The Pilbara Infrastructure

Railways (Access) Code 2000

Costing Principles

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DEFINITIONS

Table 1: Glossary

Word/Term	Definition
Access Agreement	Means an agreement in writing under the Code between TPI and an entity for access by that entity.
Act	Means the Railways (Access) Act 1998.
Ceiling Price Test	Means an operator (or group of operators) that is provided with access to a route and associated railway infrastructure must pay for the access not more than the total costs attributable to that route and that infrastructure.
Code	Means the Railways (Access) Code 2000 established under the Act.
Contractor	Means a person or entity engaged by TPI to provide advice about or to perform part of its access related functions.
Costing Principles	Means the principles, rules and practices determined by the ERA in accordance with Section 46 of the Code.
Cyclical maintenance	Means tasks that are undertaken at regular intervals (e.g. annually or specific longer intervals) which are necessary to achieve the expected asset life. Tasks could include: • track resurfacing -rail grinding; calculation, ballast top up and cleaning, rail defect removal, and structures maintenance. • signalling and communications -servicing, component replacement and cleaning. • track -firebreaks, scrub slashing, drainage, access roads, road seal on level crossings; and • signalling and communications -upgrading of components and change out for detailed servicing.
Efficient Costs	Means those costs 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.
GRV	Means the gross replacement value of the railway infrastructure calculated as the lowest current cost to replace the existing assets with assets that: • have the capacity to provide the level of service that meets the actual and reasonably projected demand; and • are, if appropriate, MEA.
GTK	Means gross tonne kilometre.
MEA	Means modern equivalent asset, being an optimised network that is re-configured using current modern technology serving the current load with some allowances for reasonably projected demand growth 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.
MPM	Means major programmed maintenance activities which are, or are associated with, partial asset renewal to maintain functional condition of the infrastructure and which occur at intervals greater than one year.
Network Management	Means activities that are undertaken in the provision of train management. Functions include access management, train scheduling, operations planning, RAMS management, customer service and safe working management.
Overheads	Means overheads attributable to the performance of the railway owner's access-related functions whether by the railway owner or an associate.

Over-payment Rules	The Over-payment Rules are those rules determined by the ERA in accordance with Clause 47 (part 5) of the Code and deal with the circumstance of a breach of the ceiling test.
Rail Safety Act	Means the Rail Safety Act 1998.
RAMS	Means the Rail Access Management System computer system operated by TPI for the purpose of preparing Train consists and monitoring Train progress on the Network and generally for the purpose of Train Control, including for the provision of information relating to timetables, special train notices, temporary speed restrictions, and track warnings.
Route Section	Has the meaning defined in Appendix C of this Costing Principles document.
Routine Maintenance	Means regular and ongoing maintenance activities, which are required to meet specific levels of defined safety and operational standards and commences from day one of operation and is generally continuous for the life of the operation. There are two major activity classifications: Routine Inspections • Track – includes patrolling; track recording using on track recording technology, ultrasonic testing, site inspections; and structures inspections; and • Signalling and Communications includes programmed inspections and systems and equipment testing.
TPI	Means The Pilbara Infrastructure Pty Ltd
TPI Costing Model	Means the model that TPI use to calculate Ceiling costs and includes the associated models and data bases for: • the track and signalling and communications model which calculate the GRV of the infrastructure; • track and signalling/communications maintenance models; • the operating costs model; • the overhead and other costs allocation model; • track population data bases; • the usage model which records from RAMS the GTK usage and train movement by route section, and supporting detail for these models including unit rates, assumptions and sources of information as well as the physical characteristics of the infrastructure including distance and specifications.
TPI Rules	Means TPI's Rules issued in accordance with TPI's Safety Management Plan approved under Section 10 of the Rail Safety Act together with any amendments, deletions or additions made in accordance with the Safety Management Plan and all policies and notices issued by TPI for the purpose of ensuring the safe use of the Network.
WACC	Means the target long term weighted average cost of capital appropriate to the railway infrastructure expressed as an annual interest rate and determined by the ERA in accordance with Clause 3, Schedule 4 of the Code.

1. INTRODUCTION

The purpose of the Railways (Access) Act 1998 ("the Act") and the Railways (Access) Code 2000 ("the Code") is to establish a rail access regime that encourages the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations.

The Pilbara Infrastructure Pty Ltd (TPI) owns and operates a rail network and port terminal in the Pilbara region in Western Australia. TPI also provides above-rail services on this network. TPI is a wholly owned subsidiary of Fortescue Metals Group (FMG). TPI is responsible for providing access to the rail network.

The WA Rail Access Regime administered by the Economic Regulation Authority (ERA) applies to the below rail operations of TPI. The rail access regime is set out in the Act and the Code and the terms defined in the Act and the Code are adopted for the purposes of these Costing Principles. In accordance with section 46 of the Code, TPI, as railway owner, must prepare and submit Costing Principles to the ERA for approval.

These Costing Principles are:

- a statement of principles, rules and practices to be applied by TPI in the determination of floor and ceiling costs; and
- to define the manner in which TPI's accounts and financial records must be kept and presented so far as they relate to the determination of floor and ceiling costs.

These Costing Principles have been developed on the basis that they are a set of principles and that they will need to be supported by databases and costing models containing considerable detail, which will change from time to time.

The Code allows TPI to negotiate prices between the Floor and Ceiling and as such the Floor and the Ceiling costs only provide the lower and upper bound to potential final prices for access which will be established by negotiations (and if necessary arbitration).

Although this document only refers to the Costing Principles, TPI notes that Clause 13, Schedule 4 of the Code provides the Pricing Principles on which negotiated access prices under the Code are to be based.

The Over-payment Rules determined by the ERA under Part 5, Section 47 of the Code are linked to the Costing Principles in so far as application of the ceiling price test defined in Clause 8 of Schedule 4 of the Code is concerned. The Over-payment Rules, as determined, set out the methodology in dealing with overpayments where breaches of the ceiling price test have occurred.

The structure of this document is as follows:

- Section 2 – Determination of Costs
- Section 3 - Capital costs

- Section 4 –Operating costs
- Section 5 – Overhead costs
- Section 6 – Other matters
- Section 7 – Compliance and Review
- Appendix A – Economic Life of Assets
- Appendix B – Allocation of Operating Costs and Overheads
- Appendix C – Route Sections

2. DETERMINATION OF COSTS

TPI will provide an initial determination of costs when required in accordance with clauses 9 and 10 of Schedule 4 of the Code. Cost determinations will include a costing model, which will be prepared in accordance with these Costing Principles.

The Code refers to specific “routes” and defines a “route section” as a section of the railway network that has been divided for management and costing purposes. TPI will calculate floor and ceiling costs at the route section level, which will then aggregate to provide a total floor and ceiling for the “route” nominated by the access seeker. The route section for key parts of the network, which will be used in the application of these Costing Principles, is included as Attachment C. TPI will reassess route sections as the railway infrastructure is expanded and extended.

TPI will calculate total costs in accordance with the definition in Clause 1 Schedule 4 of the Code. Total costs will be calculated as the total of all:

(a) capital costs

(b) operating costs; and

(c) the overheads attributable to the performance of the railway owner’s access related functions whether by the railway owner or an associate.

3. CAPITAL COSTS

Capital costs are defined in Clause 2 of Schedule 4 of the Code. Capital costs include capital costs associated with land and capital costs associated with railway infrastructure.

3.1. Capital costs associated with land

Capital costs will be calculated to include amounts for the amortisation of:

(a) The costs incurred by TPI to acquire any interest in land; and

(b) Any other costs incurred by TPI in relation to the acquisition of any interest in land. (For example, costs in connection with Aboriginal heritage or native title issues or other transaction costs).

The capital cost associated with land and the methodology used by TPI for its calculation will be reviewed by the ERA as part of each floor and ceiling cost determination.

3.2. Capital costs associated with railway infrastructure

Capital costs will include an amount intended to reflect the cost of establishing and replacing infrastructure capacity over time. This amount will be an annuity calculated in respect of the value of the infrastructure assets, the appropriate rate of return and the economic life of assets, and will apply to all of the railway infrastructure owned by TPI that is defined as railway infrastructure under Part 1 of the Code, including:

- railway track, associated track structures, over- and under-track structures, supports (including supports for equipment or items associated with the use of a railway);
- tunnels and bridges;
- train control systems, signalling systems and communications systems;
- associated plant, machinery and equipment.

Railway infrastructure is taken to include any cuttings or embankments.

Assets which support operating functions will be included in the operating cost or overhead cost calculations as appropriate. Assets included in this category are motor vehicles, computers, printers, facsimile machines, photocopiers, system hardware and software, mobile and fixed communications, office furniture and equipment. The cost of these assets will be calculated on a net basis.

3.2.1. Gross replacement values

TPI will complete a valuation in accordance with the GRV methodology. To arrive at this value, assumptions will need to be made regarding:

- *Capacity of infrastructure* – TPI considers that the network as constructed can meet current and reasonably projected demand for all users taken together. If TPI seeks to include the costs of additional infrastructure to meet projected demand it will demonstrate:
  - the basis of the demand projection; and
  - a commitment to the capital expenditure.
- *Route optimisation* –TPI will assume that the optimised network is provided by the rail track within the existing corridor of the land and hence the route alignment is optimal and efficient.
- *Contributed assets* – there are at present no contributed assets on TPI's network. However, in future, it is possible that individual mines may contribute capital towards the construction of the network. In this case, such contributed capital will be included in the cost base for the purpose of calculating the GRV and the route section ceiling. The value of the contributed capital will be reflected as an equivalent annuity payment which is included in the revenue earned on the asset for the purpose of the ceiling price test. The cost of operating and maintaining contributed assets will also be included in the calculation of ceiling costs.
- *Greenfields* – For the purposes of calculating the GRV, the replacement cost calculations are to assume a greenfields site and hence costs related to constructing around rail traffic, surface restoration and other surface diversions are excluded from the GRV.
- *Modern equivalent assets (MEA)* – replacement values must reflect the MEA value, if appropriate, and current market tested unit rates for materials. The key steps required to complete a GRV estimate based on MEA are:
  - identify the route that the GRV is being calculated for;
  - assess the existing railway infrastructure specification to ensure that the MEA test is appropriate;
  - review asset databases to ensure the population of assets is correct;
  - confirm existing network capacity will meet current and reasonably expected future demand on the network;
  - confirm unit rates are based on efficient costs;
  - complete an analysis of each asset class to optimise the network to a MEA; and
  - calculate the current replacement cost GRV of the railway infrastructure using the MEA or existing asset specification if appropriate.
- *Unit Rates* – TPI will build unit rates into the Costing Model based on an independent engineering consultant's report. Where these rates have any adjustment for scale or scope or the impact of location, these assumptions will be included. The Costing Modelwill contain information on the source of data and the assumptions that are used in the model. In addition, TPI will identify and provide to the ERA unit rate information and assumptions that it considers can be released as part of the public consultation process for the ERA's

determination of the floor and ceiling costs.

- *Design, construction and project management fees* – TPI will apply design, construction and project management fees at a rate of 20% of the total cost of the infrastructure and based on an economic life of 50 years. Because TPI uses primary unit rates for establishing construction costs, it is appropriate to charge the full project management on the materials cost calculated for the infrastructure. In cases where such fees are included in unit rates, TPI accepts that the project management fee should be reduced to account for such charges, keeping total design, construction and project management fees in line with a 20% limit.

- *Financing charge during railway infrastructure construction* – consistent with the Code requirement that the GRV be applied as part of the calculation of the capital charge, TPI will include in the capital cost an allowance for its cost of capital and related financing fees and charges during the construction period. The WACC determined by the ERA will be applied to the construction cash flows to calculate the financing charge. Upon completion of construction, the interest calculation ceases. In determining the annuity payment attributed to such costs, a 50 year economic life assumption will be utilised.

- *Equity raising costs* – the GRV will include an estimate of the cost of raising equity capital. This will be calculated as an increment to the GRV based on the notional level of equity contained in the gearing assumption for the Authority's weighted average cost of capital calculation. The estimate will include all direct costs associated with raising equity finance, including the underwriter's commission and all other costs incurred by the issuer that are not part of the compensation to underwriters. These costs include filing fees, legal and accounting fees, and taxes.

Where it is necessary for TPI to escalate its actual costs, the escalators used will be in accordance with the nature of the costs involved.

3.2.2. Economic life

The assets lives assumed by TPI are based on economic life of the covered infrastructure (being the shorter of the economic life of the mines served by the railway infrastructure and the technical life of the railway infrastructure), or estimated lives of individual assets based on MEA.

In calculating a ceiling (and if appropriate a floor) cost, the economic life assumption underpinning the annuity payment calculation for these types of capital costs will be based on the economic life of assets listed in Attachment A unless a shorter life is adopted due to the assets servicing a time limited project. In assessing the life of a project serviced by the assets, TPI may have regard to the term of contractual arrangements that are entered into by the parties. The ERA will be advised as to the reasons for any shorter life assumption.

3.2.3. Rate of return

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.

3.2.4. Annuity

The annuity calculation provides a return on capital and implicitly provides for depreciation of the asset. TPI has adopted the methodology (applying the PMT formula) used in a Microsoft Excel spread sheet to calculate the annuity required. The MS Excel terminology for the Annuity formula (PMT) is described:

Rate of Interest:	set at the relevant WACC as defined by 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 end of economic life. When an asset achieves its full economic life, then the salvage value is to be set at zero.
Type:	set at the start of the period by inputting “1”.

This formula calculates the costs at the beginning of the period which does not reflect the actual payment cycle for access charges. The appropriate methodology is to calculate the change monthly in arrears but this is not possible under the definition in the Code where 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 the formula.

4. OPERATING COSTS

As the Code requires only efficient costs to be considered in the floor and ceiling tests, TPI will prepare operating costs based on the efficient cost of maintaining the MEA network. Factors TPI will consider include: the efficient cost test; definition of operating costs; and allocation of operating costs.

4.1. Definition of operating costs

TPI adopts the definition of operating costs contained in the Code. For the removal of doubt, operating costs will comprise all of the operating costs that would be incurred by an efficient stand alone operator, managing the railway network in a manner consistent with the efficient cost definition under Section 4 of Schedule 4 of the Code, in providing access to TPI's railway infrastructure.

In determining what maintenance activities are required to maintain MEA infrastructure in a GRV based regime, major periodical maintenance activities ("MPM") have not been included. For the purpose of the Costing Principles, this is because MPM is assumed to extend the economic life of the assets.

TPI has defined the terms routine and cyclical maintenance to detail what activities have been included in operating costs.

Operating costs will therefore include:

- routine and cyclical maintenance costs for track;
- routine and cyclical maintenance costs for signalling and communications;
- network management costs; and
- working capital.

Operating costs are defined in the Code and TPI has five categories of operating costs in TPI's Costing Model as follows:

- Routine Maintenance for track, and signals and communications;
- Cyclical Maintenance for track, and signals and communications;
- Network Management Costs;
- Land-related operating costs; and
- Working Capital.

Routine and Cyclical Maintenance for track

TPI has developed a track maintenance model which calculates the cost of maintaining the track infrastructure in accordance with the defined assumptions documented in the Costing Principles. The assumptions adopted in this process are:

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 into two categories:

- routine maintenance; and
- cyclical maintenance.

There are two major activity classifications within routine maintenance:

- routine inspections; and
- maintenance activities – which typically follow the inspection process.

The inspection regime includes patrolling, on-train inspection, track condition monitoring (using recorder vehicles), defined event inspections by patroller and structures inspection.

Routine Maintenance is therefore the corrective action taken as a follow up to routine inspections.

Cyclical Maintenance represents tasks that are undertaken at regular intervals which are necessary to achieve the expected asset life and include:

- track resurfacing, rail grinding, ballast top up and cleaning, rail defect removal and structures maintenance to achieve economic life; and
- firebreaks, scrub slashing, drainage, access roads and road seal on level crossings to meet operational and safety requirements.

The cost of repairing incidents such as fire and flood, or damage caused to the track as a result of derailments or accidents has been included in maintenance costs but only to the extent they are not recoverable from insurance or operators. The cost of repairing incidents will not be included if it can be shown that TPI is negligent in its responsibility as a railway owner. TPI intends to calculate incident costs based on a historical cost approach. However, TPI understands that the ERA will decide on the manner in which the cost of incidents will be calculated when determining the Floor and Ceiling on the various routes as part of the Clause 9, Schedule 4 of the Code review.

The track maintenance model is incorporated as part of the Costing Model and includes all the assumptions and prices used. As the level of maintenance activity varies over the life of the asset, it is appropriate to calculate the net present value of the projected stream of maintenance costs that occurs over the life of the asset, starting with the assumption of a new asset in year 1.

The annualised value of this stream of costs is then used to represent an average annual

maintenance charge over the life of the asset.

These are costs included in the definition of Operating Costs in Schedule 4 of the Code.

Routine and Cyclical Maintenance for signalling and communications

Signalling and communications costs are largely based on Routine Maintenance because of the safety and operating requirements of these systems.

Routine Maintenance is based on industry accepted inspection regimes and based on fault history. It includes specified periodical inspections and procedures (including testing) and responses to faults.

Cyclical maintenance is significantly less important for signalling and communications and includes component rebuilds to achieve economic life.

The signal and communications maintenance model will be incorporated as part of the Costing Model. The annual charge is based on an annualised value of the net present value of maintenance costs stream. Maintenance costs are allocated to route sections according to train movements.

These are costs included in Part (b) of the definition of “operating costs” in Schedule 4 of the Code and the NPV of the cash flows is then used to calculate an average annual maintenance charge over the life of the asset.

Network Management Costs

There are costs directly associated with operational management of the network as defined in Part (b) of the definition of “Operating Costs” in Schedule 4 of the Code.

They reflect a centralised train control system and include compliance costs with rail safety accreditation requirements under the Rail Safety Act, train scheduling and requirements for emergency management.

Land-related Operating Costs

Land-related operating costs are any payments made in respect of any lease or licence that TPI or an associate of TPI holds over any land,. These payments will relate only to land used for constructing, maintaining or operating the relevant railway and are not capital costs.

Working Capital

Because of the limitations in the Code in calculating the annuity formula described in Section 3.1.4, TPI has included in its operating costs an annual working capital charge that is calculated by multiplying half of the WACC by the annuity.

4.2. Efficient cost tests

TPI will test whether the operating costs used for determining the Floor and Ceiling are efficient

as follows:

- 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 the consumption and scope are efficient (eg. train controller's salaries if the number of controllers and their range of duties are efficient by benchmarking);
- actual costs may also be used where the costs:

    - come from a competitive market such as insurance; or

    - are regulatory costs (such as the cost of Rail Safety Accreditation).

In measuring efficiency, TPI recognises that these costs change over time especially as a result of innovation and technological change. However, TPI has prepared its operating costs based on the efficient cost of maintaining the MEA network.

4.3. Allocation of operating costs

Track and signalling maintenance costs are directly allocated to route sections based on the nature and population of the infrastructure. Centralised train control cost will be apportioned directly to routes based upon actual train control resources managing traffic over each route.

The allocation of non-sector specific operating costs to route sections will be performed in accordance with the allocators listed in Appendix B. The allocation of Operating Costs will in the first instance be apportioned to the route level and subsequent allocation to the Route Section will be reviewed by the ERA as part of the floor and ceiling cost determinations.

5. OVERHEAD COSTS

5.1. Definition of Overhead costs

TPI's overheads are those overhead costs attributable to the performance of TPI's access-related functions whether by TPI or FMG.

TPI is a separate legal entity and has an efficient overhead structure which relates to its business of access provision. TPI also sources corporate and related functions from FMG.

TPI notes that only those overhead costs attributed to activities related to the Code's definition of railway infrastructure will be included in the Floor and Ceiling Price Tests.

5.2. Allocation of Overhead costs

The allocation of Overhead Costs will in the first instance be apportioned to the route level and subsequent allocation to the Route Section level will be reviewed by the ERA as part of the floor and ceiling cost determinations. The basis for the allocation of TPI's overhead costs to route sections is set out in Appendix B.

6. OTHER MATTERS

6.1. Indexation of floor and ceiling costs

Following any determination of floor and ceiling costs, these costs may be indexed annually, for a period of up to five years. The purpose of the indexation is to enable the administration of TPI's Over-payment Rules in relation to revenues received under Code agreements and to enable ceiling costs to reflect a reasonable return to TPI over the five year period without requiring TPI or the ERA to redetermine costs over that period.

Costs determined for the purposes of administering TPI's Over-payment Rules will remain unadjusted following the expiration of the five year determination period, unless superseded by costs approved by the ERA in a subsequent determination.

TPI will index Floor and Ceiling costs based on CPI less the "X" factor. The "X" factor will be set at one quarter of CPI. In determining CPI, the Australian Bureau of Statistics Weighted Average of Eight Capital Cities All Groups CPI index will be used. The annual change in CPI is calculated as the percentage change in the average of the four quarters to March of each year from the average of the previous four quarters.

TPI will submit annual indexed floor and ceiling costs for determined routes or route sections to the ERA for review and approval.

6.2. Asymmetric Risk

TPI will include an allowance for asymmetric risk as an annual operating cost in its model and in its floor and ceiling cost proposal. The allowance and the methodology used by TPI for its calculation will be reviewed by the ERA as part of each floor and ceiling cost determination.

6.3. Service Quality Commitment

TPI will adopt economically and technically efficient practices to provide a network, which maintains service quality at the specified operational levels for the network. TPI will negotiate specific KPI's (covering both TPI's and the operators performance) in its Access Agreements to measure operational performance of itself and the operator. This may include financial incentives or penalties.

7. REVIEW

These Costing Principles may be amended or replaced by TPI with the approval of the ERA.

Stakeholders have the ability to express any concern to the ERA which may arise at any time and the ERA will investigate such claims.

The ERA has the power under the Code to amend these Costing Principles at any time and Access Seekers and Operators can at any time request the ERA to consider amendments.

APPENDIX A – ECONOMIC LIFE OF ASSETS

	Asset	Life Expectancy (Years)
1.	Earthworks for track	100
2.	Bridges, tunnels and culverts	
	a. Bridges (not footbridges)	50
	b. Culverts	50
3.	Level crossings	20
	Access roads	10
4.	Fencing of track	15
5.	Track materials	
	a. Rail life	>20MGT
	Curve < 400m	6
	Curve 400-800m	10
	Curve > 800m & tangent	25
	b. Turnouts	>20MGT
	Bearers concrete	30
	Blades and stock rails	4
	Rail bound crossing	10
	Balance of turnout	20
	c. Sleepers	50
	d. Ballast	25
	e. Jewellery	25
6.	Track construction	50
7.	Roads and shunter pathways	10
8.	Signalling	
	a. Track construction	20
	b. Flashlights	20
	c. Boomgates	20
9.	Communications	20
10.	Maintenance	
	a. Track signs	10

APPENDIX B – ALLOCATION OF OPERATING COSTS AND OVERHEADS

Cost Component	Description	Cost allocator
Railway Infrastructure Management Costs	The administration and management of infrastructure maintenance.	
- Communications backbone	Backbone assets have a primary purpose of providing train control services.	GTK
- Infrastructure Plant & equipment	Track maintenance equipment etc.	GTK
- Signals – control systems	Control systems include real time information systems, signal control systems and train/track monitoring systems.	GTK
Network Management Costs		
- Train Control and Scheduling	The operation of the train control centres and any operations management activities.	Train numbers
- Signalling	The operation of signal cabins and centralised train control systems for the safeworking of trains along corridors and in yards.	Train numbers
- Telecoms	The operation of telecommunication facilities.	Train numbers
Land-related Operating Costs	payments made in respect of any lease or licence that TPI holds over any land	Route kilometres
Overheads		
- TPI Overheads	Corridor management; access compliance costs; net cost of computers; office equipment; furniture; motor vehicles; safety accreditation costs; and TPI management costs.	GTKs and Train numbers
- Corporate Overheads	FMG provided services including information systems, payroll, human resources, accounting/finance, company secretarial, legal, public relations; corporate governance; treasury management, insurance management and procurement.	GTKs and Train numbers

Note: Two proxies are used to allocate volumes. GTK's are used to allocate costs which vary more in quantum due to volumes moved, and train numbers are used to allocate costs which vary more in quantum due to the number of train movements. Land-related Operating Costs will be allocated to the route sections to which they apply on a route-kilometre basis.

APPENDIX C - ROUTE SECTIONS

The TPI railway network is the railway infrastructure described in the TPI Railway and Port Agreement in three sections:

1 The route section from the loadout at the Christmas Creek mine to Cloudbreak mine loadout,

2 The route section from the loadout at the Cloudbreak mine to chainage 219.5 km, measured from Port Hedland,

3 The route section from chainage 219.5 km to chainage 174.875 km, measured from Port Hedland,

4 The route section from the loadout at the Solomon mine to chainage 174.875 km, measured from Port Hedland,

5 The route section from chainage 174.875 km to chainage 23 km, measured from Port Hedland, and

6 The route section from chainage 23 km to the dump station servicing TPI's port facilities and additional infrastructure at Anderson Point, Port Hedland.