with mandatory electrical safety clearances, including SafeWork NSW's *Work Near Overhead Power Lines Code of Practice*. If there is any uncertainty, a qualified electrical engineer or ASP must assess the safety distances.

***E.6:** Response*

PLDC will ensure that all works continue to comply with SafeWork NSW's Work Near Overhead Power Lines Code of Practice and Endeavour Energy's clearance requirements. No part of these modifications change existing construction methods or introduces plant that would encroach on overhead line clearances.

***E.7:** Restrictions on tree planting near infrastructure (issues that fall outside the scope of the project)*

Deep-rooted or large trees should not be planted near electricity infrastructure. Existing vegetation of low ecological value near assets should be removed or replaced with smaller, compliant species.

E.7: Response

These modifications relate solely to earthworks and *do not* include or authorise landscaping or tree planting. Should future landscaping occur under a later application or masterplan, PLDC will ensure that all species and planting zones comply with Endeavour Energy's vegetation guidelines.

5. Response to government submissions and information requests

This Chapter sets out the response to government submissions and information requests.

5.1 Hawkesbury City Council

Hawkesbury City Council is the local government authority for the Hawkesbury region, covering a large expanse of north-western Sydney including Richmond, Windsor, North Richmond, South Windsor, Pitt Town, Wilberforce, Glossodia and surrounding rural settlements.

5.1.1 Submission (14 January 2024)

Hawkesbury City Council confirmed it had read both proposed modifications and identified the following issues.

F.1: *Difficulty justifying the proposal without a defined future land use (project justification & evaluation)*

Council noted that the modifications seek approval to raise land levels in advance of any approved land use for the site. As future uses are unknown, Council found it difficult to determine whether the extent of filling is appropriate or necessary, particularly when balancing flood immunity benefits against potential environmental impacts such as changes in flood behaviour.

F.1: *Response*

The modifications *do not* seek approval for any land use or development outcome. They are limited to interim landform completion, consistent with the long-standing Penrith Lakes approvals that allow the importation of VENM/ENM to progressively rehabilitate the site. Under Section 4.55 of the EP&A Act, DPHI must consider only whether the modifications remain substantially the same as the originally approved activity.

The original Penrith Lakes approvals contemplated:

- Large-scale importation of material for landform re-establishment
- Flood-compatible bulk earthworks
- Progressive surface stabilisation and drainage works
- The proposed modifications remain within this scope.

Future land uses will be determined separately through the precinct masterplan and planning proposal, at which time Council, NSW RA and NSW SES will be consulted and detailed justification will be required. The current modifications *do not* pre-empt or enable development, nor do they set any future land use outcome. Accordingly, Council's concern about assessing the appropriateness of the fill for an unknown future land use is not a matter for this modification, as the only relevant test under Section 4.55 is whether the earthworks remain consistent with the long-standing Penrith Lakes approvals and are substantially the same as the originally approved bulk earthworks, which is discussed further about in Section 4.6.

F.2: *Risk that improved flood immunity may drive more intensive development (issues that fall outside the scope of the project)*

Council raised concern that creating flood-immune land could open the door to more intensive or sensitive development (including residential uses) later. While raising the land might protect future development from flooding, Council emphasised that the proposal does not improve flood-free access or evacuation capability, which remain significant constraints in the Hawkesbury–Nepean Valley.

F.2: *Response*

The modifications *do not* introduce any new development rights, change zoning, alter permissibility, or create any entitlement for more intensive or sensitive land uses. It simply completes an interim landform that has been progressively shaped for decades, consistent with prior approvals.

Any future development, residential, commercial, recreational or otherwise, would require a separate DA or planning proposal, including full assessment under:

- Clause 5.38 of the WPC SEPP
- Regional evacuation requirements for the Hawkesbury–Nepean Valley
- The Western City District Plan
- Council's strategic planning framework.

Council's concerns about evacuation and development intensity are therefore relevant to future planning processes, not to these modifications.

F.3: *Questioning whether the proposal is substantially the same development (procedural or process related)*

Council suggested that the activity may more accurately function as a waste management/spoil disposal facility, given the importation of large volumes of material from other projects. Council recommended that DPHI verify that the modifications are *substantially the same development* as originally approved before determining it under Section 4.55 of the EP&A Act.

F.3*: Response*

Both modification applications include a detailed statutory assessment demonstrating that the proposal remains substantially the same development under Section 4.55 of the EP&A Act. Key points include:

- The site has always operated as a material importation and landform rehabilitation facility, consistent with the original Penrith Lakes approvals
- The nature, footprint, and operational activities remain unchanged
- No new use, building, structure, or activity is proposed
- The importation of VENM/ENM is expressly permitted under the existing consent and EPL.

The proposed modifications *do not* constitute waste disposal or a new activity. They are a continuation of the approved landform shaping program. The EPL administered by NSW EPA remains the regulatory mechanism governing material quality and environmental performance.

F.4: *Concerns about incomplete flood impact assessment (procedural or process related)*

Council raised several concerns about the submitted Water Tech Flood Impact Assessment, including that:

- Evacuation routes will still be affected in the 0.2% AEP event, meaning the site will not achieve flood-free access
- The report states no fundamental change to flooding in the Nepean River floodplain, but impacts further downstream into the Hawkesbury LGA were not quantified
- The assessment does not demonstrate compliance with Clause 5.38 of the WPC SEPP relating to compatibility with flood function and behaviour.

F.4: *Response*

As noted in Chapter 4, the Flood Impact Assessment has been fully updated by Worley (2025 see **Appendix B.11**). The revised modelling:

- Applies a high blockage scenario to the 0.2% AEP event as required by NSW RA
- Quantifies changes across the full Hawkesbury–Nepean floodplain, not only the immediate Nepean corridor
- Includes updated mapping of downstream effects within the Hawkesbury LGA
- Provides separate water-level change bands (0 to 10 mm, 11 to 20 mm, >20 mm)
- Clarifies the full study area boundary and flood behaviour context.

Under the revised modelling the 2025 Worley assessment confirms that:

- The modifications *do not* change flood-free access because no access improvements are proposed or sought
- Downstream impacts remain small and localised, consistent with the existing approved landform
- The modifications *do not* alter flood hazard, risk to life, or evacuation conditions for Hawkesbury communities

Clause 5.38 of the WPC SEPP must be applied within the limits of a Section 4.55 modification. Under Section 4.55, the consent authority can only consider changes to the already-approved earthworks and must be satisfied that the modifications remains substantially the same development. It cannot reassess or revisit historic landform changes already authorised under previous consents, and it cannot approve or imply any new land uses, buildings, or population. As the proposed modifications are restricted to earthworks only and *do not* introduce new development or bring additional people into the floodplain, they *do not* change flood risk exposure. In this context, the proposed modifications satisfy the correct Section 4.55 test and remain consistent with the objectives and intent of Clause 5.38 of the WPC SEPP.

F.5: *Reference to the Western City District Plan's flood risk principles (issues that fall outside the scope of the project).*

Council referred to the Western City District Plan, which contains a principle to avoid altering flood storage capacity through filling. The Plan also identifies Penrith Lakes as unsuitable for major residential development due to evacuation constraints. Council considered this broader strategic context relevant to its concerns about justification, flood behaviour, and future development implications.

F.5: *Response*

As noted above , the modifications *do not* propose or imply any form of residential or urban development. They only involve landform completion within an already approved extraction void that has long been part of a regional flood management and rehabilitation strategy.

The Western City District Plan's strategic settings will be addressed through the future masterplan and any subsequent planning proposal, not through these Section 4.55 modifications. No strategic land use outcome is being determined at this stage.

The updated Flood Impact Assessment confirms that the modifications *do not*:

- Result in material loss of regional flood storage
- Worsen hazard or evacuation outcomes
- Alter any strategic constraints identified in the District Plan

Therefore, these modifications remain consistent with the strategic context for Penrith Lakes.

F.6: *Recommendation to consult NSW RA and NSW SES (procedural or process related)*

Council noted that it appeared the proposal had not been referred to the NSW RA or SES. Given their respective roles in regional floodplain management and evacuation, Council recommended that both agencies be consulted before determining the modification.

F.6: *Response*

PLDC has already undertaken consultation with both agencies. Their detailed submissions are included in Sections 4.6 (NSW RA) and Section 4.7 (SES) of this report. PLDC has responded to each of their concerns in full, including:

- RA's modelling requirements, blockage assumptions, and planning policy considerations
- SES requirements relating to hazard mapping, safe evacuation, and flood behaviour impacts.

The final Worley Flood Impact Assessment (2025) incorporates all refinements requested by both agencies. The modifications therefore satisfy Council's recommendation for agency engagement.

5.1.2 Correspondence (25 March 2025)

Council's correspondence of 25 March 2025 reaffirmed several unresolved concerns with the proposal, particularly relating to its justification, flood impacts within the Hawkesbury LGA, and the broader evacuation implications.

F.7: Ongoing concern about the justification for the proposal and future evacuation implications (project justification & evaluation)

Council considered that the Applicant's response did not adequately address its original concerns about:

- Why the filling is needed when future land uses are unknown
- How the benefits of flood immunity outweigh the environmental impacts, including flood behaviour changes
- How future evacuation consequences will be managed if the raised land enables more intensive development.

Council reiterated that the filling does not improve flood-free access and may increase development expectations without resolving longstanding evacuation constraints.

F.7: Response

The modifications remain a Section 4.55(2) proposal to import fill, consistent with the long-standing Penrith Lakes approvals that have always permitted the importation of VENM/ENM to progressively re-establish and stabilise landform. The modifications *do not* seek approval for any land use, does not change zoning or development permissibility, and *do not* create any entitlement for more intensive development in the future.

The purpose of the filling is to complete the interim landform, improve site stability and drainage, and ensure the final surface aligns with the approved rehabilitation strategy. These outcomes are independent of any future land use and are necessary regardless of whether the land ultimately becomes open space, recreation, ecological habitat or urban development.

The updated Worley Flood Impact Assessment (2025) confirms that the environmental impacts associated with the modifications are small, localised, and consistent with the existing approved landform. No material changes occur to regional flood behaviour, hazard, or evacuation conditions.

Council's concerns regarding future development and evacuation feasibility relate to matters that will be assessed through the upcoming precinct masterplan and planning proposal, not through these modifications. Any future development proposal must comply with:

- Clause 5.38 of the Western Parkland City SEPP
- The Hawkesbury–Nepean Valley Flood Strategy
- The Western City District Plan
- NSW RA/SES evacuation performance requirements
- Council's own flood risk management framework.

These modifications *do not* pre-empt, enable or assume any development outcome. They simply complete an approved landform within the existing consent framework.

F.8: *Insufficient detail on flood impacts within the Hawkesbury LGA (economic, environmental, or social impacts)*

Council found the applicant's mapping difficult to interpret and said the response did not clearly quantify flood level changes within the Hawkesbury LGA.

Council emphasised that even small increases in flood levels may result in:

- New over-floor flooding
- Increased risk to property owners
- Higher Average Annual Damages (AAD).

Council requested clarity on whether there are flood level changes in the 1% AEP and 0.5% AEP events, not only in extremely rare events.

F.8 *Response*

The updated Worley Flood Impact Assessment (2025) provides a significantly expanded and clarified suite of flood impact mapping, including:

- Clear study area boundaries extending into the Hawkesbury LGA
- Separate flood-increase bands (0 to10 mm, 11 to 20 mm, >20 mm) for all mapped AEP events
- Updated depth, velocity, and hazard mapping
- Application of the high block assumption for the 0.2% AEP event, consistent with NSW RA's requirements
- Revised modelling of all mainstream events, including 1% AEP and 0.5% AEP.

The updated results demonstrate that:

- Most of the Hawkesbury LGA experiences no measurable change in the 1% and 0.5% AEP events
- Where changes do occur, they are small (typically ≤20 mm) and occur in flat areas, where small differences show up in the maps but do not make flooding any worse or more dangerous
- The modifications *do not* cause any new above-floor flooding in surrounding areas
- There are no changes at all in the PMF
- Overall risk does not meaningfully change because the updated modelling shows no material differences in the more frequent or moderate events that typically drive day-to-day flood impacts.

The updated Flood Impact Assessment therefore satisfies Council's request for clearer and more detailed flood impact information.

F.9: *Continued reliance on the Western City District Plan's flood principles (project justification & evaluation)*

Council repeated its view that the Western City District Plan includes a planning principle to avoid altering flood storage capacity or flood behaviour through filling. Council also noted the District Plan's position that Penrith Lakes is not suitable for major residential development due to severe evacuation constraints.

***F.9**: Response*

Council's comments above repeat the same District Plan concerns already addressed in ***F.5***. As outlined in that response, these modifications are landform-only works under Section 4.55 and do not propose, imply, or enable any form of residential or urban development. The District Plan's strategic principles about development, flood storage, and evacuation apply to future land-use planning, which will be considered during the masterplan and any subsequent planning proposal, not as part of these modifications.

5.2 Penrith City Council

Penrith City Council is the local government authority for the Penrith LGA, covering suburbs such as Penrith, Cranebrook, Cambridge Gardens, Emu Plains, Glenmore Park and surrounding urban and rural areas.

5.2.1 Submission (14 January 2024)

Penrith City Council confirmed it had read both proposed modifications and identified the following issues.

***G.1:** Justification for filling above the 1-in-500 flood level and freeboard (project justification & evaluation)*

Council noted that both applications propose fill levels that extend above the modelled 1-in-500-year flood level. Council also observed that the final proposed levels exceed the allowable one-metre freeboard, this being safety margin added on top of predicted flood levels to account for modelling uncertainty, natural variability, and unexpected flood events.

***G.1**: Response*

The updated Worley Flood Impact Assessment (2025, see **Appendix B.11**) modelled the revised landform against all relevant AEP events using the 2024 Hawkesbury–Nepean River Flood Study model. The proposed fill levels extend above both the modelled 1-in-500 AEP flood level and the standard one-metre freeboard. This is intentional and appropriate for this section of the floodplain, where:

- Flooding is dominated by deep, slow-moving inundation during rare and extreme events
- The existing Penrith Lakes approvals and PLDC's Water Management Plans require immunity to the 0.2% AEP flood level, resulting in higher finished landform levels
- Additional freeboard ensures robustness to modelling uncertainty and natural variability.

This exceedance does not translate into increased offsite risk. The Worley Flood Impact Assessment confirms that:

- Peak flood levels, velocities, and flow paths in the Nepean and Hawkesbury floodplains remain effectively unchanged
- PMF behaviour is unaffected
- Offsite increases are small, localised (generally ≤20 mm in extreme events), and occur in very flat areas, where small differences in water levels do not change flood danger, how water moves, or how evacuation routes operate

Section 4 of the Worley Flood Impact Assessment confirms that flood behaviour and regional evacuation routes remain unaffected.

Based on the updated modelling, the proposed modifications are compatible with regional flood behaviour, *do not* increase risk to people or property, and satisfy the performance intent of the WPC SEPP as discussed previously in Chapter 4.

G.2: *Visual impacts of batters along Castlereagh Road (economic, environmental, or social impacts)*

Council sought clarity around the proposed batters along Castlereagh Road in terms of their visual and amenity impact on the surrounding area, retention methods, grading, and potential for landscaping.

G.2: *Response*

The proposed earthworks are interim measures to complete the landform pending a future precinct masterplan and planning proposal. Final land uses, detailed landscape design, and long-term interface treatments with Castlereagh Road will be determined at that later stage.

For the modification applications, the proposed batters along Castlereagh Road have been assessed in detail in the Landscape and Visual Impact Assessment (Arup, 2025, see **Appendix B.6**). Key points include:

- Batters will be shaped to a maximum gradient of 1V:6H, meaning a very gentle slope where the ground extends six metres horizontally for every one metre of height. This is consistent with existing consent conditions and long-standing landform practices on the site
- All placed material will be compacted, stabilised, topsoiled and seeded using native/endemic grass mixes, ensuring a visually recessive and stable landform
- Short-term visual impact is assessed as *moderate*, reducing to *low–negligible* as vegetation establishes
- The batters will not interrupt key vistas to the Blue Mountains, nor alter long-established view corridors from Castlereagh Road
- The form and scale of the batters are consistent with 40 years of progressive landform shaping on the site, during which views to the escarpment have remained intact
- Regatta Lake, the Nepean River, and adjacent public spaces sit outside the visual envelope and will not experience changes in setting or amenity

The Landscape and Visual Impact Assessment confirms that once stabilised and vegetated, the batters will integrate into their surroundings and will not materially change the visual relationship between Castlereagh Road, Penrith Lakes, and the Blue Mountains backdrop.

G.3: *Compliance with SEPP WPC Clause 5.36 – earthworks and amenity impacts (procedural or process-related)*

Council noted that Clause 5.36 of the WPC SEPP requires an assessment of how the proposed earthworks will avoid, minimise or mitigate impacts, particularly on the amenity of adjoining properties.

G.3: Response

Clause 5.36 of the WPC SEPP requires that earthworks avoid, minimise, or mitigate adverse impacts on:

- Neighbouring land uses
- Amenity
- Drainage patterns
- Visual character
- Soil stability and sediment transport.

These modifications satisfy Clause 5.36 because:

- The footprint of works is unchanged, confined entirely within approved operational areas
- Updated Flood Impact Assessment (Worley 2025) confirms no material change to flood behaviour, drainage, or regional flood function
- Dust, noise, vibration and sediment controls remain governed by the EPL and long-standing environmental management plans
- Batters will be shallow, stabilised and vegetated, ensuring visual and amenity impacts remain minor and temporary (See **Appendix B.6**)
- No additional lighting, structures, services, or traffic will be introduced
- The modifications *do not* affect any residential properties, public open spaces, or sensitive receivers.

The modifications therefore meet the intent and performance requirements of Clause 5.36.

G.4: Compliance with SEPP WPC clause 5.38A – scenic and visual qualities (procedural or process-related)

Council emphasised that the proposed modifications must demonstrate that the development is:

- Located and designed to minimise visual impact, including from Castlereagh Road, the Nepean River, Regatta Lake, local heritage items and the Blue Mountains
- Contributes to the scenic quality of the Penrith Lakes Scheme.

Council considered that the increased fill would produce additional visual impacts on key vistas.

G.4: Response

The Landscape and Visual Impact Assessment (2025) provides a detailed assessment of Clause 5.38 of the WPC SEPP. It confirms that the modifications are:

- Located and designed to minimise visual impact, including from:
    - Castlereagh Road
    - Nepean River
    - Regatta Lake

- Heritage items (McCarthys Cemetery, The Poplars)
- The Blue Mountains escarpment.

- Consistent with the scenic quality objectives of the Penrith Lakes Scheme, because:
  - The modified landform continues existing patterns of shallow, grassed slopes
  - Localised changes near Castlereagh Road remain interim and will be refined through the future masterplan
  - Key regional vistas, particularly to the Blue Mountains, remain uninterrupted
  - Vegetation establishment will further reduce visibility and contrast.

The Landscape and Visual Impact Assessment assessed 10 viewpoints and four landscape character zones. It found:

- Moderate short-term impacts in one localised section of Castlereagh Road (Viewpoint 2)
- Moderate–low to negligible impacts elsewhere
- No change to visibility of the Blue Mountains escarpment from assessed viewpoints
- No material changes to the scenic quality of the Penrith Lakes system.

Taken together, the proposed modifications align with Clause 5.38 of the WPC SEPP and maintain the scenic and visual qualities of the precinct in both the short and long term.

5.2.2 Correspondence (28 March 2025)

Penrith City Council did not raise any new issues in its 28 March 2025 response. The matters outlined largely reiterated the concerns in its original submission, including the justification for fill above the 1:500 AEP level and freeboard, potential visual impacts, consistency with the SEPP's earthworks and scenic quality provisions and the need to protect heritage curtilages. Council acknowledged the RTS and the updated modelling, noting that flood impacts appear negligible, but maintained that these matters require consideration by the consent authority. Overall, the issues raised were refinements or restatements of earlier points rather than new concerns.

5.3 Department of Planning, Housing, and Infrastructure

DPHI issued three separate information requests relating jointly to the proposed modifications. Across its correspondence of 31 October 2024, 18 December 2024, and 16 April 2025, the Department highlighted a series of unresolved matters requiring clarification before the modifications could progress. These issues primarily related to the adequacy of the flood assessment, justification for the proposed landform, construction logistics, heritage and visual impacts, stormwater management, and responses to matters raised during public exhibition.

5.3.1 Information request (31 October 2024)

The Department's initial request of 31 October 2024 highlighted that key elements of the flood analysis remained unresolved, preventing the Department from confidently assessing the implications of the proposed fill volumes.

RFI1.1: *Requirement for an updated Flood Impact Assessment (economic, environmental, or social impacts)*

The Department advised that the modifications involve importing approximately 9.7 million tonnes of fill to the Penrith Lakes site, and expressed concern that the application does not yet demonstrate how the increased fill volumes would influence local and regional flooding behaviour. The Department required a Flood Impact Assessment that considered the impacts of additional fill on flooding both on and off the site and requested that this information be provided before the modification can be exhibited.

RFI1.1: *Response*

An updated Flood Impact Assessment has been prepared by Worley (2025) and is included in **Appendix B.11.** This updated assessment reflects the revised fill volume of approximately 6.8 million tonnes proposed under the two modifications and replaces the earlier Water Technology modelling referenced in this RFI.

The updated assessment considers the effects of the revised landform on both local and regional flooding behaviour and incorporates all modelling refinements requested by NSW RA and discussed in Section 4.6 (NSW RA), Section 4.7 (SES), and Section 5.1 (Hawkesbury City Council) of this report.

As outlined in those responses, the updated modelling confirms that the modifications do not materially worsen regional flood behaviour, do not generate new areas of above-floor flooding, and remain consistent with Section 4.55 of the EP&A Act and the intent of Clause 5.38 of the WPC SEPP.

This updated Flood Impact Assessment therefore satisfies the Department's request for revised and contemporary flood modelling.

5.3.2 Information request (18 December 2024)

The Department's correspondence of 18 December 2024 reaffirmed several concerns with the modifications, particularly relating to the justification for the proposed landform, associated flood impacts, and the clarity of construction logistics.

RFI2.1: *Rationale for proposed fill levels (project justification & evaluation)*

The Department raised concern about the scale and height of fill proposed under the modifications. While the intent is to provide 0.2% AEP flood immunity, the submitted plans show extensive areas being raised more than 2.5 metres above this level. The Department requires clear rationale for filling to such significant heights, including why these elevations are necessary and how they relate to the staged development of the Penrith Lakes Scheme.

RFI2.1: *Response*

Despite the revised fill volumes and profiles, the finished levels and fill heights are still driven by the need to achieve 0.2% AEP flood immunity, as required under the long-standing Penrith Lakes approvals and PLDC's Water Management Plans. They are also needed to deliver a stable, free-draining landform that can function safely in the long term, regardless of future land use.

As set out in Worley Flood Impact Assessment (2025) in **Appendix B.11** and response **F.1** and response **G.1**, the revised landforms reflect that:

- This reach of the floodplain experiences deep, slow-moving inundation during rare and extreme flood events, so a standard higher than the 1% or 0.5% AEP levels is required to achieve practical and reliable immunity
- Finished surface levels must be above the 0.2% AEP flood level, with an allowance for freeboard, to account for modelling uncertainty, natural variability, and the long-term behaviour of large, engineered landforms
- Maintaining workable surface drainage requires consistent minimum gradients, typically 0.5% to 1.0% across broad areas. Achieving these gradients means some interior zones must be raised more than 2.5 metres above the 0.2% AEP level, ensuring water drains by gravity toward the internal lake system rather than ponding on the plateau or flowing toward Castlereagh Road
- The revised landform aligns with the long-standing staged rehabilitation of the Penrith Lakes Scheme, which has always anticipated substantial importation of VENM/ENM to establish an elevated, flood-resilient landform encircling the lakes.

In summary, the higher fill levels are a function of meeting the existing 0.2% AEP immunity requirement and good engineering practice for bulk earthworks and drainage, not an attempt to pre-determine or intensify future development outcomes.

RFI2.2: *Flood impacts on surrounding land and properties (economic, environmental, or social impacts)*

The Department noted that the Flood Impact Assessment identifies up to 50 mm of increased flood levels and shows that some currently dry land would become inundated because of the modifications. However, the assessment does not identify which surrounding properties would be exposed to increased floodwaters. The Department requires revised analysis that identifies all affected properties and evaluates the implications of altered flood behaviour.

RFI2.2: *Response*

Flood impacts have been reassessed in the updated Worley Flood Impact Assessment (2025) using the 2024 Hawkesbury–Nepean River Flood Study model and revised blockage assumptions (See **Appendix B.11** and responses **C.1, C.2, C.5, F.4** and **F.8**). The revised work:

- Clearly defines the full study area, including downstream parts of the Hawkesbury LGA
- Provides separate water level change bands (0 to 10 mm, 11 to 20 mm, greater than 20 mm) for all relevant AEP events
- Includes updated depth, velocity and hazard mapping, allowing property-scale interpretation of changes.

The updated results show that:

- Most surrounding areas experience no measurable change in the 1% and 0.5% AEP events
- Where changes do occur, they are small (typically 20 mm or less) and occur in very flat parts of the floodplain, where small differences appear in the maps but do not make flooding deeper, faster, or more dangerous

- Localised increases greater than 20 mm in rare events remain limited in extent and occur on flat ground, so they do not translate into higher hazard or increased life-safety risk
- No new above-floor flooding is generated and there are no changes in PMF conditions.

While the report does not list individual properties by address, the mapping datasets in **Appendix B.11** allow any affected land parcel to be identified by the consent authority. Worley's conclusions, as reflected in Section 4.6 and Section 5.1, are that the flood impacts are small, localised, and acceptable in the context of the already approved landform.

RFI2.3: *Duration and logistics of truck movements (comments about the project itself)*

Although the modifications do not alter existing operating hours or traffic limits, the Department requires clarification on the practical logistics of importing the proposed fill volumes. This includes expected duration of the fill campaigns, transport sequencing, compliance with approved operating conditions, and indicative timing for receiving fill from key infrastructure projects.

RFI2.3: *Response*

Rate of Fill and Traffic Movements (See **Appendix B.4**) provides the detailed assessment of truck movements and timeframes. However, since then the proposed import volume has reduced to 6.8 million tonnes. Therefore, this should be discounted in place of the following summary:

- The combined volumes across both modification areas have been tested against the existing consent and EPL limits on daily and hourly heavy-vehicle movements and the current operating hours
- At a theoretical maximum import rate of about three million tonnes per year, all fill could be placed in approximately two-to-three years while remaining within existing truck limits
- Using a more realistic average import rate of 1.6–2.0 million tonnes per year, consistent with recent performance and likely fill availability from major infrastructure projects, the fill campaign would occur over about three-to-five years.
- No changes are proposed to the approved access arrangements, truck routes or movement caps; the modifications sit entirely within the existing traffic envelope.

PLDC confirmed that the material import will not alter operating hours, truck volumes or access arrangements thus resulting in Transport for NSW having no issues relating to the proposed modifications (see Section 4.8). The duration and sequencing of fill importation will therefore be managed within the current conditions of consent and EPL requirements, using standard haulage logistics and traffic management practices that have operated successfully on the site for many years.

RFI2.4: *Heritage impacts on DA2 sites (procedural or process-related)*

The Department noted that Heritage NSW has requested further information regarding the two heritage items within the project area. The Department concurs and requests a Heritage Impact Assessment prepared by a suitably qualified practitioner that considers how the modified landform would affect the heritage items and their broader setting.

RFI2.4: *Response*

In response to the Department's request and Heritage NSW's advice, PLDC commissioned a comprehensive Heritage Impact Assessment, including a Statement of Heritage Impact, prepared by Artefact Heritage (March 2025, See **Appendix B.5**).

As summarised in Section 4.3 (See responses **A.1** to **A.4** and response **A.5**):

- The assessment addresses both McCarthys Cemetery and The Poplars in accordance with the NSW Heritage Council's Statement of Heritage Impact guidelines and the relevant Conservation Management Plans
- It confirms that all works are located outside the heritage curtilages, so there are no direct physical impacts on either item
- It evaluates potential effects on setting, significant views (including between the two items and toward the Blue Mountains/Cranebrook escarpment), access, and stormwater interactions

Heritage NSW has reviewed this information, including the additional stormwater design by J. Wyndham Prince, and confirmed that no further heritage issues require assessment, subject to implementation of the recommended safeguards (See response **A.5** and response **A.6**).

RFI2.5: *Visual impacts of the increased landform (economic, environmental, or social impacts)*

As the modifications propose to raise parts of the landform by up to 2.98 metres, the Department requires a Visual Impact Assessment. The Landscape and Visual Impact Assessment must consider how the modified landform would be perceived from key public viewpoints and demonstrate compliance with Clause 5.38 of the WPC SEPP. The Department expects an assessment of how the increased landform height affects landscape character and visual catchments.

RFI2.5: *Response*

A Landscape and Visual Impact Assessment has been prepared by Arup (March 2025, See **Appendix B.6**) to address the Department's request and the requirements of Clause 5.38 of the WPC SEPP. As outlined in Section 4.3 and Section 5.2 (See responses **A.3, A.4, G.2** and response **G.4**), the assessment:

- Assesses views from key public locations, including Castlereagh Road, nearby public vantage points, the Penrith Lakes system, and the two State heritage items
- Examines how the increased landform height (up to about 2.98 metres in some locations) affects landscape character and the visual catchment
- Confirms that batters are restricted to a gentle maximum gradient of 1V:6H (six metres horizontal for every one metre of height) and will be topsoiled and grassed, so they present as shallow, vegetated slopes rather than steep engineered faces
- Concludes that visual impacts are moderate in a localised section of Castlereagh Road in the short term, reducing to low or negligible as vegetation establishes, with impacts elsewhere assessed as low to negligible
- Confirms that key regional vistas, including views to the Blue Mountains escarpment, remain uninterrupted and that the scenic quality of the Penrith Lakes Scheme is maintained.

On this basis, the Landscape and Visual Impact Assessment demonstrates that the modified landform can be accommodated within the existing landscape character and that the proposal is consistent with the scenic and visual objectives of Clause 5.38 of the WPC SEPP.

5.3.3 Information request (16 April 2025)

Following review of agency and council submissions, the Department's 16 April 2025 letter requested additional clarification on several matters, notably the proposed landform changes, their visual and heritage implications, and how public concerns had been addressed.

RFI3.1: *Response to matters raised in public submissions (procedural or process related)*

The Department requires a consolidated response to the issues raised during public exhibition. This includes addressing concerns about flooding, visual impacts, heritage items, and broader effects associated with the modifications. A clear summary of how the submissions have been considered and responded to is required.

RFI3.1: *Response*

A consolidated response to all issues raised in public submissions is provided in Chapter 6 of this report, which summarises the themes raised during exhibition and provides direct responses to each topic. These responses draw on the updated technical studies appended to the modification applications, including the revised Flood Impact Assessment (See **Appendix B.11**), the Heritage Impact Assessment (See **Appendix B.5**), and the Landscape and Visual Impact Assessment (See **Appendix B.6**).

In addition, detailed responses to all agency submissions that informed the public submissions are set out in Chapter 4 (NSW RA, SES, EPA, DCCEEW, Heritage NSW) and upfront section of Chapter 5 (Councils). These responses collectively address all matters raised by the community, including flooding, heritage, scenic quality, visual impacts, stormwater, access, fill levels, and the potential implications for future development under Section 4.55 of the EP&A Act.

The issues raised in public submissions do not identify any new or unaddressed impact pathway. All matters have been assessed using updated contemporary studies and are fully responded to within the RTS.

RFI3.2: *Clarification of landform modification and depth of fill (procedural or process related)*

The Department noted that the current information does not adequately illustrate the depth and distribution of fill proposed under the modifications. A bulk earthworks plan, such as a contour plan or heat map, is required to clearly communicate how the landform will change and the areas where significant volumes of fill are proposed.

RFI3.2: *Response*

Following the Department's request, PLDC originally supplied bulk earthworks plans and cut–fill diagrams as part of the April 2025 RFI Response (See **Appendix B.7**). These plans illustrated the then-proposed fill volumes and landform changes.

However, since that submission, the proposed import volume has been revised to approximately 6.8 million tonnes, and a contemporary landform and flooding analysis has been completed as part of the updated Worley Flood Impact Assessment (2025). The updated Flood Impact Assessment and the associated figures (See Figure 3-1 and Figure 3-2 of this report) now supersede the earlier bulk earthworks plans.

The updated information includes:

- Revised finished landform levels across both modification areas
- Updated contour mapping and landform grading
- Integration of the updated landform into the 2024 Hawkesbury–Nepean River Flood Study model
- Confirmation that the revised landform maintains drainage functionality and does not alter regional hydraulic behaviour.

These updated figures provide a clearer and more accurate representation of the proposed landform modifications than those submitted in April 2025. They demonstrate how the revised landform transitions across the site to achieve the required flood immunity, while remaining within the already-approved disturbance footprint.

Accordingly, the earlier bulk earthworks plans submitted in April 2025 should now be read as superseded by the contemporary landform information in Chapter 3 and the updated Flood Impact Assessment.

RFI3.3: *Visual impacts and required mitigation measures (economic, environmental, or social impacts)*

The Visual Impact Assessment concludes that there will be residual visual impacts, particularly within the Nepean River and floodplain landscape character zone and from key viewpoints such as Castlereagh Road (north). The Department requires advice on how these impacts will be mitigated and what the proposed mitigation measures mean for the overall volume and placement of fill sought under the modifications.

RFI3.3: *Response*

The Landscape and Visual Impact Assessment identifies *moderate* visual impacts primarily in the Nepean River and floodplain landscape character zone and the viewpoint along Castlereagh Road looking north over the site. As set out in the April 2025 RFI response letter (See **Appendix B.7**), two potential mitigation measures were assessed:

- Flattening the batter from 1V:6H to 1V:20H, i.e., making it much shallower
- Softening the batter face into a more naturalistic landform.

Both were examined in plan, section and photomontage. The outcomes were:

- A 1V:20H batter provides only marginal improvement to visibility but removes a substantial area required for fill placement, undermining the flood immunity strategy.
- A naturalistic batter softens appearance but does not reduce view loss, because the height, not the slope texture, governs the loss of floodplain and escarpment views.
- Residual visual impact remains moderate, even with the flatter batter.

Therefore, no additional mitigation is proposed because the measures available would not mot meaningfully reduce the visual impact rating, and significantly reduce the area available for fill, compromising the earthworks and drainage design. The proposed landform is also consistent with past approvals, and similar visual outcomes have been endorsed by the Department over multiple previous modification stages.

RFI3.4: *Stormwater management around heritage items (economic, environmental, or social impacts)*

The Department requests further detail on how stormwater is proposed to be managed around The Poplars and McCarthy's Cemetery to prevent adverse effects on their physical condition and heritage values. This includes responding to matters raised by Heritage NSW regarding drainage, ponding and stormwater pathways adjacent to these heritage items.

RFI3.4: *Response*

A detailed stormwater package prepared by J. Wyndham Prince was submitted to the Department (See **Appendix B.8** and **Appendix B.9**). This material sets out both the interim drainage arrangements during filling and the permanent free-draining design for The Poplars and McCarthys Cemetery. The approach directly responds to the issues raised by Heritage NSW in late 2024 regarding ponding, stability and drainage interactions.

To avoid repetition, response **A.6** outlines Heritage NSW's 30 June 2025 correspondence, which confirms that the revised drainage design for both heritage items is appropriate and that no further heritage issues require assessment. Heritage NSW's only recommendation was that the small area of existing ponding at The Poplars be resolved before any further land-raising occurs, and that this be reflected in the consent conditions.

For McCarthys Cemetery, the existing arrangement of swales, open drains and temporary pits and pipes will be maintained during filling to prevent erosion or saturation of the curtilage. Once the landform is completed, the permanent drainage system will reinstate clean, directed flow paths northward to Lake A using gently graded surface drains and subsurface connections where required. This ensures the cemetery remains free-draining and protected throughout the works and into the final landform.

For The Poplars, the drainage solution addresses both the historic ponding issue and the protection of the heritage setting. A grassed V-drain has been positioned outside the curtilage to intercept overland flow, supported by refined surface grades and temporary or permanent pit-and-pipe connections that tie into the two existing 175 mm pipes draining to Lake A. These refinements eliminate the potential for water to accumulate around the building foundations and maintain the site in a stable and dry condition.

Both drainage systems are designed to prevent stormwater from the surrounding works entering either heritage curtilage and to maintain free-draining conditions before, during and after filling. With Heritage NSW confirming that the proposed measures satisfactorily address its concerns, the stormwater arrangements for both heritage items are now fully resolved and documented.

6. Response to public submissions

This Chapter sets out the response to the public submissions. The issues have been grouped and prioritised into the various issues and sub-issues described above in Table 2-4. In grouping the submissions, those lodged in relation to DA2 are shown in blue, and those lodged in relation to DA3 are a shown in purple. Given the duplication of many submissions between both applications, both references are provided.

6.1 Flooding modelling and offsite impacts

6.1.1 Submitter ID

DA2 only | S-78124210, S-78164240

DA2 and DA3 | S-77948002/S-77991707, S-78021461/S-78021463, S-78131956/S-78131720, S-78207706/S-78207957, S-78207708/S-78207974, S-78165975/S-78165971, S-78192959/S-78192708, S-78179478/| S-78190209

6.1.2 Issue description *(economic, environmental or social impacts)*

The submitters raised the following concerns related to flooding, drainage, and stormwater management.

- The extent of the flood model and assessment
- Offsite flood risk and impacts to surrounding residents
- Flood prevention methods offsite (including stormwater drainage) in response to raising the land onsite.

6.1.3 Response

A fully updated and independently validated flood model and impact assessment (See **Appendix B.11**) was completed to test the effects of the proposed revised import of 6.8 million tonnes of fill. As the model was validated this mean means it has already been proven reliable by matching past observed flood behaviour, so the accuracy of its predictions about future conditions can be trusted.

The model covers the full Nepean and Hawkesbury floodplain and considers how water moves across the entire landscape, not just on the PLDC site. This ensures any offsite effects are properly captured.

The modelling shows that the proposed filling *does not meaningfully change flood levels or flood behaviour for nearby homes*, even in large and rare floods. Small increases (mostly 0 mm to 20 mm) occur only in very flat, open areas where tiny changes in water depth appear in the mapping but *do not* change flood danger, speed, or evacuation conditions (See detailed responses **C.1** to **C.7, D.1** to **D.7, F.4,** and **F.8**).

Put simply:

- No new above-floor flooding occurs anywhere because the changes in flood levels are very small and occur only in flat, open areas. These small differences are not large enough to lift water enough to enter any homes or buildings

- The additional fill will not change how the water behaves in the biggest and most severe flood events because the updated modelling shows that flood levels, flow paths and depths remain exactly the same as they are today under the current landform and site conditions.
- Evacuation routes remain unaffected because the updated modelling shows that flood levels, depth, and speed of water on the key roads do not change. This means the evacuation conditions stay exactly the same, with no change to when roads would close or how people would be able to leave the area during a major flood.

This means there is *no need for flood-compensation works* (i.e., creating extra space elsewhere for floodwater, which is sometimes required when fill reduces storage), which are only required where a proposal increases flood impacts. The modelling confirms this is not the case and that the proposed fill does not increase flood levels or worsen flood behaviour. Any upgrades to wider community stormwater systems sit outside this modification and, if ever required for unrelated reasons, would be delivered through separate planning processes.

6.2 Dust and air quality impacts

6.2.1 Submitter ID

DA2 only | S-78103706

DA2 and DA3 | S-78165975/S-78165971

6.2.2 Issue description *(economic, environmental or social impacts)*

The submitters raised concern about the potential for dust generation and its associated impacts offsite.

6.2.3 Response

Dust will continue to be managed through the strict controls required under the site's existing Environment Protection Licence (EPL) and consent conditions. These controls have been refined over many years and include watercarts, covering loads, wheel-washing facilities, stabilising exposed material, and active monitoring (see EPA response **E.2** and response **E.3**).

As the modifications do not increase truck numbers, operating hours, or the type of landform activities carried out, there is no reason to expect higher dust levels than those already assessed and approved. The EPA has reviewed the modification (See Section 4.5) and confirmed that the existing controls remain appropriate and effective.

6.3 Traffic, transport, and access impacts

6.3.1 Submitter ID

DA2 only | S-78124210

DA2 and DA3 | S-78131956/S-78131720

6.3.2 Issue description *(economic, environmental or social impacts)*

The submitters raised the following concerns related to traffic, transport, and access impacts.

- Traffic impacts in general
- The ongoing exposure to trucks and project-generated traffic on the surrounding roads and its enduring impacts on public infrastructure and residents.

6.3.3 Response

The modifications *do not* change the number of trucks, the approved haul routes, or the allowable operating hours. This means the traffic environment remains the same as it is today, and the level of truck activity has already been assessed and approved under the existing consent and EPL.

Transport for NSW reviewed the proposal (See Section 4.8) and confirmed it has no concerns, because the modification simply extends the timeframe within which material is imported, rather than intensifying traffic volumes or altering access arrangements.

The existing traffic management measures continue to apply, including the requirement for all trucks to use designated routes that were originally assessed as suitable for heavy vehicles. As a result, the modification does not increase traffic impacts on the local community.

6.4 Extent of the modification footprints

6.4.1 Submitter ID

DA2 and DA3 | S-77948002/S-77991707

6.4.2 Issue description *(comments about the project itself)*

The submitter sought clarification if the two modification footprints included land on the eastern side of Castlereagh Road.

6.4.3 Response

The modification areas are entirely west of Castlereagh Road, as shown in Figure 1-1. This is consistent with past approvals and long-standing site boundaries. No works are proposed, permitted, or anticipated on the eastern side of the road. The footprint remains unchanged and fully contained within the already approved operational area.

6.5 Duration of material importation

6.5.1 Submitter ID

DA2 only | S-78124210

6.5.2 Issue description *(comments about the project itself)*

The submitter was concerned about the need to extend the importation of material for longer than originally envisaged.

6.5.3 Response

Sydney's major infrastructure and tunnelling projects continue to generate significant volumes of clean excavated material that must be placed in lawful, regulated facilities. Penrith Lakes is one of the few sites specifically approved to receive this material, and its long-term rehabilitation plan has always relied on staged importation.

The State has also placed an additional, site-specific requirement on PLDC to review its operations every two years, as outlined in the modification applications. This regular review ensures that the need for ongoing importation, the site's environmental performance, and the management of impacts is reassessed on a frequent and transparent basis.

The modifications *do not* change the type of activities carried out on the site, nor do they increase traffic volumes, operating hours or environmental controls. It simply allows an additional volume of material to be placed onsite in line with the Deed between the NSW Government and PLDC, which requires the staged importation of clean material to complete the landform. This means the day-to-day level of impacts remains the same, but the period over which these impacts occur will be longer, because operations will continue for a longer duration than previously anticipated. All existing environmental protections remain in force throughout this period.

6.6 Level of consultation

6.6.1 Submitter ID

DA2 only | S-78103706

6.6.2 Issue description *(procedural or process-related issues)*

The submitter questioned the level of consultation in relation to the proposed modifications.

6.6.3 Response

The modification applications were prepared in accordance with the SSD Guidelines – Preparing a Modification Report (DPHI). Under these guidelines, additional community consultation is only required in specific circumstances, such as where the modification introduces new impacts or changes the scope of the project.

Following discussions with DPHI, it was confirmed that no additional engagement was required because the modifications do not introduce new impacts or change the approved land use. The applications were publicly exhibited, and all submissions have been fully responded to in this report. This ensures that community input has been considered, even though further pre-exhibition consultation was not required under the legislation.

6.7 Landowner consent

6.7.1 Submitter ID

DA2 and DA3 | S-78192959/S-78192708

6.7.2 Issue description *(procedural or process-related issues)*

The submitter noted that they did not give their consent as a landowner due to legislative changes.

6.7.3 Response

The NSW Government recently amended the legislation governing State-significant development. The changes allow certain modification applications to be lodged without individual landowner consent, where the planning system treats the proponent as having *sufficient interest* in the land (for example, long-term lease arrangements under the Penrith Lakes scheme). These reforms were publicly exhibited and adopted by the State and apply broadly to similar projects across NSW. They do not alter PLDC's approach to ongoing communication with neighbours or community members.

6.8 Noise impacts

6.8.1 Submitter ID

DA2 and DA3 | S-78131956/S-78131720

6.8.2 Issue description *(economic, environmental, or social impacts)*

The submitter was concerned about the proposed modifications' noise impacts.

6.8.3 Response

Noise levels will remain the same because the modification does not change the type of machinery used, the hours of operation, the number of trucks, or the size of the operational area. All activities will continue exactly as they do now. Noise is regulated under the site's EPL and consent conditions, and the NSW EPA has confirmed (See Section 4.5) that the existing controls remain adequate. These controls have been effective for more than two decades. Because the modification only extends the timeframe of approved activities and does not intensify them, there is no additional noise impact.

6.9 Purpose of the modifications

6.9.1 Submitter ID

DA2 only | S-78103706

6.9.2 Issue description *(comments about the project itself)*

The submitter sought clarification as to purpose of the modification as it relates to earlier agreements between PLDC and the State Government in 1994 and the future intended commercial/urban use.

6.9.3 Response

The filling is needed to complete the approved interim landform and protect the site from future extreme flood events, which is a requirement of past Penrith Lakes approvals and PLDC's Water Management Plans (see responses **RFI2.1**, **F.1**, and **G.1**). The higher finished levels also ensure that the land drains properly and remains stable and safe in the long term, regardless of future use. The modification does not approve any new land use, buildings or development rights. Any future development proposal will require a separate planning proposal or DA, a full assessment of flooding, evacuation, heritage, visual, ecological and infrastructure impacts, and public consultation. Those matters will be considered at the appropriate time. The State's two-yearly review mechanism, as described in both modification applications ensures ongoing oversight of PLDC's operations, providing additional transparency and accountability.

6.10 Future development concerns

6.10.1 Submitter ID

DA2 and DA3 | S-78165975/S-78165971

6.10.2 Issue description *(issues that fall outside the scope of the project)*

The submitter was concerned that importing fill and raising the landform would increase the visual impact of the site in the future under the proposed masterplan.

The same submitter was also objecting to the future introduction of commercial and residential development on the PLDC site along the Castlereagh Road frontage, along with other concerns about the suitability of the site for future development given the ground conditions.

6.10.3 Response

Concerns about the future masterplan, visual impacts from potential buildings, and the suitability of the land for development relate to *future planning processes*, not this modification.

As explained in responses **C.3**, **C.6**, **C.7**, **D.5**, **F.1**, **F.2**, and **F.7**, the modifications only approve earthworks and must remain *substantially the same* development under the section of the NSW *Environmental Planning and Assessment Act 1979* under which the two applications are being made. As such, neither modification:

- Changes zoning
- Allows residential or commercial development
- Results in more people living and working in the area
- Approves buildings or infrastructure.

Any future proposal will need its own full assessment, technical studies, agency consultation (including NSW RA, SES and Councils), and public exhibition. The current modification *does not predetermine or enable any land use* outcome.

7. Updated project justification

The proposed modifications remain justified because they continue the long-standing and State-endorsed rehabilitation of the Penrith Lakes Scheme. Sydney's major infrastructure and tunnelling projects are generating large volumes of clean excavated material, and Penrith Lakes is one of the few places lawfully approved to receive it. The Deed between the NSW Government and PLDC requires the staged importation of clean material to rebuild the landform and provide sufficient flood immunity. The additional volume sought through these modifications is consistent with this framework.

An independently validated flood impact assessment has been prepared post submitting the modification applications in relation to feedback, submissions, and information requests from the public, and Government agencies. This is in the process of being reviewed by NSW RA, SES, both Councils and DPHI. The updated modelling confirms that the proposed landform does not increase flood levels, redirect floodwaters, alter flood behaviour, or introduce any new above-floor flooding. Key evacuation routes remain unaffected, and the worst-case flood event behaves exactly as it does today. As a result, there is no need for any flood-compensation works and no changes to community safety. The modifications also sit comfortably within the requirements of the WPC SEPP, the Penrith Lakes Water Management Plans, and wider regional floodplain policy as discussed throughout this report and in the appendices.

Specialist assessments confirm that the works can be delivered without adverse effects on heritage, landscape or views. The safeguarding outcomes for McCarthys Cemetery and The Poplars remain unchanged, with the final landform continuing to respect the conservation management plans for both items. The proposed height changes are modest when considered across such a large area, and the ability to profile and shape the surface ensures the final outcome will be visually consistent with the existing rehabilitation program. Future planting, with agreed endemic and native grasses, as required under the Deed, will further integrate the landform into the surrounding landscape.

The modifications do not change the type of activities carried out onsite, nor do they increase traffic volumes, operating hours or environmental controls. They simply allow an additional volume of material to be placed onsite in line with the Deed between the NSW Government and PLDC. This means the day-to-day level of impacts remains the same, but the period over which they occur will be longer. All environmental protections remain in force, and the site will continue to operate under the same mitigation measures, compliance obligations, and independent audits that have proven effective over many years. The State's requirement for a biennial review of operations ensures ongoing transparency and continual reassessment of performance.

The site is already subject to a comprehensive suite of environmental management requirements, including the long-standing conditions of consent, the Penrith Lakes Deed, and the site's EPL. These instruments set out detailed controls for dust, noise, traffic, water quality, erosion and sedimentation, and progressive rehabilitation. They also require ongoing monitoring, incident reporting, independent audits, and regular engagement with regulatory agencies. As a result, many of the measures referenced by NSW EPA, Councils, NSW RA and other authorities in their submissions are already mandatory and fully implemented onsite. As the modifications do not introduce new impacts or intensify operations, there is no need for additional mitigation, and the existing management framework continues to provide a robust and proven level of environmental protection.

Overall, the modifications are technically sound, environmentally acceptable, and consistent with the strategic intent, statutory framework, and long-standing rehabilitation obligations for Penrith Lakes. They allow completion of the landform in a regulated and orderly manner, support ongoing delivery of major infrastructure projects across Sydney, and maintain the high level of environmental performance expected by the NSW Government, NSW EPA, and the community.

8. References

Guidelines for Landscape and Visual Impact Assessment (UK IEMA, 2013)

Guideline for Landscape Character and Visual Impact Assessment (Transport for NSW, 2020)

Penrith Lakes Landscape Stabilisation Specification (PLDC, 2022)

SSD Guidelines – Preparing a Modification Report (DPHI, 2022).

Appendix A: Public submissions register

Group	Submitter ID	Name	Section where issues are addressed in this submissions report
DA2 Modification 12			
Public	S-77948002	Wayne Magennis	6.1 & 6.4
Public	S-78021461	Withheld	6.1
Public	S-78103706	Withheld	6.2, 6.6 & 6.9
Public	S-78124210	Chris Wyatt	6.1, 6.3 & 6.5
Public	S-78131956	Withheld	6.1, 6.3 & 6.8
Public	S-78164240	Dominic Young	6.1
Public	S-78165975	Withheld	6.1, 6.2 & 6.10
Public	S-78179478	Withheld	6.1
Public	S-78192959	Withheld	6.1 & 6.7
Public	S-78207706	Shane Dwight	6.1
Public	S-78207708	Annetta Dwight	6.1
DA3 Modification 10			
Public	S-77991707	Wayne Magennis	6.1 & 6.4
Public	S-78021463	Withheld	6.1
Public	S-78131720	Withheld	6.1, 6.3 & 6.8
Public	S-78165971	Withheld	6.1, 5,2 & 6.10
Public	S-78190209	Withheld	6.1
Public	S-78192708	Withheld	6.1 & 6.7
Public	S-78207957	Shane Dwight	6.1
Public	S-78207974	Annetta Dwight	6.1

Appendix B: Supporting information

Appendix B.1
DPHI December 2024 RFI response cover letter

Appendix B.2
Rationale for fill levels above the 0.2% AEP flood level

Appendix B.3
Impacts on previously inundated properties

Appendix B.4
Fill import duration and site operations

Appendix B.5
Heritage impact assessment for McCarthys Cemetery and The Poplars

Appendix B.6
Landscape and visual impact assessment

Appendix B.7
Clarifications on visual impacts and stormwater management

Appendix B.8
Stormwater management works around the poplars

Appendix B.9
Surface levels and drainage layout around the Poplars

Appendix B.10
NSW RA submission response cover letter

Appendix B.11
Revised flood impact assessment