



Economic Regulation Authority

Draft determination of Arc Infrastructure depreciated optimised replacement costs and depreciation schedule

Attachment 8: Depreciation Schedule

26 March 2026

Acknowledgement of Country

At the ERA we value our cultural diversity and respect the traditional custodians of the land and waters on which we live and work.

We acknowledge their continuing connection to culture and community, their traditions and stories. We commit to listening, continuously improving our performance and building a brighter future together.

Economic Regulation Authority

Level 4, Albert Facey House

469 Wellington Street, Perth WA 6000

Telephone 08 6557 7900

Email info@erawa.com.au

Website www.erawa.com.au

This document can also be made available in alternative formats on request.

National Relay Service TTY: 13 36 77

© 2026 Economic Regulation Authority. All rights reserved. This material may be reproduced in whole or in part provided the source is acknowledged.

Contents

Attachment 8. Summary	1
Depreciation Schedule	3
Arc Infrastructure Proposal	4
Comments in submissions	7
RP Infrastructure advice	8
ERA Considerations	9
New capital expenditure	15

List of appendices

Appendix 1 List of Tables	16
Appendix 2 List of Figures	17

Note

This attachment relates to the draft determination for Arc's Depreciation Schedule.

This attachment forms part of the ERA's draft determination on the Arc DORC and Arc Depreciation Schedule. It should be read in conjunction with all other parts of the draft determination, which comprises of the following documents and attachments:

- Overview
- ERA's draft determinations of depreciated optimised replacement costs by route section
- ERA's draft determinations of depreciated optimised replacement costs (model)
- ERA's draft determinations of depreciation schedule (model)
- Attachment 1: Information used by the ERA
- Attachment 2: Total construction replacement costs
- Attachment 3: Optimisation
- Attachment 4: Capital contributions
- Attachment 5: Funding cost during construction
- Attachment 6: Depreciation
- Attachment 7: DORC summary
- **Attachment 8: Depreciation Schedule (this document)**

Attachment 8. Summary

The forward depreciation schedule sets out the profile of annual depreciation of the initial regulatory asset bases, relying on the ERA's determination on Arc's initial regulatory asset base and the remaining life of assets.

Arc provided simple depreciation schedules that provided annual percentages for depreciation for each year by route section and asset group. Arc did not calculate annual amounts of depreciation expenditures over time based on its proposed initial regulatory asset base.

Arc's proposed depreciation schedules result in a weighted average remaining life of 25.2 years for the whole rail network. Arc's proposed initial regulatory asset base and proposed depreciation schedules implies network-wide depreciation payments of \$3.6 billion (real 2024 dollars) for the first five years, averaging around \$700 million each year. Over this five-year period, the proposed depreciation schedules would result in recovery of about a quarter (24 per cent) of its proposed initial regulatory asset base.

Stakeholders submitted that Arc's proposed DORC valuation, which they considered excessive, would result in an inflated schedule of depreciation. Submissions considered that the DORC valuation needed to be corrected before meaningful comment could be provided on the depreciation schedule.

The ERA has recalculated the schedules on the basis of:

- The ERA's draft decision of the initial regulatory asset base resulting from the DORC valuation of \$7.7 billion.
- The assets' remaining life from the DORC valuation, which sets the period of time over which depreciation is recovered.
- A straight-line depreciation approach, which allocates the recovery of assets to equal annual amounts.
- Unlike Arc, the ERA includes no non-depreciating assets. Earthworks, cuttings and formation are depreciated over their standard design lives.

The ERA's draft decision is shown as the Depreciation Schedule Model.¹

The ERA's determined depreciation schedules results in depreciation payments of \$2.3 billion (real 2024 dollars) over the first 5 years, averaging around \$460 million annually and would recover around 30 per cent of the ERA's initial regulatory asset base. Most of the initial regulatory base and therefore depreciation is in track and signalling and control systems.

Our analysis of the profile of annual capital charges over time reveals that capital charges are significantly front loaded.² The return on capital and return of capital combines to result in high annual capital charges of nearly \$1 billion (real 2024 dollars) for the first five years. With the full depreciation of signals, there is a material reduction in total capital charges from year seven onwards.

¹ ERA's draft determination of depreciation schedule.

² Capital charges include a return of capital (depreciation) and a return on capital (rate of return of the regulatory asset base). These generally represent the biggest components of regulatory building block costs.

The ERA seeks stakeholder feedback on the merits of simplification of the depreciation schedules to apply one single asset group per route. This is discussed below.

The ERA has made a draft decision for the depreciation schedules informed by the ERA's draft decision on Arc's initial regulatory asset base. The depreciation schedules will be updated for the ERA's final decision.

Depreciation Schedule

1. The ERA is required to approve a Depreciation Schedule for Arc under section 47K of the Code. This is separate to the approval of Arc's initial regulatory asset base and the depreciated optimised replacement cost valuation exercise.
2. The forward Depreciation Schedule sets annual depreciation amounts and takes into account the ERA's determination on Arc's initial regulatory asset base and the remaining life of these assets.
3. The forward Depreciation Schedule can then be used by Arc and interested parties to depreciate and roll forward annual balances of the regulatory asset base.
4. The ERA is required to approve the Depreciation Schedule with or without amendments, or to determine what is to constitute the applicable Depreciation Schedule.
5. Arc's Costing Principles detail that the Depreciation Schedule will describe depreciation in respect of each year of an asset's economic life. Depreciation may be applied evenly over an asset's economic life or may vary over time.³
6. Arc will provide the regulator with all supporting information necessary for the regulator to meet its obligations under section 47K in the evaluation of the Arc's Depreciation Schedule.⁴
7. Further the Costing Principles details that the Depreciation Schedule will, pursuant to section 47K(5) of the Code, provide:⁵
 - for assets to be depreciated over their economic life (whether depreciation is distributed uniformly or otherwise)
 - for an asset to be depreciated only once over its economic life, such that the railway owner may not recover a sum exceeding the value of the asset that was added to the regulatory asset base
 - for access prices to vary over time in a way that promotes efficient growth in the market for rail access
 - for adjustments that reflect changes in the economic life of a particular asset or asset group
 - for the legitimate business interests of the railway owner, access seekers and access holders.

³ Arc infrastructure, *Costing Principles*, 11 July 2025, p. 6.

⁴ Arc infrastructure, *Costing Principles*, 11 July 2025, p. 13.

⁵ Arc infrastructure, *Costing Principles*, 11 July 2025, p. 15.

Arc Infrastructure Proposal

8. Arc submitted a Depreciation Schedule along with its statement of depreciated optimised replacement cost.
9. Arc provided a Depreciation Schedule, with a schedule for each asset class by route section. The Depreciation Schedule was provided as a spreadsheet.⁶ No accompanying report on the Depreciation Schedule was provided.
10. The Depreciation Schedule submitted by Arc did not provide a schedule for all route sections in its Costing Principles.
11. Arc's Depreciation Schedule detailed depreciation for the period 2025 to 2098.
12. A summary of Arc's Depreciation Schedule is provided in Table 8.1.

Table 8.1: ERA's summary of Arc's depreciation schedule

Asset Group	Arc's Proposed RAB (\$ billion)	Average Remaining Life (years)	Weighted Average Remaining Life (years)
Right of Way - Permanent	2.9	Perpetual	Perpetual
Right of Way	0.5	5.7	6.2
Civil Structures	0.7	32.5	42.4
Associated Track Structures	0.0	11.1	12.1
Track	8.5	29.4	38.1
Signalling and Control Systems	2.4	5.9	8.5
Buildings	0.1	22.9	18.3
Miscellaneous	0.1	14.4	45.7
Total	15.3	20.8	25.2

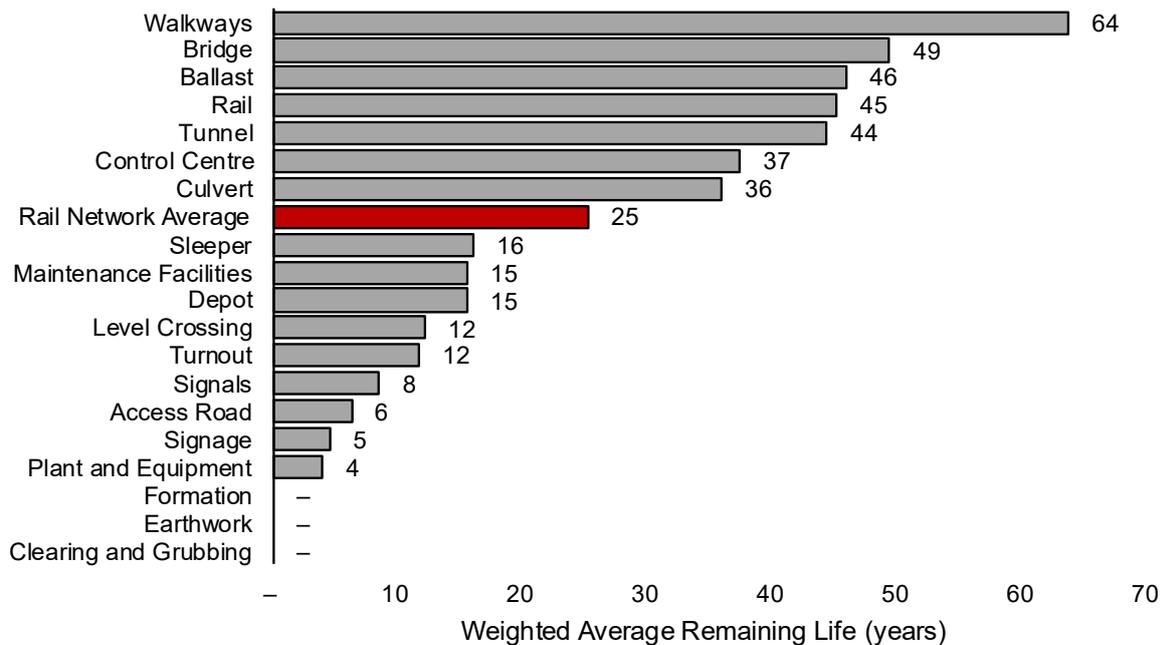
Source: ERA analysis of Arc DORC Model and Depreciation Schedule Model.

13. Arc's Depreciation Schedule only details the percentage of annual depreciation of a fixed initial regulatory asset base over time. For example, Arc's depreciation schedule for the Avon Yard to West Merredin bridge asset category details a depreciation rate of 2.17 per cent. Arc has not calculated depreciation dollar amounts and therefore the materiality of each component of depreciation is not presented by Arc.
14. Arc's annual depreciation amounts will be a function of the Depreciation Schedule and Arc's initial regulatory asset base.

⁶ Arc, *Arc Infrastructure Depreciation Schedule model*, 6 June 2025. Available [online](#).

15. Arc's Depreciation Schedule applies straight line depreciation, so that the same amount of depreciation is applied until the end of the asset's economic life. Arc's Depreciation Schedule is informed by the residual remaining life coming out of its DORC modelling. For example, the Avon Yard to West Merredin route's Depot depreciation rate of 6.45 per cent implies a residual remaining life of approximately 15.4 years.
16. The weighted average remaining life by asset class is presented in Figure 8.1.

Figure 8.1: Arc implied weighted average remaining life by asset class (years)

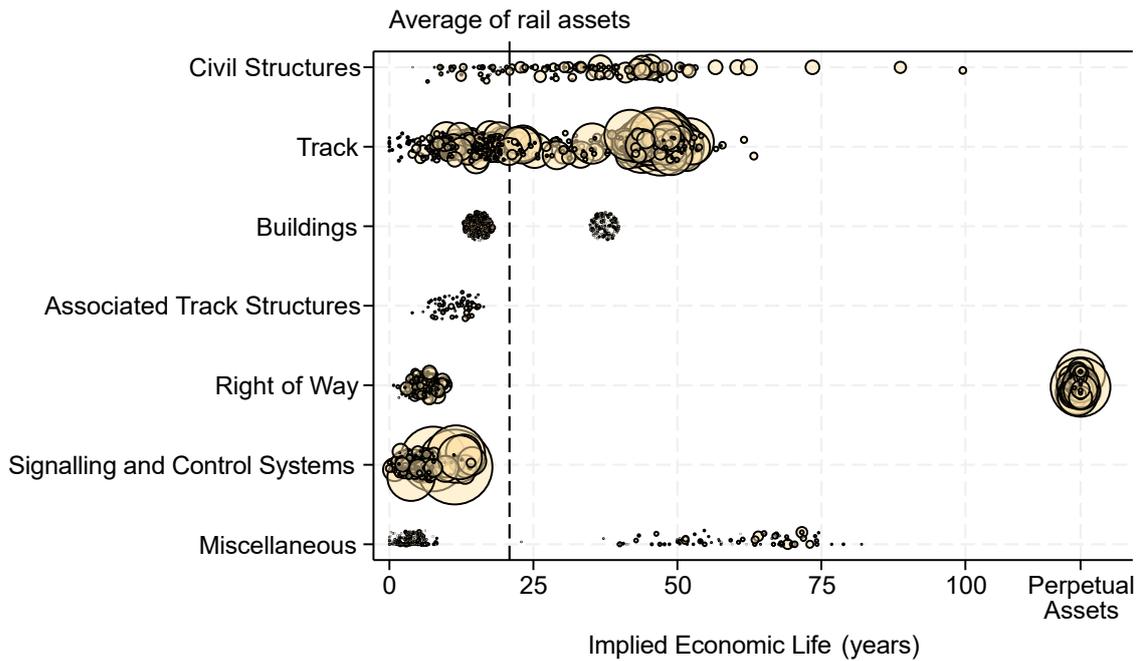


Source: ERA analysis of Arc DORC Model and Depreciation Schedule Model.

Note: Observations are weighted by DORC RAB. Arc proposed that Formation, Earthwork and Clearing and Grubbing assets were not to be depreciated and are represented in the chart as having zero remaining life.

17. The distribution of Arc's proposed economic life on a route and asset level basis is presented in Figure 8.2. The ERA observes that:
- There are close to three thousand separate assets in the depreciation schedule. All these will have to be depreciated and rolled forward each year. There is one exception where some asset types are not depreciated over time, including earthworks and formation. Arc treats these \$2.9 billion (real 2024 dollars) of assets as perpetual assets.
 - The distribution of residual asset lives across route sections ranges from a minimum of 1 year (a signage asset) to 98 years (a bridge asset) with an overall simple average remaining life of 21 years. This means that most of the RAB will be recovered by 2050. However, some assets have very long residual lives, with 91 assets having over 50 years of residual life (rail, walkways and bridges) which extend far beyond the other assets in the network.

Figure 8.2: Arc implied average remaining life by asset group per route (years)



Source: ERA analysis of Arc DORC Model and Depreciation Schedule Model.

Note: Observations are on the route-asset level and then placed into asset groups. Bubble size represents the relative size of the DORC RAB for each asset. The average of rail assets is the mean of all assets on an unweighted basis. As Arc proposed that certain Right of Way assets were not to be depreciated, this is represented on the chart as having an economic life of 100+ years so they are not omitted otherwise.

18. The route sections differ between Arc’s route section valuations, DORC model and the Depreciation Schedule. For example, Arc’s Depreciation Schedule does not have a depreciation profile for around \$169 million of routes. With these inconsistencies in mind, the ERA has applied Arc’s proposed initial regulatory asset base to the depreciation percentages detailed in Arc’s Depreciation Schedule to calculate the annual depreciation dollar amounts in Table 8.2.

Table 8.2: ERA’s summary of a five year depreciation schedule based on Arc’s proposal (real 2024 \$ million)

Asset category	2025	2026	2027	2028	2029
Right of Way	83.7	83.7	83.6	83.1	76.3
Civil Structures	17.8	17.8	17.8	17.8	17.8
Associated Track Structures	2.9	2.9	2.9	2.9	2.9
Track	294.4	291.9	289.3	286.4	284.4
Signalling and Control Systems	367.5	367.5	343.7	295.5	201.4
Buildings	4.9	4.9	4.9	4.9	4.9
Miscellaneous	9.5	9.4	9.1	8.4	1.7
Total	780.7	778.1	751.3	699.0	589.4

Source: ERA analysis of Arc DORC Model and Depreciation Schedule Model.

Comments in submissions

19. Arc's Depreciation Schedule was published by the ERA on 16 June 2025 for stakeholder comment.⁷
20. Submissions mentioned the Depreciation Schedule, though the focus of stakeholders was on Arc's DORC valuation exercise.

Aurizon

21. Aurizon noted the Depreciation Schedule will need to be reviewed by the ERA to align with the final DORC valuation. The Depreciation Schedule should provide for the assets to be depreciated from the valuation date over their remaining standard design life as used in the assessment of accumulated depreciation for the DORC valuation.⁸

CBH

22. CBH submitted that the ERA should not approve Arc's Depreciation Schedule or determine what is to constitute the Depreciation Schedule, without adopting CBH's recommendations put forth in its submission.⁹
23. CBH considered that the establishment of an appropriate DORC and Depreciation Schedule for the rail network was critical to ensuring the pricing methodology in the revised Code functions as intended. CBH submitted that if the DORC and Depreciation Schedule result in unreasonably high values, the new DORC valuation methodology will not have the intended practical impact of reducing the delta between floor and ceiling prices and constraining overcharging.¹⁰

Karara Mining Limited

24. KML submission detailed concern with the lack of information on assets and with significant discrepancies with the remaining life of multiple assets, which affects Arc's Depreciation Schedule. KML submitted that Arc should provide adequate information for each route section and asset category and discrepancies on remaining asset life need to be resolved.¹¹

⁷ Arc, *Arc Infrastructure Depreciation Schedule model*, 6 June 2025. Available [online](#).

⁸ Aurizon, *Arc Infrastructure Proposed Depreciated Optimised Replacement Cost Submission to ERA*, 11 August 2025, p. 8.

⁹ CBH Group, *CBH submission on Arc Infrastructure's statement of the depreciated optimised replacement cost and statement of the depreciation schedule published on 16 June 2025*, 11 August 2025, pp. 7-8.

¹⁰ CBH Group, *CBH submission on Arc Infrastructure's statement of the depreciated optimised replacement cost and statement of the depreciation schedule published on 16 June 2025*, 11 August 2025, p. 8.

¹¹ Karara Mining Limited, *KML's Submission Regarding Arc's DORC Report*, 11 August 2025, pp. 12, 34.

RP Infrastructure advice

25. RPI recommended that the ERA not approve the Depreciation Schedule put forward by Arc.
26. RPI separately provided the ERA with an estimate of the DORC, which would inform an alternative Depreciation Schedule.

ERA Considerations

27. The ERA is required to either make a separate determination for Arc's forward Depreciation Schedule or approve Arc's statement either with or without amendments.
28. In reviewing the Depreciation Schedule the ERA must consider the following requirements of s.47K(5) to (6) of the Code.
 - (5) The Regulator must not approve the statement submitted by the railway owner unless the Regulator is satisfied that the statement —
 - (a) sets out an annual depreciation profile for each asset or group of assets that is applicable railway infrastructure; and
 - (b) provides for each asset or group of assets to be depreciated over its economic life (whether the depreciation is distributed uniformly or otherwise); and
 - (c) provides for each asset to be depreciated only once, that is, so that the sum of the return of capital that is attributable to an asset over its economic life, via depreciation or otherwise, does not exceed the value of the asset at the time at which it is first included in a regulatory asset base; and
 - (d) is designed so that access prices will vary over time in a way that promotes efficient growth in the market for rail access; and
 - (e) allows, as far as reasonably practicable, for adjustments that reflect changes in the expected economic life of a particular asset or group of assets; and
 - (f) allows for the legitimate business interests of the railway owner, access seekers and access holders.
 - (6) If the statement submitted by the railway owner provides for depreciation of an asset or group of assets not to be distributed uniformly across each year of the economic life of the asset or group of assets, the Regulator must have regard to the following when performing its functions under subsection (3) —
 - (a) if the statement provides for depreciation of the asset or group of assets to be accelerated — whether it is appropriate for depreciation of the asset or group of assets to be accelerated in the manner provided in the statement to avoid asset stranding;
 - (b) if the statement provides for depreciation of the asset or group of assets to be deferred — whether it is appropriate for depreciation of the asset or group of assets to be deferred in the manner provided in the statement on the basis that the market for access to the asset or group of assets is relatively immature.
29. Based on the assessment of the information received to date the ERA does not approve Arc's proposed depreciation schedule and will determine a Depreciation Schedule.

30. The discussion below outlines the ERA's derivation of the Depreciation Schedule. The ERA's Depreciation Schedule is accompanied by a detailed Depreciation Schedule Model.¹² The Depreciation Schedule Model spans 100 years, to ensure that all of the initial regulatory asset base is recovered by depreciation over time and that there is no double counting or stranding. For presentational purposes the tables below extract depreciation for the five year period until the next review.
31. The ERA's Depreciation Schedule is informed by:
- The ERA's initial regulatory asset base resulting from the DORC valuation, which sets the value of the assets that need to be recovered by depreciation over time.
 - The assets' remaining life from the DORC valuation, which sets the period of time over which depreciation is recovered.
 - A straight-line depreciation approach, which allocates the recovery of assets to equal annual amounts.
32. Arc's Depreciation schedule did not detail all the required routes and had errors.¹³ The ERA's DORC analysis included all the required routes and accordingly the ERA's Depreciation Schedule includes all required routes.
33. The ERA's Depreciation Schedule for the asset classes is provided in Table 8.3.

Table 8.3: ERA's five year depreciation schedule (real 2024 \$ million)

Asset category	2025	2026	2027	2028	2029
Track	243.6	243.6	243.6	243.6	243.6
Signalling and Communications/Control Systems	170.1	170.1	170.1	170.1	170.1
Civil Structures	12.2	12.2	12.2	12.2	12.2
Associated Track Structures	19.7	19.7	19.7	11.4	7.8
Right of Way	8.7	8.7	8.7	8.7	8.7
Buildings	5.3	5.3	5.3	5.3	5.3
Totals	459.6	459.6	459.6	451.3	447.7

¹² ERA's draft determination of depreciation schedule.

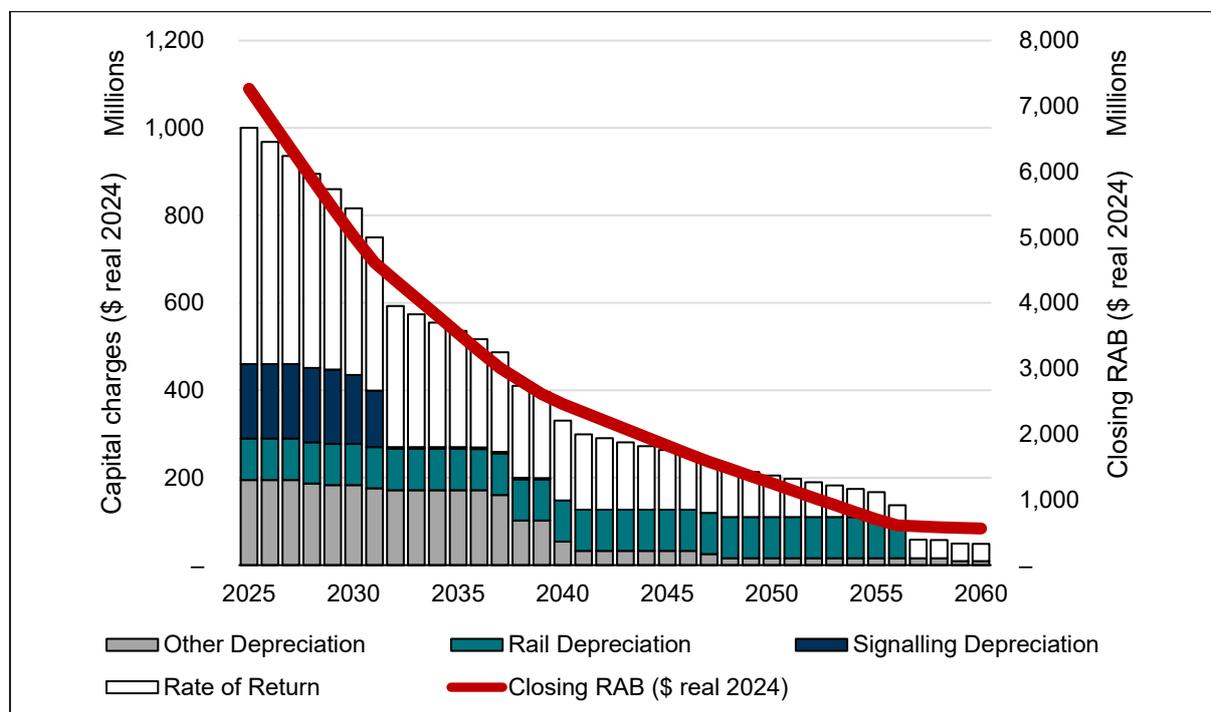
¹³ Arc applied depreciation to assets with zero RAB for certain routes on the Signalling and Control Systems asset class.

34. With regard to the asset categories:

- The ERA depreciates all assets to ensure that Arc's initial regulatory asset base is recovered.
- Unlike Arc, the ERA includes no non-depreciating assets. Earthworks, cuttings and formation assets are depreciated over their standard design lives.
- Most of the DORC value is in Track and Signalling and Control Systems.

35. Figure 8.3 details the profile of annual capital charges over time. Capital charges include a return of capital (depreciation) and a return on capital (rate of return on the regulatory asset base). These generally represent the biggest components of regulatory building block costs.

Figure 8.3: ERA depreciation profile and capital charges over time



Note: An indicative, constant illustrative rate of return of 7 per cent has been applied for this example.

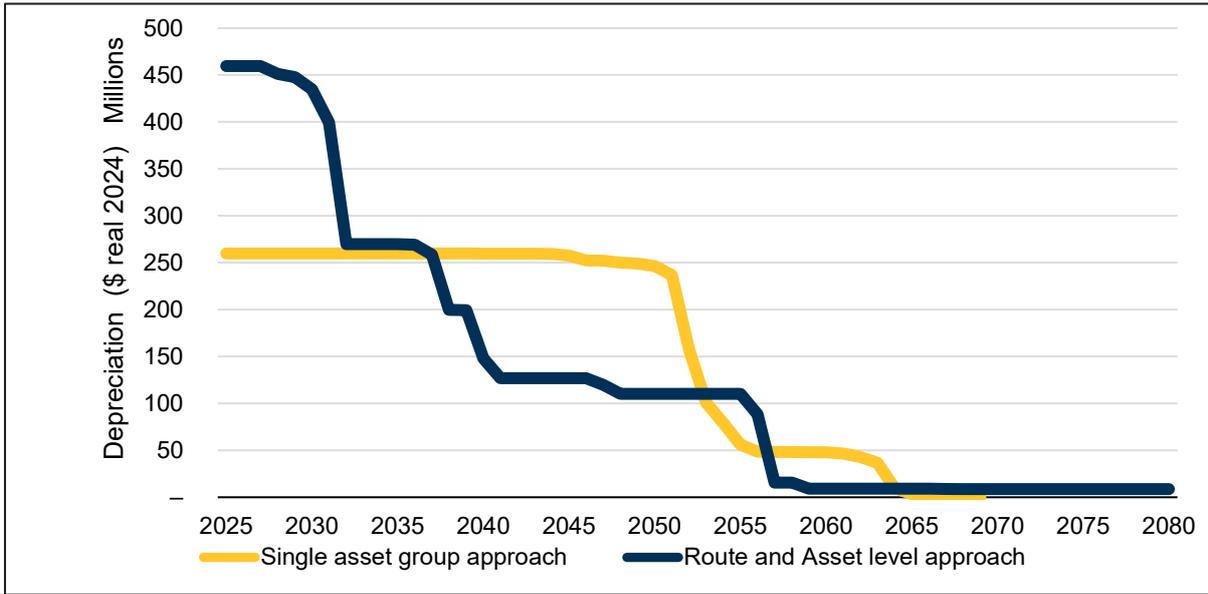
36. The ERA makes the following observations on the capital charges over time:

- Depreciation is front loaded in the first five years.
- The front-loaded depreciation is driven by the signal assets. Signals is one of the largest components of the initial DORC and its short remaining asset life means that it is recovered over five years.
- The largest component of the initial DORC is rail, which is depreciated over a longer period.
- Some minor assets classes representing only a small portion of the initial DORC, extend for years beyond the life of the rail assets. If the rail assets are not renewed/replaced these assets with very long lives may be orphaned and the full value of the assets may not be recovered.

- The regulatory asset base rapidly declines over a 30-year period.
 - The higher regulatory asset base value in the early years drives a higher allowance for the return on capital.
 - The return on capital and return of capital combines to result in high annual capital charges of around \$930 million for the first five years. With the full depreciation of signals, there is a material reduction in total capital charges from year 7.
37. Given the initial high capital charges and their rapid decline over a 30-year period, consideration needs to be given as to whether such a capital charge profile best meets the Code objective.
38. The ERA is interested in stakeholder feedback on the profile of capital charges over time.
39. The number of asset categories in the Depreciation Schedule of over 4,000 lines results in the uneven, volatile depreciation profile and makes the annual rollover of the regulatory asset base and the five yearly reset difficult. The ERA considers that an aggregation of the Depreciation Schedule into a single asset group per route would avoid the “front loaded” charges, reduce volatility and reduce stranding risk for assets that have an economic life greater than the track assets. Additionally, this would simplify the roll forward process and enhance the utility of the schedule. The ERA notes this would reduce the future flexibility to adjust economic lives of separate asset classes within the individual routes should the need arise at future five yearly regulatory reviews.
40. These two options are provided in the Depreciation Schedule Model. The single asset group approach aggregates the regulatory asset base for each route and sets the economic life based on the weighted average remaining life (WARL) of the route assets.¹⁴ The profile of depreciation payments from the two approaches is presented in Figure 8.4.

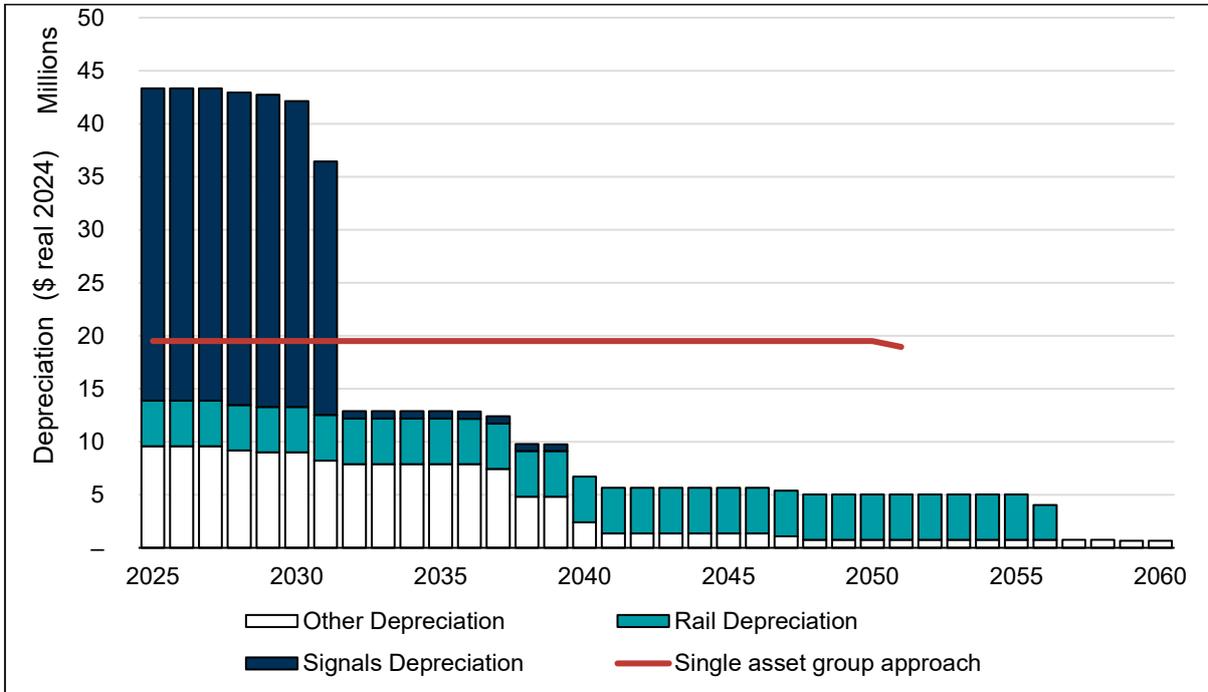
¹⁴ For each route i and asset j , $WARL_i = \sum (\text{Economic Life of Asset}_j \times \text{Asset Value}_j) / \text{Total Asset Value of route } i$.

Figure 8.4: ERA depreciation profile from single asset group and route-asset approaches



41. The single asset group approach reprofiles depreciation payments by both bringing forward and pushing back depreciation amounts due to the adopted WARL being between the minimum and maximum of the asset economic lives. This is compared to the route-asset approach which has large front-ended payments due to the short economic life of signals and a residual long tail due to the Right of Way assets having a 100 year economic life. This reprofiling is illustrated for a single route in Figure 8.5.

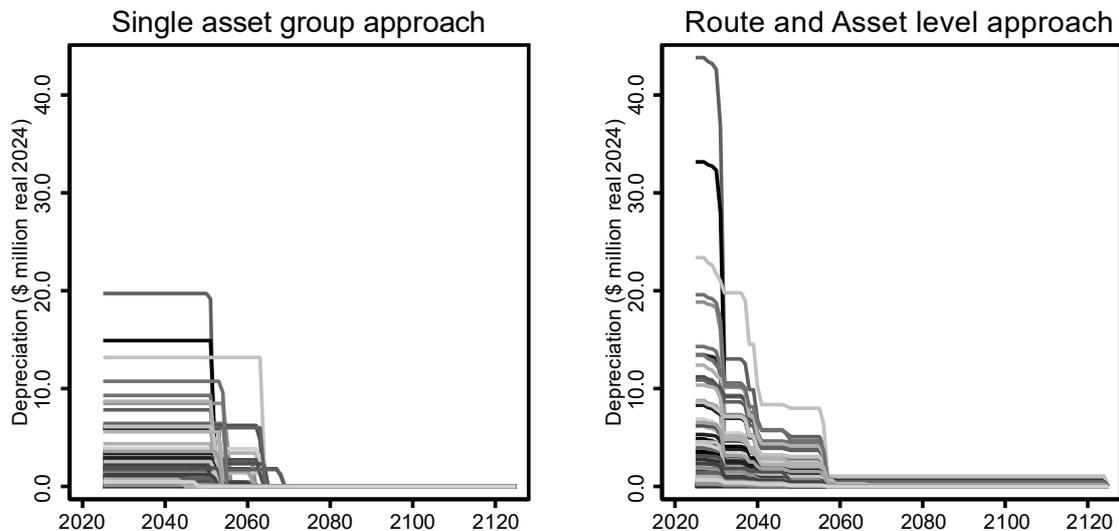
Figure 8.5: ERA depreciation profile from single asset and route-asset approaches for Avon Yard to West Merredin route



Note: For the single asset group approach, when the WARL is not a whole number, the last annual payment will be the residual amount that reduces the asset base to zero.

42. The effect across all route sections is illustrated in Figure 8.6:

Figure 8.6: ERA depreciation profile from single asset and route-asset approaches for all routes



Note: All route sections are depicted in the grey lines. The top three routes in terms of total depreciation payable is Avon Yard to West Merredin, Kambalda to Salmon Gums and Merredin to Southern Cross.

43. The ERA seeks stakeholder feedback on the simplification of the Depreciation Schedule to one single asset group per route, noting that it has impacts on both the presentation of the schedule and the depreciation profile.
44. The ERA does not approve Arc's Depreciation Schedule because:
 - The ERA does not accept Arc's DORC statement for the initial regulatory asset base for each relevant route.
 - Arc's Depreciation Schedule does not meet the Code requirements with respect to setting out an annual depreciation profile for each asset (due to missing routes) and having purported depreciation for assets with zero RAB (double counting).
 - Even when applying the ERA's DORC draft decision, the corresponding Depreciation Schedule would not result in access prices that will vary over time in a way that promotes efficient growth in the market for rail access due to the front-loaded nature of depreciation.
 - While Arc's proposed Depreciation Schedule may promote the business interests of the railway owner, the ERA considers that it does not allow for the business interests of access seekers and access holders.
45. The ERA has made a draft decision for the Depreciation Schedule informed by the ERA's draft decision on Arc's initial regulatory asset base. The draft Depreciation Schedule will be updated for the ERA's final determination.
46. The ERA invites further submissions on the Depreciation Schedule.

Question 8.1

What is an appropriate format for the Depreciation Schedule to take? Do you support the single asset group per route or route and asset group level, noting that it has impacts on both the presentation of the schedule and the depreciation profile?

Question 8.2

Are there any other relevant Depreciation Schedule matters that should be considered by the ERA?

New capital expenditure

47. Any new capital expenditure undertaken by Arc would need to be rolled into its regulatory asset base.
48. Depreciation of this new capital expenditure would be consistent with the Standard Design Life set out in the Costing Principles.

Appendix 1 List of Tables

Table 8.1: ERA's summary of Arc's depreciation schedule.....	4
Table 8.2: ERA's summary of a five year depreciation schedule based on Arc's proposal (real 2024 \$ million)	6
Table 8.3: ERA's five year depreciation schedule (real 2024 \$ million)	10

Appendix 2 List of Figures

Figure 8.1: Arc implied weighted average remaining life by asset class (years).....	5
Figure 8.2: Arc implied average remaining life by asset group per route (years).....	6
Figure 8.3: ERA depreciation profile and capital charges over time	11
Figure 8.4: ERA depreciation profile from single asset group and route-asset approaches	13
Figure 8.5: ERA depreciation profile from single asset and route-asset approaches for Avon Yard to West Merredin route	13
Figure 8.6: ERA depreciation profile from single asset and route-asset approaches for all routes	14