

HUMELINK CONTINGENT PROJECT APPLICATION 2
Land & Easement Acquisition Cost Estimates for Project Implementation
CONFIDENTIAL AND COMMERCIAL IN CONFIDENCE

Instructing Party: Transgrid

Date of Advice: 4 August 2023

Purpose: To provide an independent cost estimate of land and easement acquisition costs required for the 500kV Humelink transmission project in support of Transgrid's Contingent Project Application Stage 2 (CPA2) to the Australian Energy Regulator for project implementation costs

Summary of advice

Transgrid submitted a stage 1 part 1 Contingent Project Application (CPA1-1) for proposed 'early work' for the Humelink project in April 2022. The scope of land acquisition activities for CPA1 includes acquiring land for a new substation, compulsory acquisition, customer asset relocation, cultural heritage and establishing option agreements for transmission line easements. It is understood that the AER approved \$22.2 million for these early work land acquisition activities.

CPA1 early work landholder engagement allowed for survey access for technical investigations, desktop and detailed valuations after property inspections and the option agreement making process to commence. An assessment of this work confirms:

- agreement has been reached for the Gugaa substation over an area of 105.39ha
- the original route has a total of 335 landholdings with 55 public and 280 private landholdings
- the Green Hills alignment has a total of 320 landholdings with 50 public and 270 private landholdings
- offers for easement acquisition have been made to presented to the vast majority of private landholders with [REDACTED] ([REDACTED]) presented along the original route and [REDACTED] ([REDACTED]) presented to landholders for the Green Hills alignment
- As at 30 June 2023, the status of agreements with private landholders is:
 - agreed compensation: [REDACTED] ([REDACTED]) for the original route or [REDACTED] ([REDACTED]) agreements for the Green Hills alignment
 - not agreed (in negotiation): [REDACTED] ([REDACTED]) for the original route or [REDACTED] ([REDACTED]) for the Green Hills alignment
 - early engagement: where an offer is yet to be made is [REDACTED] ([REDACTED]) of private landholdings for the original route, and [REDACTED] ([REDACTED]) of private landholdings for the Green Hills alignment
- valuations for public landholdings are yet to be completed

A Contingent Project Application for Stage 2 works (CPA2) seeks to recover revenue for Humelink project implementation costs. For project land and easement acquisition, stage 2 project implementation costs include:

- compensation for acquiring easements for public and private landholdings
- stamp duty on land and easement acquisition costs
- compensation for timber plantations
- substitute forestry land
- disturbance costs
- construction camps and laydown area lease and rehabilitation costs
- statutory fees, valuations and legal costs

The estimate excludes the costs of cultural heritage management, and early works costs included in the accepted CPA1 application.

The basis for the cost estimate acknowledges the accepted budget and progress (or status) of CPA1 activities and sets how the total cost for land and easement acquisition has been calculated for CPA2.

Forecasting accurate costs for property acquisitions where the interest being taken is less certain from a valuation perspective that if the fee simple of the land was taken. This is primarily due to the assessment of “injurious affection” under S55(f) of the *Land Acquisition (Just Terms Compensation) Act 1991*.

Based on assessment of injurious affection there can be a range of views from differing valuation professionals in assessing the impact of the works have on the balance of the land owned by the landholder. Analysis of valuation data from Humelink CPA1 activities shows that independent registered valuers (acting for landholders) have assessed the value of easements at significant factors above the assessed compensation of Transgrid’s appointed valuer.

A landholder sentiment-based approach has been adopted to determine the likely premium above the assessed compensation. The evidence base for this approach is data from land and easement acquisition from Project EnergyConnect (PEC). In considering the evidence, Humelink specific factors have also been considered for moderating compensation premiums for Humelink CPA2.

Transgrid provided estimates for public landholdings, construction camps and laydown areas have been reviewed and been benchmarked against comparable projects. Forest land and timber costs are based on estimates from Transgrid’s specialist forestry consultant. Statutory costs have been estimated based on recent statutory valuation and legal costs and has considered the number of cases progressing to compulsory acquisition benchmarked against comparable linear infrastructure projects.

The total cost estimate for easement acquisition costs for the original route is \$202,243,682 and the Greenhills alignment is \$197,288,633. In line with our instructions this estimate has been

undertaken on the basis of a restricted desktop assessment only of client and project supplier provided data. It has been provided for the exclusive use of Transgrid, and that it is agreed that an estimate of this nature is provided on an 'all care, no liability' basis. As such no liability is accepted to Transgrid or any other party in relation to this advice. Further information on the basis for land easement and acquisition costs is detailed further in this advice with disclaimer attached setting out the limitations of our advice.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jamahl Waddington', is positioned above the printed name.

Jamahl Waddington

Head, JLL Infrastructure Advisory

1 Background

Transgrid investigated options for reinforcing the New South Wales (NSW) Southern Shared Network to deliver a net economic benefit to consumers and producers of electricity and support the energy market transition through:

- increasing the transfer capacity between the Southern NSW major load centres of Sydney, Newcastle and Wollongong.
- enabling greater access to lower cost generation to meet demand in major load centres
- facilitating the development of renewable generation in high quality renewable resources areas in southern NSW and Southern States
- increasing the competitiveness of bidding in the wholesale electricity market

Over 2019- 2021 a three-stage Regulatory Investment Test for Transmission (RIT-T) was undertaken to assess investment options to increase the transfer capacity of the shared southern network transmission network. An electrical 'loop' between Maragle, Wagga Wagga and Bannaby was found to provide the greatest benefit of all seven options considered and scenarios investigated. Analysis shows that the preferred option, Humelink, is expected to:

- deliver net benefits of approximately \$491 million;
- reduce the need for new dispatchable generation investment to meet demand;
- avoid capital costs that would otherwise be required associated with enabling greater integration of renewables in the National Electricity Market (NEM);
- lower the aggregate generator fuel costs required to meet demand in the NEM; and
- provide significant 'competition benefits' by increasing the efficiency of bidding in the wholesale market.

1.1 Humelink project description

Humelink is a 500kV transmission line project that will establish critical connections between Wagga Wagga, Bannaby, and Maragle. It stands as one of the most significant energy infrastructure projects in NSW, encompassing approximately 360km of proposed new transmission lines and involving the establishment or upgrade of infrastructure at three substation locations.

The proposed Humelink project corridor was narrowed to a preferred 200 metres in most areas. The process of route selection considers social, environmental and technical considerations. In some cases the assessment may alter or amend the route to minimise impacts.

1.2 Original route and Greenhills alignment

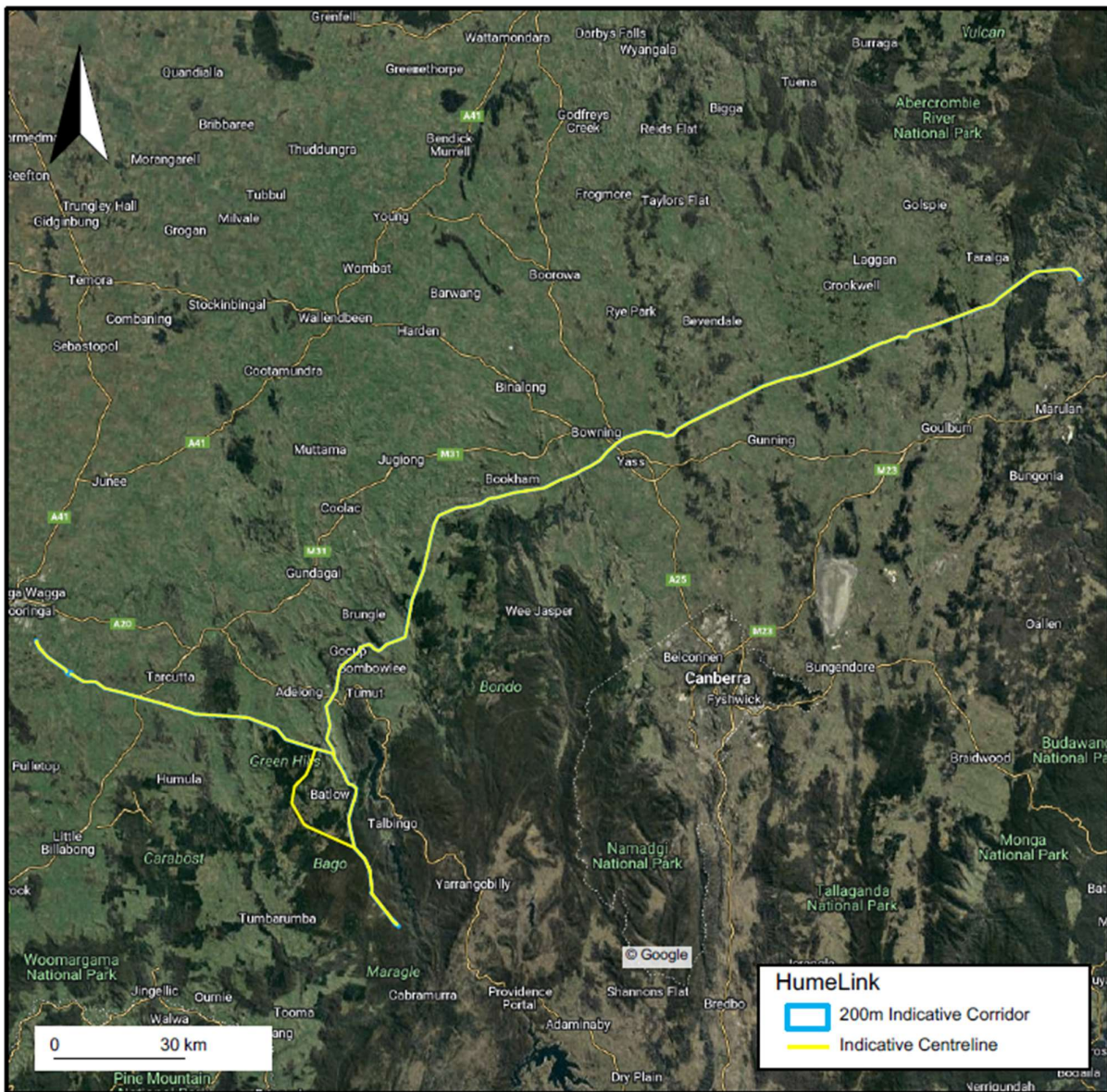
Transgrid seeks to determine a route that minimises net impact. It has adopted the following guiding principles to the route selection process:

- keeping the transmission line as straight as possible;

- electing the shortest possible route between two substations; and
- where possible paralleling existing transmission easements or using public land.

In conjunction with these principles, Transgrid uses a constraints mapping process that considers, social considerations, environmental considerations, land use considerations, network resilience and cost. In determining the preliminary preferred route through the Green Hills region area, a range of options were narrowed to two final options: (1) original route Paralleling Line 51 (P51), and (2) Green Hills alignment through the Green Hills State Forest as an alternative route as illustrated in Figure 1 below.

Figure 1: HumeLink transmission project: original route and Green Hills alignment



For the original route, there are 342 landholdings along the transmission corridor whereas the Green Hills alignment affects 270 landholdings.

1.3 Contingent Project Application: Stage 1

Transgrid submitted a stage 1 part 1 contingent project application (CPA1-1) for proposed 'early work' for the Humelink project in April 2022. The application sought \$71.5 million in revenue, paid by energy consumers, to deliver 'early works' to determine construction costs, identify and manage project risks and achieve AEMO's target delivery date. CPA1-1 was accepted by the AER in August 2022.

The scope of land acquisition activities for CPA1 includes:

- determining the compensation to be paid to each landholder;
- establishing option agreements in order to be able to acquire land in Stage 2;
- commencing the compulsory acquisition process in the event amicable agreements cannot be reached with landholders;
- undertaking surveys to identify and protect places of cultural heritage significance along the route; and
- securing a site for Gugaa substation so that designs can be undertaken to match the available site location, size and geotechnical conditions¹.

Stage 1 early works capital expenditure for acquiring land for a new substation, compulsory acquisition, customer asset relocation, cultural heritage and establishing option agreements for transmission line easements were estimated at \$22.12 million (6.9% of capex)².

In May 2023, Transgrid submitted Humelink stage 1 part 2 contingent project application (CPA1-2) to seek \$226.7 million in revenue for the procurement of Long Lead Equipment (LLE). This is its second 'early works' CPA to purchase of transformers, reactors, conductor and steel as part of Stage 1 activities.

1.4 Contingent Project Application: Stage 2

A Contingent Project Application for Stage 2 works (CPA2) seeks to recover revenue for project implementation costs once the project has been committed to and a final cost estimate is available.

For project land and easement acquisition, stage 2 project implementation costs include:

- compensation for acquiring easements for public and private landholdings;
- stamp duty on land and easement acquisition costs;
- compensation for timber plantations;
- substitute forestry land;
- disturbance costs;

¹ Transgrid 2022, Humelink – Stage 1 (Early Works) Contingent Project Application: Principal Application document, 5 April 2022, p.25

² *ibid*, p.4,30,31

- construction camps and laydown area lease and rehabilitation costs; and
- statutory fees, valuations and legal costs.

2 Purpose

The purpose of this advice is to provide an independent cost estimate of land and easement acquisition costs required for the 500kV Humelink transmission project in support of Transgrid's CPA2 for project implementation costs. Land access and easement acquisition is a critical predecessor step to project construction activities.

The CPA2 will be lodged with the Australian Energy Regulator (AER) for assessment against Clause 6A.8.2(d) of the National Electricity Rules (NER) for transmission network service providers to amend Transgrid's revenue determination to include the revenue required for the Humelink project.

3 Scope

The scope of this cost estimate considers land requirements for the original route and Green Hills alignment assuming a final easement width of 70 metres. The cost estimate is structured using the following cost items:

- compensation for public and private landholdings;
- stamp duty on land acquisition costs;
- compensation for timber plantations;
- substitute forestry land;
- disturbance costs;
- construction camps and laydown areas; and
- statutory fees, valuations and legal costs.

It excludes the costs of cultural heritage management, and early works costs included in the accepted CPA1 application.

4 Confidentiality and information disclosure

JLL recognises that some information such as methods for determining compensation for the acquisition of land and easements and providing cost estimates is commercially sensitive. This information falls under AER market sensitive cost inputs and strategic information confidentiality categories.

Disclosing commercially sensitive compensation data and information would affect Transgrid's ability to negotiate reasonable compensation and obtain competitive prices for transmission infrastructure. If a decision was made to disclose commercial data, landholders would be unfairly advantaged to the detriment of final energy consumers that would need to absorb higher acquisition costs.

In accordance with AER contingent price application guidelines, two versions of our cost estimate are provided:

- (1) **Public version:** that discloses the substances of acquisition of land and easements and appropriately maintains the confidentiality of sensitive commercial information which is in the interests of energy consumers. Information is presented in a way that maintains confidentiality while also providing sufficient information to understand and assess the substance of land and easement acquisition costs affecting different stakeholder groups. Redactions have been minimised and are limited to confidentiality categories.
- (2) **Confidential version:** a detailed version of the methods, assumptions and benchmark data used to determine land and easement acquisition costs with confidential information highlighted in yellow which is redacted in the public version.

5 Land and easement acquisition framework

The framework for land and easement acquisition is governed by legislation, Transgrid policies and standards, good industry practice and case studies of other linear infrastructure. These elements combine to embody good practices and expected norms for the efficient and effective delivery of land that recognises the importance of the social licence to operate and long asset life of transmission infrastructure. The up-front investment of building respectful relationships with landholders early, pays dividends in project construction, commissioning and decades of operations and maintenance.

5.1 Legislation

The key legislation governing land tenure in New South Wales are the *Crown Land Management Act 2016* and *Real Property Act 1900*.

Crown land, referred to as public landholding in this advice, is land that is owned by the State Government. Crown land is mostly administered by the NSW Department of Planning and Environment under the *Crown Land Management Act 2016*. This legislation allows for the issue of rights to use Crown Land in the form of:

- Leases (perpetual or term)
- Licences
- Enclosure Permits
- Reserves & Dedications

Some other forms of Crown or State-owned lands are subject to alternate or additional legislation include:

- National Parks and Wildlife Act 1974;
- Roads Act 1993; and
- Forestry Act 2012.

The *Real Property Act 1900* allows for the declaration of titles of land and its transfer. Supported by the *Conveyancing Act 1919*, which sets out the rules for the transfer of property, and the *Strata Schemes Management Act 2015*, which regulates the management of strata title properties, the Act provides a comprehensive framework for property ownership and transfer in New South Wales.

In New South Wales, acquiring authorities including government agencies, some state-owned corporations, and local councils have the power to acquire privately owned property for public purposes. This may be all or part of a property or an interest in a property, for example easements for power lines, sewerage, or water. The powers of acquiring authorities to acquire property are contained in legislation specific to those authorities.

Under section 10A of the *Land Acquisition (Just Terms Compensation) Act 1991*, authorities are required to meaningfully engage with landholders over a minimum 6-month period to negotiate a voluntary agreement for land acquisition. If agreement is not possible after the statutory period of engagement, an authority can commence the process to compulsorily acquire the land.

5.2 Transgrid corporate policies and standards

Key Transgrid policies and guidelines which govern land access and acquisition include:

- Major Projects Land Access Guidelines;
- Property Acquisition Policy;
- Property Acquisition Procedure; and
- Humelink Land Access and Delivery Acquisition Strategy.

5.3 Good industry practice

Relevant industry practice that embodies knowledge, case studies and lessons learned in land access is captured in the following standards, guidelines and charters.

5.3.1 Revised Property Acquisition Standards

The NSW Centre for Property Acquisition has set out revised property acquisition standards for engagement with landholders in relation to the acquisition of land or interests in land:

1. Property owners will be treated fairly and with empathy and respect;
2. Property owners will be provided with clear information about their rights;
3. Property owners will be supported throughout the acquisition process with assistance tailored to meet individual circumstances;
4. The acquisition process will be consistent across projects and acquiring authorities; and
5. The Government will monitor and report publicly on the effectiveness of the land acquisition process.

5.3.2 Better Practice Social Licence Guideline

The Better Practice Guideline is the result of an Energy Charter collaboration between landholder and community representatives and a group of Transmission Network Service

Providers. The Guideline provides practical social licence to operate guidance to mitigate adverse impacts and prioritise shared value through hosting energy transition infrastructure.

5.3.3 Landholder and community better practice engagement guide

The guide was developed by the Energy Charter on what to expect from gas pipeline and transmission network service providers' when engaging with landholders and affected communities on energy development projects and existing energy assets. It sets out better practice engagement principles which are reflected in the approach to stakeholder engagement.

5.4 Case studies

The timelines for requiring access to land for construction activity (possession of site) and subsequent project delivery in general has the greatest bearing on the extent to which a proponent is prepared to negotiate a voluntary commercial agreement in excess of valuation.

It follows that the tighter the delivery timeframe for access to land for construction purposes, the less time is allocated to negotiating voluntary commercial agreements with directly impacted landholders and subsequently agreed compensation will be inflated to a greater degree above valuation.

Landholders and their advisors in the current environment are very astute and are more cognisant of their ability to drive a higher compensation amount if proponents are under pressure to achieve access to land in a short timeframe.

This is particularly evident in instances where a proponent has insufficient time to acquire land and easements by compulsion. There are a number of case studies and examples where this has been the case.

5.4.1 Case Study 1: North Island Upgrade Project (NZ)

In its report entitled "North Island Grid Upgrade Project, Application for increase of major Capex Allowance" dated September 2013, Transpower cited delays in obtaining regulatory approvals as a key reason for placing upwards pressure on the property compensation budget. Landholders were able to leverage reduced timeframes to drive acquisition costs upwards. This was particularly accentuated by the fact that Transpower commenced overhead line construction on the project with nearly 40% of agreements remaining outstanding. Ultimately, Transpower exceeded their initial forecast estimate of property costs by 49.09% as shown in Table 1.

Table 1: North Island Upgrade Project Property Costs

Date	Description	Amount	Variance
October 2006	Original Estimate (P90)	\$125,700,000	
July 2013	Forecast End Cost	\$187,400,000	\$61,700,000

Source: Transpower 2013, North Island Grid Upgrade Project, Application for increase of Major CAPEX Allowance

5.4.2 Case Study 2: 60 km High Pressure Gas Pipeline Project (Qld)

This fast track project was constructed in a region where upstream (wells) and midstream (pipelines) gas development is prevalent and landholders in the region are well versed in the rights and obligations of both landholders and gas companies alike. The project development was on a very tight timeline and the ability to use compulsory acquisition powers by the gas company was limited due to time constraints.

The initial estimates of compensation were considered very generous for the reasons detailed above as these factors were well known at the time of preparing the original estimates. However, the negotiated voluntary agreements eventually settled at a factor of approximately two times valuation, which were already at the higher end.

5.4.3 Case Study 3: 620 km High Pressure Gas Pipeline Project (NT/Qld)

This greenfield project traversed mainly large cattle station properties ranging from family-owned pastoral operations to large corporate beef producers. The project was driven by the Northern Territory Government's desire to move foundation gas to the east coast of Australia and therefore communities and landholders along the proposed route were not directly benefitting from the project. The client was motivated by a desire to maintain a strong Social Licence to Operate in the regions and was keen to reach commercial agreements where at all possible. The project was also on an extremely tight delivery timeframe and the use of compulsory acquisition or resumption powers was not realistically a viable option.

Desktop assessments of compensation payable for the acquisition of an easement were undertaken by a certified valuer with experience in compensation valuations however as negotiations unfolded it became apparent that the desktop estimates did not adequately address matters associated with business disruption and in particular the disruption to the normal operations of a cattle property.

Landholders and pastoralists engaged the services of lawyers and valuers to act on their behalf (at the proponents' costs) who attempted to quantify the business disruption.

Given the lengthy time taken to engage valuers and to prepare reports, time became a critical factor in negotiations as construction contracts had been entered into and the threat of liquidated damages loomed which in turn applied pressure to negotiations and entering into commercial voluntary agreements.

Original estimates of compensation across the project to acquire easements was set at \$840,000 with the final compensation payments totalling \$2,760,000 representing a circa 300% increase on the original estimates.

6 Status of landholder compensation

CPA1 early work landholder engagement allowed for survey access for technical investigations, desktop and detailed valuations after property inspections and the option agreement making process to commence. It also provided for land acquisition for the Gugaa substation where an agreement has been accepted for a suitable site.

For the original transmission route, there are a total of 335 landholdings with 55 public and 280 private landholders. The Greenhills alignment reduced the number of private landholdings to 270, public landholdings to 50 making a total of 320 landholdings as set out in Table 2 below.

Table 2: Number of landholdings by transmission route

Route	Landholdings				
	Public		Private		Total
Original route	55	(16.4%)	280	(83.6%)	335 (100%)
Green Hills alignment	50	(15.6%)	270	(84.4%)	320 (100%)

Initial efforts have focussed on valuations and agreement making with private landholders. Valuations for public landholdings are yet to be completed.

Transgrid's valuer has completed desktop valuations and a further detailed valuations for 124 private landholdings. Offers have been made to presented to the vast majority of private landholders with [REDACTED] ([REDACTED]) presented along the original route and [REDACTED] ([REDACTED]) presented to landholders for the Green Hills alignment.

The current status of the number and percentage of option agreements for private landholding transmission easements as at 30 June 2023 are summarised for both the original route and Green Hills alignment is shown in Table 3 below:

Table 3: Status of option private landholder agreements by route (as at 30 June 2023)

Status of agreements	Original route		Green Hills alignment	
Agreed	[REDACTED]			
Not agreed (in negotiation)	[REDACTED]			
Early engagement	[REDACTED]			
Total	280	(100%)	270	(100%)

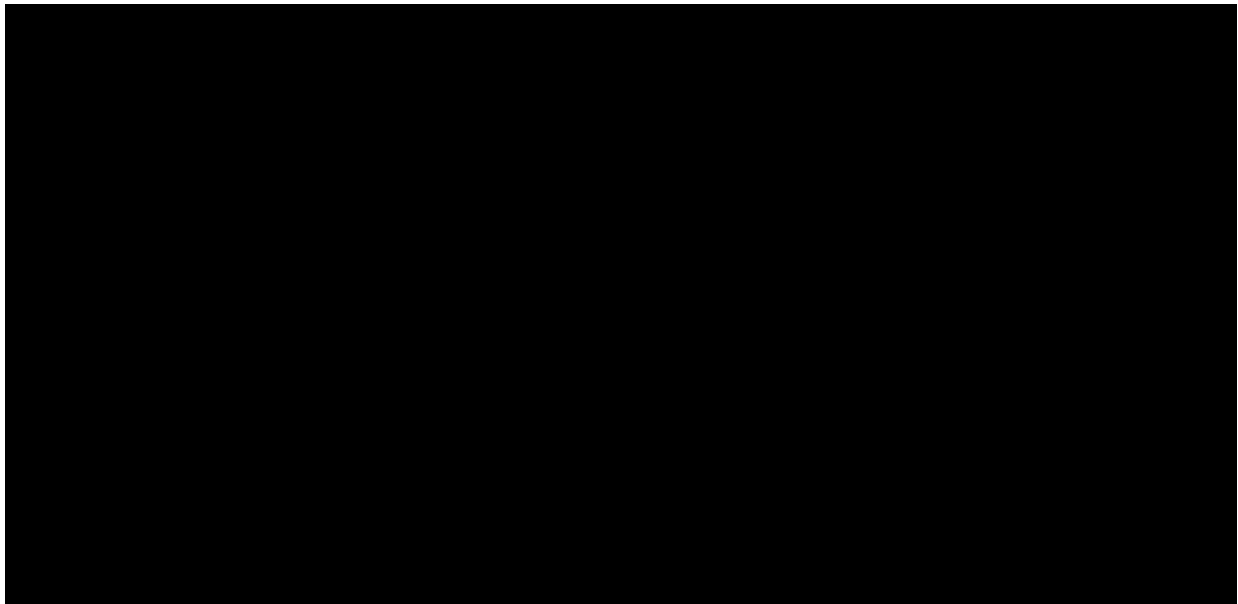
6.1 Agreed compensation

Agreement has been reached with some private landholders along the original route ([REDACTED]) and Greenhill alignment ([REDACTED]). The premium above the assessed value averages almost [REDACTED] as shown in Table 4.

Table 4: Agreed compensation paid above the assessed value

Route	Agreements	Assessed Value	Agreed compensation	Premium above assessed value
Original				
Green Hills alignment				

The distribution of agreed premiums above the assessed value by band is presented in [REDACTED] below.



6.1.1 Original route

The absolute number of compensation agreements and proportion within clustered premium bands for the original route are:

- [REDACTED] agreements ([REDACTED]) negotiated at or within [REDACTED] of assessed compensation,
- [REDACTED] agreements ([REDACTED]) negotiated within [REDACTED] of assessed compensation,
- [REDACTED] agreements ([REDACTED]) negotiated within [REDACTED] of assessed compensation, and
- [REDACTED] agreements ([REDACTED]) negotiated above [REDACTED] of assessed compensation.

6.1.2 Green Hills alignment

The absolute number of compensation agreements and proportion within clustered premium bands for the original route are:

- [REDACTED] agreements ([REDACTED]) negotiated at or within [REDACTED] of assessed compensation,
- [REDACTED] agreements ([REDACTED]) negotiated within [REDACTED] of assessed compensation,
- [REDACTED] agreements ([REDACTED]) negotiated within [REDACTED] of assessed compensation, and

- [REDACTED] agreements ([REDACTED]) negotiated above [REDACTED] of assessed compensation.

6.2 Not agreed compensation

There are [REDACTED] private landholders for the original route where there is no agreement on compensation. Of these landholdings, there are [REDACTED] initial offers of compensation where a response is pending and the remaining [REDACTED] landholdings where counter offers have been received.

For the original route, the average counter offer is [REDACTED] above the initial assessed value of the easement which equates to a premium of [REDACTED] above the assessed of [REDACTED] as detailed in Table 5 below.

Table 5: Analysis of counter offers above the assessed value of private landholdings

Landholding	No of counter offers	Assessed value	Counter offer value	Offer above assessed value	
				%	\$
Private	38	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

6.3 Early engagement

It is noted that there are [REDACTED] landholders on the original route, and [REDACTED] landholders for the Green Hills alignment where engagement is in the early stages. Once valuations are completed, option for easement agreements will be prepared and presented to the landholders for consideration.

7 Basis for cost estimates

The basis for the cost estimate acknowledges the accepted budget and progress (or status) of CPA1 activities and sets how the total cost for land and easement acquisition has been calculated. The methods used for calculating each cost item are detailed under subheadings below.

Forecasting accurate costs for property acquisitions where the interest being taken is less certain from a valuation perspective than if the fee simple of the land was taken. This is primarily due to the assessment of “injurious affection” under S55(f) of the *Land Acquisition (Just Terms Compensation) Act 1991*.

Based on assessment of injurious affection there can be a range of views from differing valuation professionals in assessing the impact of the works have on the balance of the land owned by the landholder. Analysis of valuation data from Humelink CPA1 activities shows that independent registered valuers (acting for landholders) have assessed the value of easements at up to 4 times the assessed compensation of Transgrid’s appointed valuer.

7.1 Incomplete data

There are [REDACTED] (Green Hills alignment) to [REDACTED] (original route) of the private landholdings where compensation is yet to be agreed. In order to provide landholders with the required offer under S10A of the *Land Acquisition (Just Terms Compensation) Act 1991*, Transgrid’s appointed independent valuers completed desktop valuations.

Valuations of public non-forest land is yet to be completed.

7.2 Compensation

Compensation offers are required to consider the market value of the land any special value, losses attributable to severance and disturbance, any disadvantage from relocation and any change in property value in accordance with section 55 of the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)*.

Compensation cost items include both agreed compensation amounts and forecast compensation for public and private landholdings.

7.2.1 Agreed compensation

Agreed compensation represents the private landholder agreements which have been accepted. Agreed compensation for the original route is [REDACTED] and the cost for the Green Hills alignment is [REDACTED].

7.2.2 Forecast Estimates

Private landholdings

There are [REDACTED] private landholders for the original route, and [REDACTED] private landholdings for the Green Hills alignment where there is no agreement on compensation.

Typically compensation paid for land and easement acquisition exceeds valuations for several reasons such as differences between desktop and detailed valuations, alignment changes or voluntary purchase of entire properties. Commercial decisions also determine the compensation paid. Where a counter offer is marginally above the maximum negotiation threshold and, less than the cost of compulsory acquisition, or where the acquisition is time critical a higher amount may be paid. Consideration may also be given to the consequential costs of a delay (i.e. contractor stand down costs), additional security costs if landholder relations are poor or higher costs to gain entry to properties in operations over the lifetime of the asset.

A landholder sentiment-based approach has been adopted to determine the likely premium above the assessed compensation. The evidence base for this approach is data from land and easement acquisition from Project EnergyConnect (PEC) which is presented in Table 6.

Table 6: PEC landholder sentiment and final compensation premium

Landholder sentiment (PEC)	Agreements		Premium	
	#	%	\$	%
Unlikely	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Possible	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Likely	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

THE PEC data shows that sentiment toward compensation is linked to the premium paid. Landholders with an 'unlikely' sentiment received a premium of [REDACTED], 'possible' sentiment

landholders received a premium of [REDACTED] and landholders with a 'likely' sentiment received a [REDACTED] premium above the assessed compensation.

In considering evidence from PEC, other factors have also been considered for determining compensation premiums for Humelink. These factors include:

- high proportion of detailed assessments that have been conducted on Humelink;
- less variation in property types along the alignment; and
- setting a maximum premium before proceeding with compulsory acquisition after meaningful engagement has not resulted in agreement.

Taking these factors into account, JLL have adopted moderated sentiment-based premiums for private landholdings as set out in Table 7.

Table 7: Moderated compensation premiums for Humelink CPA2 estimates

Landholder sentiment (Humelink)	Premium
Unlikely	[REDACTED]
Possible	[REDACTED]
Likely	[REDACTED]

These moderated premiums, using the prevailing sentiment of landholders which are still in negotiation, have been used to forecast the likely cost of acquisition. The forecast compensation for private landholders in negotiation is estimated at [REDACTED] for the original route and [REDACTED] for the Greenhills alignment.

Public landholdings

JLL has been provided with indicative compensation estimates for Government owned public landholdings that were prepared by Transgrid. Forest land estimates have been replaced by valuations undertaken by Transgrid's specialist forestry consultant, Indufor. Valuations for non-forest public landholdings are yet to be completed which will provide a more reliable estimate of compensation. Given the early stage of easement acquisition, a [REDACTED] premium has been applied to the estimate for non-forest public landholdings.

7.3 Stamp duty

Stamp duty costs have been estimated based on agreed and forecast compensation using NSW Government 2023 rates as detailed in Table 8 below.

Table 8: NSW Government stamp duty rates (effective from 1 July 2023)

Property value	Transfer duty rate
\$0 to \$16,000	\$1.25 for every \$100 (minimum \$10)
\$16,000 to \$35,000	\$200 plus \$1.50 for every \$100 over \$16,000
\$35,000 to \$93,000	\$485 plus \$1.75 for every \$100 over \$35,000
\$93,000 to \$351,000	\$1,500 plus \$3.50 for every \$100 over \$93,000
\$351,000 to \$1,168,000	\$10,530 plus \$4.50 for every \$100 over \$351,000

Over \$1,168,000

\$47,295 plus \$5.50 for every \$100 over \$1,168,000

Stamp duty was calculated using the NSW Government rates set out above for each of the private landholdings and each of the public landholdings. Stamp duty estimates for both routes based on agreed and forecast compensation payments, noting rounding for the original route, is summarised in Table 9. Stamp duty for private landholdings is calculated based on the agreed or forecast compensation for each property. Stamp duty for public landholdings is based on estimated forest and non-forest land values.

Table 9: Stamp duty estimates by landholding type using NSW Government rates as at 1 July 2023

Landholding	Original route		Green Hills alignment	
	Compensation	Stamp duty	Compensation	Stamp duty
Private				
Government				
Total *		\$6,6401,106		\$6,289,594

The stamp duty amount is the sum of stamp duty applicable to public and private landholdings. It should be noted that exercising option agreements may not occur for another financial year or two, a provision for an escalation in stamp duty rates should be allowed.

7.4 Timber

Cost estimates for the value of timber taken are as provided by Transgrid's specialist forestry consultant which estimated the plantation value.

7.5 Substitute forest land

JLL have been instructed to provide for the possible requirement for substitute forest land used for renewable energy infrastructure to have an area at least twice as large as the area used for construction and operation, be of similar locational advantage to timber processors, have the same or greater productivity and average annual rainfall in accordance with s59 *Forestry Act 2012 (NSW)*.

The forecast costs for substitute forest land are based on a broad estimate for replacement land for plantations only and not native forest. Existing forest landholdings which vary in size, location, utility, among other factors, have been used as a basis for estimated compensation values. A provision of for stamp duty also been allowed based on the configuration and value of existing forest landholdings. Table 10 presents a summary of forest plantation areas for the two routes, compensation values, stamp duty and forecast total costs.

Table 10: Plantation productive area, estimated value and stamp duty and total cost for substitute forest land

Original route				Green Hills alignment			
Area	Value	Stamp duty	TOTAL	Area	Value	Stamp duty	TOTAL

Additional provisions for substitute forest land of [REDACTED] (original route) and [REDACTED] (Greenhills route) have been made based on Transgrid's specialist forestry consultant's estimates for forest land to meet the possible legal requirement to provide an area at least twice as large as the area used for transmission infrastructure.

7.6 Disturbance costs

Provisions have been made for permanent and temporary disturbance costs.

7.6.1 Permanent disturbance

Permanent disturbance, often referred to as "general disturbance" is understood to mean compensation for the disturbance and inconvenience caused by the acquisition. It recognises the time and effort required of landholders to review documents, meet with representatives of Transgrid as the acquiring authority and attend to other matters relating to the acquisition.

- for Private land, we consider an amount of [REDACTED] per landholding to be appropriate compensation based on comparable rates used for comparable major linear infrastructure projects, noting that negotiations may become protracted
- for Public land, we consider an amount of [REDACTED] per landholding to be appropriate compensation to account for permanent disturbance as an estimate for Government administrative charges

7.6.2 Temporary disturbance

Temporary disturbance is commonly referred to as 'construction disturbance'. We have assumed losses from construction disruption to farm operation activities will continue for up to 2 years. The lost productivity allows for 2 growing seasons due to construction impacts including reinstatement over the whole easement area.

For private land, an appropriate method of assessing disturbance is to assume an implied lease over the easement affected land for a period of up to 2 years. The lease amount is based on an annual fee, calculated at [REDACTED] of the underlying value of the easement impacted land, before any adjustments have been made to the detrimental impacts caused by the proposed transmission line.

7.7 Professional fees allowance

Affected parties are allowed to claim for the reimbursement of reasonable professional services fees associated with the acquisition of the land under the *Land Acquisition (Just Terms Compensation) Act 1991 (NSW)*. Professional fees typically include legal and valuation services, with tax, accountancy and agronomy services becoming increasingly prevalent.

An allowance for these costs was made in the first Humelink Contingent Project Application (CPA1) so a provision is not required for CPA2.

7.8 Construction camps and laydown areas

Construction camp and laydown cost estimates prepared by Transgrid have been reviewed. Estimates are based on an early site access date of 1 July 2024 for up to a total three (2+1) year period with a [REDACTED] rent review allowance and provision to rehabilitate sites to pasture.

Estimates have also benchmarked to consider the annual cost of laydown and campsite rentals from comparable linear infrastructure projects. A summary of successfully negotiated and in-negotiation annual licence fees for laydown areas is summarised below in Table 11.

Table 11: Annual laydown and land lease costs from linear projects in NSW

Location	Area	Annual Fee	Commencement
Milbrulong NSW	10 ha	[REDACTED]	Under Negotiation 2023
Lockhart NSW	10 ha	[REDACTED]	Under Negotiation 2023
Upper Lachlan, NSW	12 ha	[REDACTED]	Circa 2023
Boooroban NSW	25 ha	[REDACTED]	September 2021

The construction camp and laydown area licence estimates fall within the typical range noting rates are dependent upon size, location, utility, land use, rehabilitation requirements and lease term. The forecast costs for construction camps and laydown is calculated at \$3.01 million as detailed in

Table 12 below.

Table 12: Forecast cost estimate for construction camps and laydown areas

Site	Area (ha)	Year 1	Year 2	Year 3	Rehab	TOTAL
Gregadoo Rd Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Tarcutta Accommodation	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Ellerslie Rd Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Ardrossan Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Lower Bago Rd Accommodation	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Memorial Av Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Snubba Rd Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Maragle Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Bannaby Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Crookwell Accommodation and Laydown	12	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Yass Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Binalong Accommodation	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Gundagai Accommodation	10	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Red Hill laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Tumut Laydown	5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

TOTAL	102	\$815,000	\$855,750	\$898,537.50	\$439,897.50	\$3,009,185
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7.9 Other costs

Other costs include statutory fees, valuations and legal costs. Valuer General assessments which typically cost [REDACTED] are assumed for [REDACTED] of private landholdings that have an unlikely sentiment toward voluntary agreement to compensation.

Where voluntary agreements are not possible after the statutory period of meaningful engagement, legal proceedings may be required to acquire land or an easement which is estimated considering:

- evidence from other large linear infrastructure projects where 5% -10% of the total number of landholders are unable to reach a voluntary agreement;
- the original Humelink route has a total of 280 private landholders where [REDACTED] private landholders are not agreed, or in negotiations;
- NSW Centre for Property Acquisitions summary data shows 80% voluntary and 20% compulsory acquisitions based on a total of 466 acquisitions for FY2021/223; and
- Typical costs for legal proceedings is [REDACTED] per case.

The calculation for forecast other statutory fees, valuations and legal costs it outlined in Table 13.

Table 13: Other cost items calculations

Cost item	Qty	Rate	Cost estimate
Valuer General fees	[REDACTED]	[REDACTED]	[REDACTED]
Risk of court action	[REDACTED]	[REDACTED]	[REDACTED]
TOTAL			[REDACTED]

7.10 Property management and overhead costs

Property management costs and overheads are excluded from the cost estimate.

8 Land and easement acquisition cost estimates for CPA2

In line with our instructions this estimate has been undertaken on the basis of a restricted desktop assessment only of client and project supplier provided data. It has been provided for the exclusive use of Transgrid, and that it is agreed that an estimate of this nature is provided on an 'all care, no

³ NSW Government 2023, Summary of acquisitions- financial year 2021-22, Available online at: <https://www.nsw.gov.au/housing-and-construction/property-acquisition/data/summary-of-acquisitions-2022> (Accessed on 26 July 2023).

liability' basis. As such no liability is accepted to Transgrid or any other party in relation to this advice. Further information on the limitations of this cost estimate is detailed in the attached disclaimer.

8.1 Summary cost estimate

Based on data available as at 30 June 2023 the cost estimates for land easement acquisition of the original route and Greenhills alignment are presented in Table 14.

Table 14: CPA2 land and easement acquisition cost estimate (by route)

Land acquisition cost items	Original route	Green Hills route
1. Agreed compensation		
2. Private landholders - forecast compensation		
3. Government landholders -forecast compensation		
4. Stamp duty	6,641,106	6,289,594
5. Timber		
6. Substitute forest land		
7. Disturbance costs	9,295,281	8,984,641
8. Program management/ overheads		
9. Construction camps and laydowns	3,009,185	3,009,185
10. Statutory fees, valuations, and legal costs		
TOTAL COST ESTIMATE	\$ 202,243,682	\$ 197,288,633

8.2 Cost estimates by public and private landholding

A disaggregated cost estimate for private and public landholdings easement acquisition, other costs and construction camps and laydowns are presented in Table 15.

Table 15: CPA2 land and easement acquisition cost estimate (by landholding type)

Land acquisition cost items	Original route	Greenhills route
1.Private landholdings		
1.1 Compensation		
1.2 Stamp duty		
1.3 Permanent disturbance		
1.4 Temporary disturbance		
Private landholdings sub- total		
2. Government landholdings		
2.1 Public landholdings		
2.1.1 Land compensation		
2.1.2 Stamp duty- compensation		
2.2 Substitute forest land		
2.2.1 Substitute forest land compensation		

2.2.2 Stamp Duty - Substitute Forest land		
2.3 Timber (Indufor)		
2.4 Permanent disturbance		
2.5 Temporary disturbance		
Public landholdings sub-total		
3. Other costs		
3.1 Statutory fees, valuations, and legal costs		
Other costs sub-total		
4. Construction camps and laydowns		
4.1 Construction camps and laydown areas	3,009,185	3,009,185
Construction camps and laydown areas sub-total	\$3,009,185	\$3,009,185
TOTAL COST ESTIMATE	\$ 202,243,682	\$ 197,288,633

9 Conclusion

Land and easement acquisition for the Humelink transmission project is a critical predecessor step to project construction activities.

Transgrid's land and easement acquisition framework embodies good regulation, practices and expected norms that have guided CPA-1 early works for acquiring land for a new substation and establishing option agreements for transmission line easements.

The next stage of work under CPA2 project implementation for land and easement acquisition will focus on negotiating voluntary option agreements for private and public landholdings wherever possible. The adoption of sentiment-based premiums above assessed compensation for private landholdings using evidence from comparable projects provides a proven way to maximise voluntary acquisition of land and easements for the project. This approach is most likely to secure a social licence to operate over the long asset life of the transmission infrastructure. A modest provision has been made for compulsory acquisition which will only be considered a last resort after meaningful negotiations have failed.

Estimates for public landholdings, construction camps and laydown areas have been reviewed and been benchmarked against comparable projects. Forest land and timber costs are based on estimates from Transgrid's specialist forestry consultant. Statutory costs have been estimated based on recent statutory valuation and legal costs and has considered the number of cases progressing to compulsory acquisition benchmarked against comparable linear infrastructure projects.

The total cost estimate for easement acquisition costs for the original route is \$ 202,243,682 and the Greenhills route is \$197,288,633. This CPA2 cost estimate represents a responsible up-front investment in building respectful relationships with landholders early. Good practice and evidence from comparable projects indicates that a robust framework for land and easement acquisition pays dividends in project construction, commissioning and decades of operations and maintenance.

DISCLAIMER

This restricted desktop cost estimate has been undertaken without a physical inspection of the affected properties in this instance. We reserve the right to amend the estimate should a physical inspection of the site be undertaken in the future resulting in additional information that materially affects the market rental valuation detailed herein.

This restricted desktop cost estimate is current at the date of issue only. The cost estimate assessed herein may change significantly and unexpectedly over a relatively short period of time (including as a result of general market movements or factors specific to the particular property). Liability for losses arising from such subsequent changes in value is excluded as is liability where the valuation is relied upon after the date of the estimate.

Contaminants such as asbestos, chemicals, toxic wastes, or other potentially hazardous materials could, if present, adversely affect the value of the property. We advise the Valuer is not qualified to detect such substances, quantifying the impact on values, or estimate the remedial costs. Therefore, unless otherwise stated in this report, the extent of hazardous substances, which may or may not be represented on or in the property, was not considered by the Valuer in the conclusion of value.

We also emphasise we have not carried out a structural survey of any improvements nor have we examined them for signs of timber infestation, concrete cancer and the like and accordingly cannot be responsible for the consequence of such defects. Furthermore, no soil analysis or geological studies were ordered or made in conjunction with this report.

The Australian Property Institute (API) considers that there are inherent risks to a client who relies on a restricted assessment/valuation but acknowledges that the client has expressed a commercial need for such an assessment to be carried out by Valuers. The instructing party expressly acknowledges and confirms that:

- The valuer has not carried out the usual range of enquiries that a valuer is required to make by professional practice standards (as determined by the API and at law in carrying out a Valuation of property and that this is at the specific request of the client;
- The client fully understands and accepts the risks inherent in such circumstances;
- Inspection of the property has not been carried out as the date of the estimate;
- The instructing party agrees to accept the restricted valuation assessment having regard to the risks inherent in relying upon a valuation which does not have the benefit of a comprehensive inspection; and
- Acknowledges the valuation has been premised within the limitations of restricted assessment and the limited information provided/available.

This restricted desktop cost estimate has been prepared on the basis that full disclosure of all information and facts which may affect the valuation has been made to us. We do not accept any liability or responsibility whatsoever for the valuation if full disclosure has not been made. Furthermore, we do not accept responsibility for any consequential error or defect in the desktop cost estimate which has resulted from any error, omission or inaccuracy in data or information supplied by the client or its officers and agents.

Where land and buildings have been valued on a market basis it should be noted the Privacy Act prevents the disclosure of vendors and purchaser names and this information has been excluded from the Government sales data provided to us. Whilst we have made reasonable efforts to eliminate sales from our analysis which do not conform with the definition of the value contained herein, we cannot verify the accuracy of sales upon which our judgements are based.

Government sales data provided may include GST. We have made reasonable efforts to determine if GST or the Margin Scheme has been applied and made allowance for such amounts if applicable. We cannot verify the accuracy of sales upon which our judgements are based.

This cost estimate is solely for the use of the party by whom we were instructed and for no other purpose. We owe no duty of care to any third party who become aware of this valuation and, without our knowledge, chooses to act or rely on the whole or any part of it.

Reliance on this cost estimate is permitted only:

1. by a party expressly identified by the report as being permitted to rely on it;
2. when the given party has received the report directly from JLL; and
3. for a purpose expressly identified by the report as being a permitted use of the report.