

REDACTED VERSION

The Pilbara Infrastructure

Floor and Ceiling Cost Determination for the route subject to Brockman Iron's Access Proposal dated 15 May 2013

September 2013

Economic Regulation Authority

WESTERN AUSTRALIA

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FINAL DETERMINATION

1. On 23 May 2013, The Pilbara Infrastructure Pty Ltd (**TPI**) submitted an initial determination of floor and ceiling costs for a route along the Port Hedland to Cloudbreak mine section of its railway.
2. TPI's determination was provided pursuant to clause 10(2) of Schedule 4 of the *Railway (Access) Code 2000 (WA)* (**Code**), in response to an access proposal submitted by Brockman Iron PL (**Brockman**) (**Brockman's Access Proposal**).
3. In this determination by the Authority, TPI's determination is referred to as 'TPI's proposed floor and ceiling costs'. The Authority has agreed, pursuant to section 50(3) of the Code, to TPI's request that TPI's proposed floor and ceiling costs remain confidential. Accordingly, TPI's proposed floor and ceiling costs have not been published on the Authority's website.
4. TPI's proposed floor and ceiling costs have been assessed by the Authority in accordance with the relevant provisions of the *Railways (Access) Act 1998 (WA)* (**Act**) and the Code.
5. The Authority has considered relevant submissions on TPI's proposed floor and ceiling costs made by TPI and other interested parties in response to public consultation.
6. Pursuant to clause 10(3) of Schedule 4 of the Code, the Authority does not approve TPI's proposed floor and ceiling costs provided to the Authority on 23 May 2013 and has made the following six (6) determinations in respect of TPI's proposed floor and ceiling costs. The Authority's determined Floor and Ceiling Costs to apply to the route sections relevant to Brockman's Access Proposal are shown in Table 3.

List of Determinations

Determination 1

The Authority has determined floor and ceiling costs to apply to those route sections of TPI's railway which are subject to Brockman's access proposal (the relevant route sections) on the basis of the Modern Equivalent Asset (**MEA**) specification shown at Table 1, [REDACTED]

Determination 2

The Authority has determined the Gross Replacement Values (**GRV**) attributable to the relevant route sections as shown in Table 2 in this determination.

Determination 3

The Authority has determined floor and ceiling costs to apply to the relevant route sections using a real pre-tax weighted average cost of capital (**WACC**) value of 9.76 per cent, in place of [REDACTED]

Determination 4

The Authority has determined annualised capital costs for the relevant route sections on the basis of the economic lives shown in Appendix A of TPI's Costing Principles.

Determination 5



Determination 6

The Authority does not approve TPI's proposed determination of its costs as provided to the Authority on 23 May 2013. The Floor and Ceiling Costs which the Authority has determined will apply to the relevant route sections are shown in Table 3. These costs are current as at 1 July 2013. The Floor and Ceiling Costs proposed by TPI are shown in Table 4.

REASONS FOR THE FINAL DETERMINATION

Background

7. On 15 May 2013, Brockman submitted an access proposal to TPI.
8. The route the subject of Brockman's Access Proposal is described as being between chainages 23 km and 219.5 km, as measured from Port Hedland. The route is comprised of two sections, existing either side of chainage 174.875 km, which is where the 'Solomon Spur' intersects with the Port Hedland to Cloudbreak line.
9. On 23 May 2013, TPI submitted its determination of floor and ceiling costs for the route subject to Brockman's Access Proposal.
10. As TPI's proposed floor and ceiling costs was provided to the Authority in response to the submission of an access proposal, clause 10(3) of Schedule 4 of the Code requires the Authority to either approve TPI's determination or, if not, to itself determine the relevant costs. The Authority is required to give approval or make its determination no later than 30 days after:
 - TPI submits its proposed floor and ceiling costs, or
 - approval is given by the Authority, for the purposes of section 10(1) of the Code, for negotiations to proceed.
11. TPI was of the view that provision of access to the proponent would involve the provision of access to railway infrastructure to an extent that may in effect preclude other entities from gaining access to that infrastructure, and applied to the Authority for a decision to be made under section 10(1) of the Code regarding the approval of

negotiations for access. The application was made in accordance with section 11(2) of the Code. The Authority issued and published its final decision in relation to this matter on 14 August 2013.

Legislative Considerations

Code

12. Schedule 4 of the Code sets out the provisions relating to prices to be paid for access. Clauses 7 and 8 of Schedule 4 prescribe the floor and ceiling price tests.
13. In clause 7 the floor price test provides that an operator who is provided with access must pay an amount not less than the incremental costs resulting from its operations on that route and use of that infrastructure.
14. In clause 8 the ceiling price test provides that an operator provided with access must pay an amount no more than the total costs attributed to that route and associated infrastructure.
15. The results of these tests form a price range to guide negotiations of the access tariff.
16. Pursuant to clause 10(1) of Schedule 4 of the Code, where an access proposal has been made and the Regulator has not determined costs under clause 9, the railway owner is to determine floor and ceiling costs referred to in clauses 7 and 8 of Schedule 4 of the Code that are relevant to an access proposal in accordance with the costing principles for the time being approved or determined by the Regulator under section 46.
17. The costs approved or determined by the Regulator under clause 10(3) in respect of an access proposal are the costs that are to apply under clauses 7 and 8 for the purposes of the proposal.


Act

18. In making its decision under clause 10(3) of Schedule 4 of the Code, the Authority must take into account the following matters outlined in section 20(4) of the Act:
 - (a) the railway owner's legitimate business interests and investment in the railway infrastructure;
 - (b) the railway owner's costs of providing access, including any costs of extending or expanding the railway infrastructure, but not including costs associated with losses arising from increased competition in upstream or downstream markets;
 - (c) the economic value to the railway owner of any additional investment that a person seeking access or the railway owner has agreed to undertake;
 - (d) the interests of all persons holding contracts for the use of the railway infrastructure;
 - (e) firm and binding contractual obligations of the railway owner and any other person already using the railway infrastructure;
 - (f) the operational and technical requirements necessary for the safe and reliable use of the railway infrastructure;
 - (g) the economically efficient use of the railway infrastructure; and

- (h) the benefits to the public from having competitive markets.

Floor and Ceiling Costs

19. The Act and the Code establish a framework for negotiation of access to regulated railways in Western Australia. The Code does not prescribe exactly how negotiations are to be conducted or the specific terms and conditions to be included in an access agreement. The parties are free to negotiate terms, including price, outside the Code, with only limited exceptions in relation to safety, train management and train path policy. Where negotiations under the Code fail, parties can obtain a binding determination through arbitration.
20. To assist in negotiations on the price of access, floor and ceiling prices are determined under Schedule 4. These prices form the lower and upper limits for the negotiation of access charges. The establishment of a regulated price band allows for price discrimination between access seekers.
21. Clause 10 of Schedule 4 of the Code requires TPI to determine floor and ceiling costs in accordance with its Costing Principles. TPI's Costing Principles which were approved by the Authority in May 2013, pursuant to section 46 of Part 5 of the Code, provide details on the manner in which TPI's floor and ceiling costs are to be formulated.
22. As required by clause 10(2) of Schedule 4 of the Code, TPI has submitted proposed floor and ceiling costs as described in clauses 7 and 8 of Schedule 4, that are relevant to Brockman's Access Proposal. However, it is important to note that the Authority does not determine prices in respect of a particular proposal. Prices are negotiated between the railway owner and the proponent subsequent to the approval or determination of costs by the Authority. The Authority does not have a role in establishing specific access prices, except where requested to provide an opinion on the fairness of prices, as described in Section 21 of the Code.
23. The role of the Authority in relation to the determination of floor and ceiling costs is to either approve TPI's proposed floor and ceiling costs determination of costs, or to make its own determination of costs, as described in clause 10(3) of Schedule 4 of the Code. In deciding whether to approve TPI's proposed floor and ceiling costs or in making its own determination of those costs, the Authority must take into account:
 - a) the matters outlined in section 20(4) of the Act; and
 - b) the object of the Act and the Code to encourage the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations as set out in section 2A of the Act.
24. The floor and ceiling costs approved or determined by the Authority represent the minimum and maximum recoverable revenue in respect of the relevant route sections. This means that the ceiling cost is the maximum revenue recoverable by TPI from all operators and all other entities, including itself, on the relevant route.
25. The floor cost is determined by the total of incremental costs resulting from the combined operations on the relevant route and use of the associated infrastructure of all operators and other entities and the railway owner. "Incremental costs" is defined in clause 1 of Schedule 4 of the Code, in relation to an operator or group of

- operators, as the operating costs and, where applicable, the capital costs and the overheads attributable to the performance of the railway owner's access-related functions whether by the railway owner or an associate, that the railway owner would be able to avoid in respect of the 12 months following the proposed commencement of access if it were not to provide that access.
26. The ceiling cost is derived from the total costs attributable to the section of a route and use of the infrastructure. "Total costs" is defined in clause 1 of Schedule 4 of the Code as the total of all operating costs, capital costs and overhead costs attributable to the performance of the railway owner's access-related functions, whether by the railway owner or an associate.
27. The capital cost components of the floor and ceiling costs and the approach to estimating these costs are not based on actual costs or on the existing network specification but rather are based on the hypothetical Gross Replacement Value (**GRV**) of the railway infrastructure, where GRV is calculated as the lowest current cost to replace existing assets with assets that –
- a) have the capacity to provide the level of service that meets the actual and reasonably projected demand; and
 - b) are, if appropriate, modern equivalent assets (**MEA**).¹
28. Further, clause 4 of Schedule 4 provides that the costs referred to in Schedule 4, including the capital costs included in the floor and ceiling costs, are intended to be those that would be incurred by a body managing the railways network and adopting efficient practices applicable to the provision of railway infrastructure, including the practice of operating a particular route in combination with other routes for the achievement of efficiencies.
29. Section 2 of the Code defines a "route section" as the sections of the railways network into which the network is divided for management and costing purposes. For the purposes of this determination, and as approved by the Authority on 22 May 2013, TPI's Costing Principles details six route sections (Costing Principles, Appendix C "Route sections"), including the following two route sections:
- The route section from chainage 219.5 km to chainage 174.875 km, measured from Port Hedland. This route section is referred to as Section 3 in this determination.
 - The route section from chainage 174.875 km to chainage 23 km, measured from Port Hedland. This route section is referred to as Section 5 in this determination.
30. The two route sections referred to above correspond in total to the route relevant to Brockman's Access Proposal.
31. 

¹ This is described in detail in clause 2 of Schedule 4 of the Code.

32. The two route sections referred to in TPI's Key Physical's Summary correspond in total to the route relevant to Brockman's Access Proposal, and are contiguous route sections. The Authority has assessed TPI's proposed floor and ceiling costs on the basis that the proposed costs relate to route sections which would be constructed on an alternative alignment were they built as stand-alone replacements for the two route sections described in TPI's Costing Principles.
33. The Authority's determination of costs applies to the two route sections as described in TPI's Costing principles and in Brockman's Access Proposal.

INFORMATION USED BY THE AUTHORITY

Consultants used by the Authority

34. To assist the Authority in making its determination, the Authority engaged a consultant, AECOM, to review TPI's proposed floor and ceiling costs and public submissions, and to provide advice to the Authority.

Public Consultation

35. On 27 May 2013, and in accordance with clause 11(1) of Schedule 4 of the Code, the Authority issued a notice calling for submissions from interested parties on TPI's proposed floor and ceiling costs. The closing date for public submissions was 11 June 2013.
36. Three public submissions were received, from:
 - Brockman Mining Australia Pty Ltd (**Brockman Mining**);
 - Flinders Mines Ltd (**Flinders Mines**); and
 - Aurizon Holdings Ltd (**Aurizon Holdings**).
37. These submissions were published on the Authority's website on 27 June 2013.
38. TPI did not provide a submission to the public consultation process.

Aurizon Holdings and Flinders Mines Submissions

39. The Aurizon Holdings submission commented on the lack of transparency resulting from TPI's claim of confidentiality over its proposed floor and ceiling cost calculations, and recommended that the Authority undertake a clause 9 determination of the entire TPI railway network.
40. The Flinders Mines submission also commented on the lack of transparency resulting from the Authority's decision to keep TPI's proposed floor and ceiling costs confidential. Whilst the Flinders Mines submission provided some projected cost outcomes based on material published by the Authority in 2011 (relating to a floor and ceiling cost assessment of route sections comprising the original Port Hedland to Cloudbreak line), the analysis was limited to this historical material and was not consistent with the approved Costing Principles. Therefore, the Authority did not

place any weight on Flinders Mines submission for the purposes of determining current engineering and cost estimation issues.

Brockman Mining Submission

41. The Brockman Mining submission provided costings for a modern heavy haul (120 mtpa) railway specified by Brockman Mining in its submission. The Brockman Mining submission provides some relevant comments on costs proposed by TPI under the following three headings:
 - TPI failure to provide costs for proposed access
 - TPI failure to provide Costing Model or supporting information
 - Factors to be considered in an assessment of costs
42. Under the first heading of its comments on costs, “TPI failure to provide costs for proposed access”, Brockman Mining submitted that TPI has not provided floor and ceiling costs for the proposed access. In this respect, Brockman Mining says that the Code requires floor and ceiling costs to be provided for the proposed date of access.
43. The Authority does not agree that the ceiling costs required to be provided by TPI are costs for the relevant route from the proposed date of access. The Authority is aware that Brockman has proposed operations on TPI’s railway from 2016.
44. Section 9(1)(c)(i) of the Code requires TPI to provide Brockman with the floor price and the ceiling price for the proposed access. Section 9(1) does not require TPI to provide this information to the Authority. The Authority is not required to make a decision or determination in relation to those prices or the currency of those prices.
45. The Authority notes that the Code requires TPI, at clause 10(2) of Schedule 4, to provide the Authority with its determination of costs on which the prices referred to in section 9(1)(c) of the Code are calculated. It is possible to use current costs to inform a calculation of future prices.
46. Clause 1 of Schedule 4 of the Code defines incremental costs as costs which the railway owner would avoid in respect of the 12 months following the proposed commencement of access should access not occur. Incremental costs are used to determine a floor cost.
47. The calculation of all other classes of costs including operating, capital and overhead costs are described in Schedule 4 of the Code as calculations of current costs. The calculation of annuities is required by clause 2 of Schedule 4 of the Code to be by way of applying a current WACC to a GRV, which is described as the lowest current cost to replace existing assets.
48. The Authority considers that the costs required to be determined by TPI, and to be provided to Brockman and the Authority as the basis for calculation of ceiling prices for the proposed access, must be current costs. These are costs current at 1 July 2013.
49. Also under the first heading of its comments on costs, “TPI failure to provide costs for proposed access”, Brockman Mining submitted that TPI should, in its capital cost valuation, include the infrastructure to be provided by TPI’s current expansion, and provide an explanation of the basis of the demand projection on which TPI is undertaking the current expansion as well as a demonstration of TPI’s commitment to the expenditure.

50. Contrary to the inference in Brockman Mining's submission, the GRV estimate provided by TPI includes the infrastructure to be provided by TPI's current expansion, and is TPI's (proposed) determination of the lowest current cost to replace existing assets with assets that have the capacity to provide the level of service that meets the actual and reasonably projected demand, as required by clause 2 of Schedule 4 of the Code.
51. The Authority acknowledges that this is not observable as the information publicly available does not indicate the railway specification proposed by TPI. The Authority also notes TPI's Costing Principles indicate, at section 3.2.1, that if TPI seeks to include the costs of additional infrastructure to meet projected demand, TPI will demonstrate the basis of that demand projection and the commitment to any capital expenditure, [REDACTED].
52. [REDACTED]
53. Under the second heading of its comments on costs, "TPI failure to provide Costing Model or supporting information", Brockman Mining submitted that the TPI Costing Principles states that TPI will provide its costing model with its assessment of costs, and states that the costing model was not provided to Brockman, or to the Authority as far as Brockman Mining is aware.
54. The Authority notes that section 2 of the Costing Principles indicates that TPI will provide a determination of costs in accordance with clauses 9 and 10 of Schedule 4 of the Code, and that cost determinations will include a costing model prepared in accordance with the Costing Principles.
55. The Authority notes that, at clause 10(2) of Schedule 4, the Code distinguishes between the provision of costs to the proponent as described in section 9 of the Code and the provision of the determination of costs to the Regulator (the Authority) at clause 10(1) of Schedule 4. The Authority notes that there is no provision in the Code for the provision of the latter determination of costs to the proponent or other parties.
56. Under the third heading of its comments on costs, "Factors to be considered in an assessment of costs", Brockman Mining submitted that certain principles outlined in clause 13 of Schedule 4 of the Code should apply to the determination of floor and ceiling costs. The Authority notes that the clause 13 guidelines are incorporated in TPI's Costing Principles approved by the Authority under section 46 and to which the Authority has had regard in making its determination. Brockman Mining's submission includes a section headed "Brockman Mining's assessment of costs for the route". In this section, Brockman Mining explains that its own costing does not include infrastructure equivalent to that currently under construction, due to a lack of available detail on the current expansion project. Brockman Mining submits that the Authority is better placed to assess the replacement value of the infrastructure that is the subject of the current expansion project, and that the Authority should assess such costs as part of its determination.
57. This determination by the Authority is of costs associated with the replacement value of the relevant sections of the TPI railway, [REDACTED]
[REDACTED]

58. The costing provided by Brockman Mining is for a railway of 120 million tonne per annum (**mtpa**) capacity with track length of 234 kilometres. [REDACTED]
59. Brockman Mining states that, with regard to freight task on the railway, it has not been provided with any evidence or substantive information regarding Fortescue Metal Group's (**FMG**) statements that they will export 155 mtpa.
60. Brockman Mining has provided quantities for many items as per-kilometre averages. Some items, such as level crossings, buildings and access roads are not explicitly included in Brockman Mining's model, and it is unclear if these have been included within the scope of other items.
61. AECOM has provided the following advice in relation to some major cost items in Brockman Mining's submission:
- the unit costs of major track materials are broadly consistent with the range of probable costs;
 - the unit costs for bridges, signalling and communications are low and outside the range of probable costs; and
 - the unit costs of earthworks and culverts cannot be assessed on the basis of available information.
62. The Authority notes that Brockman Mining proposes that indirect costs include only a 20 per cent margin for Design, Construction and Project Management (**DCPM**) fees, and that no other allowances are made for other indirect cost items. Brockman Mining's costing does not include an amount for land rehabilitation.
63. The Authority notes the construction period assumed by Brockman Mining for the purposes of calculating financing costs associated with the railway specified by Brockman Mining is 27 months.
64. Brockman Mining has calculated operating costs associated with its specified railway based on historical information relating to TPI's initial railway from Port Hedland to Cloudbreak, with an additional nominal allowance of \$1,000,000 for overheads.
65. Brockman Mining's submission includes a section comparing inferred pricing on a per tonne basis between the information provided by TPI, Brockman Mining's own costings, prices for other railways, and publicly available details of other arrangements entered into by TPI.

Submission in response by TPI

66. [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

- [Redacted]
- [Redacted]
- [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

■ [Redacted]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

Notice of Potentially Adverse Material

- 80. [REDACTED]

TPI's Costing Model

- 81. In order to meet the requirements of section 2 of its Costing Principles, TPI has submitted a costing model which contains its proposed floor and ceiling costs for the route sections of its railway network relevant to Brockman's proposal.
- 82. Although section 2 of TPI's Costing Principles indicate that TPI will include a costing model with its determination of costs under 10 of Schedule 4, TPI has requested the Authority keep all details of its model confidential on the basis that it contains confidential and commercially sensitive material
- 83. In accordance with section 50(3) of the Code, the Authority has agreed to the request from TPI to keep all details contained in its costing model confidential.
- 84. [REDACTED]

[REDACTED]

[REDACTED]

DISCUSSION OF COST ELEMENTS

Level of Service and Modern Equivalent Asset Standard

86. TPI's Costing Principles 'Definitions', at page 4, defines the Modern Equivalent Asset (**MEA**) as:

An optimised network that is re-configured using current modern technology serving the current load with some allowances for reasonably projected demand growth for up to three years into the future. The MEA excludes any unused or underutilised assets and allows for potential cost savings that may have resulted from technological improvement.

87. Replacement values must reflect the MEA value, if appropriate, and current market tested unit rates for materials.

88. [REDACTED]

89. [REDACTED]

90. [REDACTED]

91. [REDACTED]

[REDACTED]

Table 1 – MEA Standard

Parameter	TPI Standard/Specification
Track gauge	[REDACTED]
Axle load (tonnes)	[REDACTED]
Rail weight (Kg/m)	[REDACTED] [REDACTED]
Sleeper type, pattern and spacing	[REDACTED] [REDACTED] [REDACTED]
Ballast type and minimum depth (mm)	[REDACTED] [REDACTED]
Fasteners	[REDACTED]
Formation width	[REDACTED]
Target maximum operating speed	[REDACTED] [REDACTED]
Horizontal Curve Radii	[REDACTED]
Maximum Gradient	[REDACTED]
Train Configuration	[REDACTED]
Turnouts	[REDACTED]

93.

[REDACTED]

94. If, in the course of any negotiations subsequent to this determination, it is agreed between TPI and Brockman that an extension or expansion is required in order to accommodate Brockman's proposed operations on the TPI network, then this determination of costs will provide a basis for negotiations under the Code on price, in conjunction with separate negotiations around the funding of any required expansion.

95. If an agreement under the Code is reached as a result of any such negotiation, then the costs for the relevant sections of TPI's network will need to be re-determined on completion of the agreed expansion to enable TPI to incorporate the costs associated with the expansion in order to be able to recover those additional costs

services. These are defined as railway infrastructure under section 3 of Part 1 of the Code and include:

- land;
- railway track and associated track structures;
- tunnels and bridges;
- train control systems, signalling systems and communication systems;
- associated plant, machinery and equipment.

99. TPI's Costing Principles (section 3) undertakes not to include assets that support operating functions in the asset base for capital cost calculations. TPI's Costing Principles indicates that such assets will be included in the operating cost or overhead costs calculations, as appropriate.
100. TPI's Costing Principles (section 3.2.1) indicates a maximum allowance for DCPM costs of 20 per cent of the total cost of the infrastructure, and based on an economic life of 50 years.
101. TPI's Costing Principles (section 3.2.1) nominates the WACC as determined by the Authority to be used as the interest rate for assessing the financing (interest) charges capitalised over the construction period. A 50 year economic life assumption is used in amortising financing costs.

102.

[REDACTED]

103.

[REDACTED]

AECOM advice and treatment of indirect costs

104. AECOM has provided an assessment of some capital items (and associated GRV) with reference to confidential information provided by TPI. These assessments are based on industry standards or recent project experience. Assessments appear under separate headings for each category of capital item below.
105. Items subject to capital cost estimates are broken down by direct and indirect costs. AECOM have assessed direct costs as contractor's direct costs and contractor's indirect costs, and indirect costs as contingencies, DCPM, temporary construction and camps.
106. AECOM's assessments of direct and indirect costs appears under relevant capital item headings in this section. General observations relating to indirect costs appear directly below.

INDIRECT COSTS - CONTINGENCIES

107.

[REDACTED]

108. AECOM has advised that the extent of contingencies reduce as the design development of a project progresses. That is, that the requirement for contingencies

will diminish as the design unit quantities become more certain towards the completion of construction. The Authority considers the MEA specification of a replacement railway to be a well-developed design.

109. [REDACTED]

110. [REDACTED]

[REDACTED]

[REDACTED]

INDIRECT COSTS – DESIGN CONSTRUCTION PROJECT MANAGEMENT (DCPM) MARGIN

113. [REDACTED]

[REDACTED]

115. [REDACTED]

116. [REDACTED]

117. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

121. [REDACTED]

122. [REDACTED]

INDIRECT COSTS – TEMPORARY CONSTRUCTION AND CAMP COSTS

123. [REDACTED]

- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]

[REDACTED]

[REDACTED]

126. [REDACTED]

[REDACTED]

128. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

132. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

147.

[REDACTED]

- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]
- | [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

152. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

153.

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

159. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

160. [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

165. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

166. [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

167. [REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

173. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

174. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

175. [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

178. [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

179. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

180. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

181. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

185. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

186. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

190. [REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

192. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

193. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

199.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

206. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

207. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

211. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

[REDACTED]

212. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

219. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.

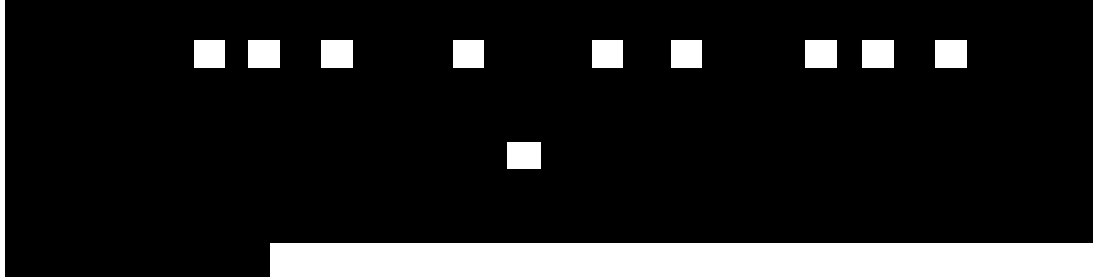
[REDACTED]

220. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

222.



[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

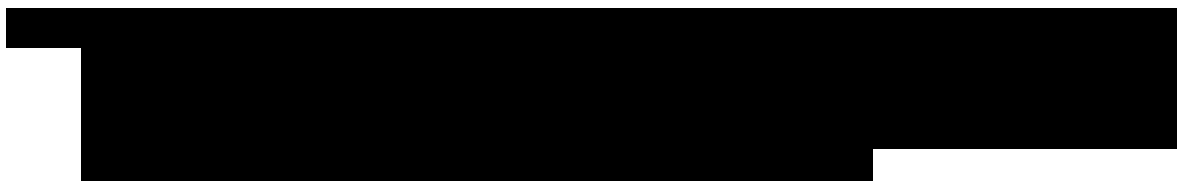
225. The breakdown of the Authority's determination of GRV for [REDACTED] by route section is shown in Table 2 at the end of this section.



226.



[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]



229. [Redacted]

[Redacted]

[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]

231. The breakdown of the Authority’s determination of GRV for [Redacted] by route section is shown in Table 2 at the end of this section.

[Redacted]

232. [Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

[Redacted]

[Redacted]

[Redacted]

236. The calculation of the [Redacted] is shown in Table 2 at the end of this section.

237.

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

242. The Authority's determination of costs for [REDACTED], is shown in Table 2 at the end of this section.

[Redacted]

243. [Redacted]

[Redacted]	[Redacted]
[Redacted]	[Redacted]
[Redacted]	[Redacted]

244. [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

258. [REDACTED]

259. The Authority's determination of costs for [REDACTED], is shown in Table 2 at the end of this section.

[REDACTED]

260. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

265. The Authority's determination of [REDACTED], is shown in Table 2 at the end of this section.

[REDACTED]

266. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

267.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

272. The Authority's determination of [REDACTED] is shown in Table 2 at the end of this section.

Annualised Capital Costs

TPI's Costing Principles

273. Section 3.2.4 of TPI's Costing Principles outlines the method that TPI will use to calculate annuities associated with replacement values of capital items. TPI has undertaken to use the PMT formula provided by MS Excel with the following inputs:

- Rate: to be set at the relevant WACC as defined in the Code
- Nper: expressed in years and based on the relevant economic life of the track sections
- Pv: the GRV of the relevant route section
- Fv: the salvage value, if any, which remains at the end of economic life
- Type: to be set as an 'annuity due' by inputting "1"

274. Section 3.2.2 of TPI's Costing Principles states that the asset lives assumed by TPI will be based on the economic life of the infrastructure or the estimated lives of the individual assets based on MEA. Section 3.2.2 defines the economic life of the railway as the shorter of the economic life of the mines served by the railway infrastructure and the technical life of the railway.

275. TPI's Costing Principles state that the economic life assumption used to calculate capital costs will be based on the economic life of assets listed in Attachment A of the Costing Principles, unless a shorter life is adopted due to the assets servicing a limited time project, and that the Authority will be advised as to the reasons for any shorter life assumption.

276. In relation to the WACC, section 3.2.3 of TPI's Costing Principles "Rate of Return", states as follows:

In accordance with the Code, the WACC as applied to TPI will be determined by the ERA and reviewed (by the ERA) each year at 30 June as applied to TPI.

TPI's Proposal

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Authority's Assessment

281. Clause 3 of Schedule 4 of the Code sets out the process by which the Authority is to determine a WACC value as at 30 June in each year.

282. [Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

³ [Redacted]

[Redacted]

289.

[Redacted text block]

290.

[Redacted text block]

⁵ http://www.artc.com.au/library/AS_HV_Undertaking_2011.pdf

⁶ 6 266 million tonnes exported at 80.8 million tonnes per annum implies an 80 year export task.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

300. [Redacted]

[Redacted]

[Redacted]

[Redacted]

Final Determination

Determination 3

The Authority has determined floor and ceiling costs to apply to the relevant route sections using a real pre-tax weighted average cost of capital (**WACC**) value of 9.76 per cent, [REDACTED]

Determination 4

The Authority has determined annualised capital costs for the relevant route sections on the basis of the economic lives shown in Appendix A of TPI's Costing Principles.

Operating and Overhead Costs

303. TPI has provided proposed costs in this category at the network level and has allocated these to route sections 3 and 5 on the basis of the allocations nominated in its Costing Principles.

TPI's Costing Principles – Operating Costs

304. TPI's Costing Principles (section 4) state that operating costs are costs directly associated with operational management of the network. They reflect a centralised train control service, track maintenance equipment, signals/control systems and a train/track monitoring system.

305. TPI's Costing Principles (section 4) also state that operating costs include network management, comprising operation of the train control centres, operation of signal cabins and centralised train control systems and operation of telecommunication facilities.

306. TPI's Costing Principles (section 4.2) state that TPI will test whether the operating costs used for determining floor and ceiling costs are efficient in the following manner:

9

- benchmarking will be used where it is available and comparable;
 - for certain processes and activities, unit costs from competitive tendering may be used;
 - if the maintenance programs are based on accepted industry standards for maintenance which describe the scope and frequency of the activity then this may be considered to be efficient;
 - actual costs may be used where consumption and scope are efficient; and
 - actual costs may also be used where the costs come from a competitive market or are regulatory costs.
307. TPI's Costing Principles (section 4.2) state that in measuring efficiency, TPI recognises that these costs change over time especially as a result of innovation and technological change.
308. TPI's Costing Principles (section 4.3) state that track and signalling maintenance costs are directly allocated to route sections based on the nature and population of the infrastructure and centralised train control costs will be apportioned directly to routes based upon actual train control resources managing traffic over each route.
309. TPI's Costing Principles (section 4.3, Appendix B) state that the allocation of non-sector specific operating costs to route sections will be performed in accordance with the allocation rules using Gross Tonne Kilometres (**GTKs**) or train numbers. Train numbers will be linked to network management functions and the management of maintenance related functions will be linked to GTKs.
310. TPI's Costing Principles (section 4.1) state that TPI has developed a track maintenance model which calculates the cost of maintaining the track infrastructure with the following assumptions:
- the track infrastructure is new at year 1 and is maintained to realise the defined economic life of components of the asset;
 - the infrastructure maintenance levels and the frequency of the activities are deemed to comply with the Australian Standard AS4292 Parts 1 and 2 which specify safety requirements of the Railway Safety Management System;
 - the maintenance regime is broadly classified in routine maintenance and cyclical maintenance;
 - there are two major activity classifications within routine maintenance, namely routine inspections (include patrolling, on-train inspections, track condition monitoring, defined event inspections by patroller and structures inspections) and maintenance activities which typically follow the inspection process, routine maintenance being therefore a corrective action taken as a follow up to routine inspections; and
 - cyclical maintenance represents tasks that are undertaken at regular intervals which are necessary to achieve the expected asset life (e.g. track resurfacing, rail grinding, ballast top up and cleaning, rail defect removal, firebreaks, scrub slashing, drainage, access roads and road seal on level crossings to meet operational and safety requirements).

311. Section 4.1 of TPI's Costing Principles states that, as the level of maintenance activity varies over the life of the asset, the net present value of the projected stream of maintenance costs that occurs over the life of the asset is calculated by a track maintenance model to derive an average annual maintenance charge over the life of the asset.
312. TPI states in its Costing Principles (section 4.1) that a signal and communications maintenance model is incorporated into the Costing Model, and that routine maintenance of signalling and communications is based on industry accepted inspection regimes. It includes specified periodical inspections and procedures (including testings) and responses to faults. Cyclical maintenance is significantly less important for signalling and communications and includes component rebuilds to achieve economic life.
313. Appendix B of TPI's Costing Principles indicates that signalling and communication costs are allocated to route sections according to train numbers.
314. Section 4.1 of TPI's Costing Principles states that major periodical maintenance is not included in maintenance activities that are required to maintain MEA infrastructure on the understanding that it is an asset renewal program to extend the economic life of the assets.
315. Section 3.2.4 of TPI's Costing Principles stipulates that TPI will include an allowance for working capital as an operating cost. The rationale for inclusion of working capital is described as compensation for the effects of the form of the function used to calculate capital annuities.
316. In section 3.2.4 of its Costing Principles, TPI has undertaken to use the PMT formula provided by MS Excel which calculates annuities on the basis of the start of each period (by setting "type" to value 1). Section 3.2.4 states:

This formula calculates the costs at the beginning of the period which does not reflect the payment cycle for access charges. The appropriate methodology is to calculate the change monthly in arrears but this is not possible under the definition of the Code where the economic life for the GRV of the railway infrastructure is to be expressed in years as the number of periods. To allow for this, TPI will include in its operating costs a proxy for the working capital required because of the effects of this formula.
317. TPI's Costing Principles does not indicate a method by which a working capital allowance will be calculated or allocated to route sections.

Costing Principles – Overhead Costs

318. TPI's Costing Principles (Section 5.1) defines overheads as overhead costs attributable to the performance of TPI's access-related functions whether by TPI or FMG. Although it is a separate legal entity with an overhead structure which relates to its business of access provision (TPI overheads), TPI also sources corporate and related functions from FMG (corporate overheads).
319. In its Costing Principles (Appendix B), TPI has nominated overheads as including corridor management, access compliance, information technology (IT) and software costs, motor vehicle costs, office accommodation and support services, accreditation costs and TPI management costs.
320. In its Costing Principles (Appendix B), TPI has nominated corporate overheads as including legal and public relations costs, payroll, human resources,

accounting/finance costs, treasury and insurance management, corporate procurement and governance.

- 321. It is stated in TPI's Costing Principles (section 5.1) that only those overheads attributable to activities related to the Code's definition of railway infrastructure (section 2 of Part 1 of the Code) will be included in the floor and ceiling costs determination.
- 322. The TPI Costing Principles (Appendix B) nominate two allocators for overheads. GTKs are to be used to allocate costs which vary more in quantum due to volumes moved, and train numbers are to be used to allocate costs which vary more in quantum due to the number of train movements.

TPI's Proposal – Operating and Overheads Costs

323. [REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

- [Redacted]

[Redacted]

- [Redacted]

[Redacted]

[Redacted]

- [Redacted]

[Redacted]

Authority's Assessment

331. [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

Final Determination

Determination 5

[Redacted]

Floor Costs

335. [Redacted]
336. Section 3.2.4 of TPI's costing principles allows for TPI to include working capital as a class of operating cost to compensate for the discrepancy between the payment cycle implied by the required annuity formula (which is annual) and the usual access payment cycle (which is monthly).
337. [Redacted]

338. Schedule 4, clause 1 of the Code defines incremental costs, in relation to an operator or group of operators, as:
- (a) the operating costs; and
 - (b) where applicable –
 - (i) the capital costs; and
 - (ii) the overheads attributable to the performance of the railway owner's access-related functions whether by the railway owner or an associate,
- that the railway owner or the associate would be able to avoid in respect of the 12 months following the proposed commencement of access if it were not to provide access to that operator or group of operators;
339. The Code defines the floor price test in the following terms (at clause 7 of Schedule 4):
- An operator that is provided with access to a route and associated railway infrastructure must pay for the access not less than the incremental costs resulting from its operations on that route and use of that infrastructure.
- The total of –
- (a) the payments to the railway owner by –
 - (i) all operators; and
 - (ii) all other entities,
- that are provided with access to a route, or part of a route, and associated infrastructure (the route); and
- (b) The revenue that the railway owner's accounts and financial statements show as being attributable to its own operations on the route,
- must not be a sum that is less than the total of the incremental costs resulting from the combined operations on the route of all operators and other entities and the railway owner.
340. The Authority considers that the calculation of floor costs should be consistent with the definition of the floor price test shown in clause 7 of Schedule 4 of the Code, where it is prescribed that the sum of payments to the railway owner should not be less than the total of all incremental costs resulting from the combined operations of all operators on the route.
341. [REDACTED]
342. For the purposes of this determination, the Authority has decided that floor costs for the route subject to Brockman's Access Proposal will be calculated as the total of all current operating and overhead costs associated with all above-rail operations on the route.
343. There are means by which a floor cost defined in this way may be apportioned between operators and escalated to a future date if it is necessary to do so, for the purposes of calculating an incremental cost as defined in Schedule 4 clause 1 of the Code.
344. In this determination, the Authority defines the floor cost to be a nominal cost current for the 2013 - 2014 financial year.

Determination of TPI's Floor and Ceiling Costs

345. Based on the assessments outlined in the previous sections, the Authority's determination of floor and ceiling costs for the route sections relevant to Brockman's Access Proposal, to apply from 1 July 2013, is shown in Table 3 of this document (see below).
346. In making this determination, and in particular when exercising its discretions under the Code, the Authority has been mindful of the matters it must consider which are prescribed in section 20(4) of the Act, which include a range of conflicting objectives. Ultimately, the Authority's determination has involved a balancing of the section 20(4) objectives in a way that it believes best achieves the object of encouraging the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations, consistent with the object of the Act and the Code.
347. The Authority has been required to exercise its discretion in relation to a number of areas where inadequate information has been provided by TPI, or where time constraints associated with the legislative deadline for the making of this determination has impacted on the Authority's ability to obtain further information. In a number of instances, this discretion has been exercised in favour of TPI, and has resulted in an upside bias to the Authority's determination of costs. Examples of these aspects of the determination are:
- The acceptance by the Authority of [REDACTED], where a [REDACTED] [REDACTED] may have been attributed to GRV values. In particular, this applies to [REDACTED] costs, [REDACTED] costs, and the cost of [REDACTED] facilities such as a [REDACTED] facility and [REDACTED] facilities.
 - Acceptance of the capital costs associated with the [REDACTED] facility for the purposes of constructing the two route sections.
 - The acceptance of TPI's proposed [REDACTED] margin, in place of the [REDACTED] margin for [REDACTED].
348. The Authority has also accepted TPI's proposed [REDACTED] costs (with the exception of the calculation of [REDACTED] despite inadequate information being available to enable AECOM to fully verify the proposed costs. The Authority has accepted these costs on the basis that it would not be in the public interest or TPI's legitimate business interests to extend the review of these costs as such a review would be at the cost of additional time and consultants' expense to both TPI and the Authority.
349. On the other hand, the Authority's decisions to extend the [REDACTED] of the [REDACTED] beyond the [REDACTED] and to reduce the cost of TPI's [REDACTED] were guided by considerations in section 20(4)(g) and (h) of the Act, that is, the economically efficient use of the railway infrastructure and the benefits to the public from having competitive markets.
350. In making this determination the Authority is mindful that clause 12 of Schedule 4 of the Code allows it to re-determine TPI's floor and ceiling costs in respect of these route sections at any time if the Authority considers there may have been a material change in any of the circumstances that existed at the time this determination was made. Such circumstances may include the completion of further extension or expansion works by TPI, or changes in the level of general prices or asset-specific

prices, which occur between the date of this determination and the date of commencement of above-rail operations to which this determination applies.

Final Determination

Determination 6

The Authority does not approve TPI's proposed determination of its costs as provided to the Authority on 23 May 2013. The Floor and Ceiling Costs which the Authority has determined will apply to the relevant route sections are shown in Table 3. These costs are current as at 1 July 2013. The Floor and Ceiling Costs proposed by TPI are shown in Table 4.

Table 3 – ERA Determination of Floor and Ceiling Costs for Route Sections 3 and 5 of TPI's railway network as described in TPI Costing Principles Appendix C.

Section Name	Section 3	Section 5	Total Route
	\$	\$	\$
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
FLOOR COST	16 155 919	68 586 120	84 742 039
CEILING COST	64 073 279	252 828 535	316 901 814

Table 4 – TPI Proposed Determination of Floor and Ceiling Costs for Route Sections 3 and 5 of TPI's railway network.

Section Name	Section 3	Section 5	Total Route
	\$	\$	\$
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
FLOOR COST	13 817 552	59 595 090	73 412 642
CEILING COST	118 432 239	457 210 423	575 642 663