NDIA SDA Pricing Review 2022-23

Technical Research Report – Land Cost Report

Reliance Restricted

12 May 2023

EY
Building a better working world

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Our conclusions are based, in part, on the assumptions stated and on information from both publicly available information and other sources used during the course of the engagement. The modelled outcomes are contingent on the collection of assumptions as agreed with NDIA and no consideration of other market events, announcements or other changing circumstances are reflected in this Report. Neither Ernst & Young nor any member or employee thereof undertakes responsibility in any way whatsoever to any person in respect of errors in this Report arising from incorrect information provided by the NDIA or other information sources used.

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1 Executive Summary

Purpose and Findings

Purpose

Ernst & Young ("EY") has been engaged by the National Disability Insurance Agency ("NDIA") to assist in undertaking technical research and analysis to support the Specialist Disability Accommodation ("SDA") Pricing Review. This report will examine land costs as a key input to assist the NDIA in developing new SDA benchmark prices. Further information on the SDA Pricing Review can be found on the NDIS website (NDIS website).

Land Cost Method

- Land area assumptions are based on analysis of planning controls and advice provided by Kennedy Associates Architects, "KAA".
- Analysis of land costs was based on CoreLogic market trends data to estimate the land cost at an SA4 level. CoreLogic data includes improved (land and building) and unimproved (land only) market transactions.
- EY adopted the 25th percentile data values as agreed with the NDIA ,to reflect the lower value of unimproved sites or lower value improved sites which may be more suitable for redevelopment.
- Analysis of land cost data was limited by three key factors:
  1. **Valuer General data**: EY was unable to obtain current Valuer General data as each State and Territory publishes different reports to varying levels of granularity. Several avenues to source this data were investigated including procuring the data from CoreLogic however no reliable data was able to be obtained. Without the Valuer General data, analysis was limited to the CoreLogic data which includes both unimproved and improved market transactions.
  2. **Granularity of data**: Land costs vary significantly across SA4 regions therefore assessing data and developing land cost estimates at an SA3 level may be more appropriate. While this was the intention through our initial methodology, the data analysed did not allow for this. Through the process of removing outliers in the CoreLogic market trends data, some SA3 areas had limited data points remaining to determine an average value with a high degree of confidence. The absence of Valuer General data did not allow for further analysis to support the CoreLogic data at an SA3 level.
  3. **Market volatility:** The economic conditions and market trends over the past three years have contributed to increased market volatility in land prices. For example the CoreLogic 36 month change in median sales prices to December 2022 shows an average national increase of 15.3% annually, which is irregular growth when compared with the 20 year average annual growth of 7.0%. Within the national averages there is volatility at an SA4 level, with *Sydney – Northern Beaches* sales prices decreasing 6.4% and *QLD - Wide Bay* increasing 25.6% over the same 12 month period to December 2022. As such, analysis of the previous 12 months transaction data may not be reflective of current and short to medium term land costs.

Purpose and Findings

Land Cost Findings

- The national average annual 5 year compound growth rate in median transaction (improved and unimproved) values is 7.8% based on CoreLogic data. Across SA4 regions this ranged from 2.2% to 15.8% of average annual growth based on CoreLogic data.
- The estimated median capital city land cost is $1,136 per square meter based on our analysis of CoreLogic data as at December 2022. Table 1 on the following pages provides a summary of the estimated residential value per square meter for each SA4 region per our analysis of CoreLogic 25th percentile residential sales (improved and unimproved) data.

Land Cost Results

Table 1 provides a summary of the estimated residential value as at December 2022 per square meter for each SA4 region per our analysis of CoreLogic 25th percentile residential sales (improved and unimproved) data. Using the 25th percentile rather than median represents the likely average cost of land to a developer within each SA4 region and reduces the limitation of CoreLogic data including improved sales. It also provides the average annual growth rate of residential sale prices over the last 5 years at an SA4 level.

Table 1: Estimated Residential Values per Square Meter

SA4	Classification	Value	Land Size (sqm)	$/sqm	Average Annual Growth Rate
New South Wales					
Capital Region	Outer Regional	$717,375	2,066	$347	12.2%
Central Coast	Inner Regional	$814,909	931	$875	8.6%
Central West	Outer Regional	$547,500	2,820	$194	10.8%
Coffs Harbour - Grafton	Outer Regional	$754,500	2,674	$282	10.8%
Far West and Orana	Remote	$284,100	3,143	$90	8.1%
Hunter Valley exc Newcastle	Outer Regional	$605,925	1,745	$347	9.7%
Illawarra	Outer Regional	$799,188	663	$1,206	8.0%
Mid North Coast	Outer Regional	$641,125	2,143	$299	10.7%
Murray	Outer Regional	$368,225	2,222	$166	9.9%
New England and North West	Outer Regional	$384,750	2,886	$133	7.6%
Newcastle and Lake Macquarie	Outer Regional	$706,806	740	$955	8.8%
Richmond - Tweed	Outer Regional	$939,852	1,796	$523	12.0%
Riverina	Outer Regional	$386,766	2,614	$148	10.0%
Southern Highlands and Shoalhaven	Outer Regional	$840,438	2,104	$399	10.1%
Sydney - Baulkham Hills and Hawkesbury	Inner Regional	$1,686,006	1,397	$1,207	5.8%
Sydney - Blacktown	Major City	$765,393	614	$1,246	4.9%
Sydney - City and Inner South	Major City	$1,526,100	245	$6,228	2.9%
Sydney - Eastern Suburbs	Major City	$2,460,250	405	$6,081	6.3%
Sydney - Inner South West	Major City	$1,073,339	578	$1,858	4.0%
Sydney - Inner West	Major City	$1,788,341	486	$3,683	4.8%
Sydney - North Sydney and Hornsby	Inner Regional	$2,020,893	803	$2,517	4.8%
Sydney - Northern Beaches	Major City	$2,207,500	785	$2,811	6.8%

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm	Average Annual Growth
Sydney - Outer South West	Inner Regional	$784,417	1,108	$708	5.6%
Sydney - Outer West and Blue Mountains	Inner Regional	$799,602	1,303	$614	6.0%
Sydney - Parramatta	Major City	$1,052,800	609	$1,728	3.6%
Sydney - Ryde	Major City	$1,726,250	798	$2,164	5.4%
Sydney - South West	Major City	$832,438	742	$1,122	5.4%
Sydney - Sutherland	Major City	$1,333,438	702	$1,899	4.9%
Victoria					
Ballarat	Outer Regional	$492,650	1,529	$322	13.0%
Bendigo	Outer Regional	$577,875	1,690	$342	11.6%
Geelong	Inner Regional	$551,667	725	$761	11.4%
Hume	Outer Regional	$442,171	3,070	$144	13.0%
Latrobe - Gippsland	Inner Regional	$463,341	2,310	$201	12.7%
Melbourne - Inner	Major City	$1,305,083	412	$3,170	2.8%
Melbourne - Inner East	Major City	$1,506,875	752	$2,003	2.2%
Melbourne - Inner South	Major City	$1,133,000	595	$1,903	3.9%
Melbourne - North East	Major City	$781,575	1,282	$609	4.5%
Melbourne - North West	Inner Regional	$694,550	2,141	$324	5.2%
Melbourne - Outer East	Major City	$829,292	1,570	$528	4.3%
Melbourne - South East	Inner Regional	$719,795	952	$756	4.9%
Melbourne - West	Major City	$591,107	582	$1,016	4.4%
Mornington Peninsula	Major City	$976,920	1,557	$628	8.2%
North West	Outer Regional	$294,850	2,799	$105	11.8%
Shepparton	Outer Regional	$392,188	2,089	$188	12.7%
Warrnambool and South West	Outer Regional	$458,750	1,916	$239	14.0%
Northern Territory					
Darwin	Major City	$478,810	826	$580	3.4%
Northern Territory - Outback	Remote	$415,781	2,754	$151	3.8%

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm	Average Annual Growth Rate
Western Australia					
Bunbury	Outer Regional	$348,269	1,170	$298	5.2%
Mandurah	Inner Regional	$362,500	1,076	$337	4.7%
Perth - Inner	Major City	$1,316,038	583	$2,255	6.3%
Perth - North East	Major City	$451,426	854	$529	4.0%
Perth - North West	Major City	$508,651	580	$877	4.5%
Perth - South East	Inner Regional	$497,474	818	$608	4.0%
Perth - South West	Major City	$528,146	702	$752	4.8%
Western Australia – Outback South	Remote	$331,571	1,031	$322	12.2%
Western Australia – Outback North	Remote	$227,855	2,281	$100	5.8%
Western Australia - Wheat Belt	Outer Regional	$370,708	3,047	$122	4.6%
Australian Capital Territory					
Australian Capital Territory	Major City	$684,117	829	$826	9.3%
Tasmania					
Hobart	Major City	$691,260	1,618	$427	13.3%
Launceston and North East	Outer Regional	$433,286	2,854	$152	14.7%
South East	Outer Regional	$578,250	7,984	$72	15.8%
West and North West	Outer Regional	$343,227	1,601	$214	13.3%

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm	Average Annual Growth Rate
Queensland					
Brisbane - East	Major City	$711,123	922	$772	9.2%
Brisbane - North	Major City	$725,922	645	$1,126	9.8%
Brisbane - South	Major City	$819,742	645	$1,271	9.1%
Brisbane - West	Major City	$949,780	829	$1,146	9.6%
Brisbane Inner City	Major City	$1,132,023	503	$2,250	8.5%
Cairns	Outer Regional	$419,875	1,746	$241	6.1%
Central Queensland	Outer Regional	$295,823	1,503	$197	7.7%
Darling Downs - Maranoa	Outer Regional	$300,000	5,188	$58	4.6%
Gold Coast	Inner Regional	$806,014	1,156	$697	10.5%
Ipswich	Inner Regional	$458,719	1,298	$353	9.0%
Logan - Beaudesert	Inner Regional	$553,599	1,573	$352	8.6%
Mackay - Isaac – Whitsunday	Outer Regional	$347,271	1,241	$280	7.2%
Moreton Bay - North	Inner Regional	$612,357	1,202	$509	10.3%
Moreton Bay - South	Inner Regional	$687,286	1,247	$551	9.8%
Outback	Remote	$188,375	1,588	$119	3.9%
Sunshine Coast	Inner Regional	$835,342	2,011	$415	12.5%
Toowoomba	Outer Regional	$432,357	1,708	$253	7.3%
Townsville	Outer Regional	$314,714	1,259	$250	4.8%
Wide Bay	Outer Regional	$394,924	2,430	$163	10.0%
South Australia					
Adelaide - Central and Hills	Major City	$881,438	841	$1,049	8.1%
Adelaide - North	Inner Regional	$461,938	903	$512	8.6%
Adelaide - South	Major City	$635,910	796	$799	9.0%
Adelaide - West	Major City	$599,139	573	$1,046	8.5%
Barossa - Yorke - Mid North	Inner Regional	$294,080	2,353	$125	6.6%
Outback	Remote	$165,833	1,717	$97	2.2%
South East	Inner Regional	$337,729	2,483	$136	8.2%

Source: EY analysis of CoreLogic Market Trends, December 2022

2 Introduction

Background, Scope and Limitations

Background

EY has been engaged by the NDIA to assist in undertaking technical research and analysis to support the SDA Pricing Review. This report examines land costs as a key input to assist the NDIA in developing new SDA benchmark prices.

Land costs form a key assumption within the SDA Pricing Model in determining funding required by a developer to acquire land to develop new build SDA properties.

Scope

This report presents the findings from research and analysis on land costs for SDA in response to the below report scope provided by the NDIA.

1. Develop statistical estimates of the cost per square meter of undeveloped and vacant land in each of the 88 SA4 regions, where the land is valued based on its highest and best permitted use.

Limitations

Based on the scope of work and the information available to us we have performed a like-for-like comparison. To enable this, certain assumptions have also been made. Obtaining Valuer General data was challenging as each State and Territory publishes different reports and varying levels of information. Several avenues were investigated including utilising the Government Reference Group, procuring data from CoreLogic and extracting publicly available information from each respective Valuer General however no suitable reliable data was able to be obtained. Without the Valuer General data analysis was limited to the CoreLogic data which includes both unimproved and improved market transactions.

This Report is limited in time and scope, other more detailed reviews or investigations may identify additional issues or considerations than this Report has noted. The results of this work are limited by the availability and quality of data. The results of this work and procedures performed do not constitute an audit, a review or other form of assurance in accordance with any generally accepted auditing, review or other assurance standards, and accordingly EY does not express any form of assurance.

Our findings are based, in part, on the assumptions stated and on information from both publicly available information and other sources used during the course of the engagement. The modelled outcomes (where appliable) are contingent on the assumptions as agreed with the NDIA and no consideration of other market events, announcements or other changing circumstances are reflected in this Report. Neither Ernst & Young nor any member or employee thereof undertakes responsibility in any way whatsoever to any person in respect of errors in this Report arising from incorrect information provided by the NDIA and other information sources used.

Definitions

When performing analysis to estimate land costs, consideration was given to both unimproved capital value and improved value as defined below:

- Unimproved capital value reflects the amount land only is worth subject to its highest and best use i.e. the price that a parcel of land would be expected to transact for without any above ground or structural improvements. The Valuer General of each State and Territory reports on unimproved capital value. Market transactions of vacant land can also be used to estimate unimproved capital value, however in established regions vacant land transactions can be limited.
- Improved value reflects that amount that both the land and structural improvements are worth subject to highest and best use i.e. the price that a dwelling on a parcel of land would be expected to transact for. Using market transactions and sales evidence is a methodology for estimating improved value.

Essentially, the scope of this report is to estimate the value of the unimproved capital value of land only. Due to the limitations outlined on Page 23, Valuer General data was unable to be obtained and therefore does not form part of our analysis. The CoreLogic market trends data used provides information on all residential sales at an SA2 level, which incorporates both improved and unimproved transactions.

In order to account for the differences between improved and unimproved value, the 25th percentile of the CoreLogic data has been assessed rather than the median as agreed to by the NDIA.

Methodology

EY undertook this work in collaboration with our consortium partner Kennedy Associates Architect (KAA) who bring a depth of experience in SDA design and planning through their work across feasibility studies for both Government and private sector clients. Additional information on KAA's experience and qualifications can be found in our Benchmark Construction Cost Technical Report.

The approach in undertaking the Land Cost research methodology is detailed below.

1. Historic Assumptions

- Identified historic assumptions utilised by NDIA within the historic SDA Pricing Model to inform land costs, land areas and applied growth rates.
- Provided an overview of the historic methodology and the application of the assumptions used by NDIA within the existing SDA Pricing Model.

2. Collecting and Processing Data

- Proposed land data would be collected at an SA3 level which is more granular, and reduces the impact of large SA4 regions where there is significant land cost variance over or understating the cost of land. SA3 data consists of 340 regions and are able to provide higher confidence in land costs.
- Source aggregated sales and growth data from CoreLogic to provide:
  - A view on brownfield value compared to greenfield, as relevant in areas where there is limited vacant land available.
  - A consistent approach across each State and Territory, as each Valuer General may utilise different valuation assumptions and release different data tables.
  - A sense check against Valuer General data provided.

Land value data was intended to be sourced from the Valuer General within each State and Territory at an SA3 region level. Valuer General provide unimproved land values only.

We note that when collecting Valuer General and SA3 level data time delays, inaccuracies and lack of quality data available limited our ability to deliver the intended methodology. As such, our findings have not included Valuer General information and remain at an SA4 level. Further information on the limitations is outlined on Page 24.

3. Analysis of Data and Key Findings

- Researched and defined average expected land areas required for efficient construction of SDA property building types.
- Produced a schedule of land costs (per square metre) based off information obtained from CoreLogic within each State and Territory.
- Conducted research and analysis to determine historic land value growth.

3 Background

Historic Methodology and Assumptions

The land cost input forms a key assumption within the SDA Pricing Model ("the Model") used by the NDIA as it is a measure of the cost to purchase land for SDA development.

The historic assumptions regarding land cost were assessed by the NDIA based on the median land value per SQM at a SA4 geographical level of granularity.

The median land value calculation was performed by the relevant State or Territory land authority or based on data supplied by the authority (either publicly available or by request). Due to differences in information quality and availability, alternative methods were applied in some jurisdictions, with the aim of achieving similar results as far as practicable.

The land areas were historically based on the below key assumptions by NDIA:

- That an apartment block of 40 units would be constructed on a block of approximately 2,000 SQM in size.
- That group accommodation for 5 residents would be constructed on a block of around 900 SQM (based on NSW Hunter Expression of Interest indication of 800-1,000 SQM).
- That other non-apartment accommodation (including villas, duplexes, townhouses and houses) would require a land area that was proportional to the number of residents and calculated on a pro-rata basis compared with a 5 resident group home. Resulting in 180 SQM being applied per resident.

Table 2 shows the adopted land area per Build Type.

The historic assumption escalates land costs by CPI each year.

Table 2: Historic Land Area Assumptions

Dwelling type	Beds	Assumed Dwellings per Parcel of Land	Land per Dwelling	Total Land
Apartment	1	40	50	2,000
	2	40	50	2,000
Villa/ Townhouse/ Duplex	1	5	180	900
	2	2	360	720
	3	2	540	1,080
House	3	1	540	540
Group home	4	1	720	720
	5	1	900	900
	6	1	1080	1,080

Source: Historic SDA Pricing Model

4 Analysis

Land Area Assumptions

The land area required for the development of each Build Type and Design Category is a key assumption for determining the total land cost that would reasonably be incurred to purchase land for the development of New Build SDA. There are many factors which impact the size of land required for a development including, but not limited to:

1. SDA Design Standard "Design Standard" (2019): The Design Standard includes requirements such as areas of egress for Robust, minimum pedestrian accessways and ramp where there are level differences.
2. Variation in planning controls and zoning: Planning controls such as site coverage, height limits and setbacks vary between each State, Territory and local council. This may have a material impact on the land area requirements for example:
    - The same house would have different land area requirements in a regional area which has a minimum lot size that is larger than a metropolitan area.
    - As stated in the Benchmark Construction Cost Technical Report, apartment costs have been estimated based on a development comprising of 40 apartments. A council height limit of three storeys compared to a height limit of six storeys would impact the land area requirements for the block of 40 apartments.
3. Individual site characteristics: Individual parcels of land will have different characteristics which will result in site specific area requirements. The shape, topography, frontage and presence of flood or bushfire areas all impact the land area.

The land area assumptions are for cost estimation purposes only and may not comply in all regions or apply for individual site requirements. The land area assumptions are based on the dwellings per parcel of land assumption as outlined within the Benchmark Construction Cost Technical Report. Table 3 provides a summary of this below.

Table 3: Assumed Dwellings per Parcel of Land by Build Type

Build Type	SDA Residents	Assumption
Apartment	1, 2 and 3	40 apartments
Villa/ Townhouse/ Duplex	1	3 dwellings for Robust, 5 for all other Design Categories
	2	2 dwellings
	3	
House	2 and 3	1 detached house
Group home	4 and 5	

Source: Benchmark Construction Cost Technical Report, EY 2023

The NDIS Pricing Arrangements for SDA state that "Each house must have a land area that keeps with similar properties in the neighbourhood". We acknowledge that different regions and neighbourhoods have different minimum and typical lot sizes which may result in certain SDA Build Types being unsuitable for that region or requiring additional land area. For example, suburbs with small lot sizes may have limited options for land area which can accommodate a Group Home. Similarly, in a regional area with large minimum lot sizes a House may be developed on a larger land area.

Land Area Assumptions

The land area assumptions have been developed to determine what a reasonable parcel of land is required for the efficient provision of SDA. The land area required for a project will be influenced by local planning controls and individual site characteristics and may also be impacted by the availability of land for purchase.

House and Group Home Area Assumption

House and Group Home land areas have been provided by KAA as part of the reference designs developed for the Benchmark Construction Cost Technical Report. KAA based the land area requirements on Victorian planning controls as they advised these are the most comparable with other States and Territories.

The GFA and configuration of each Design Category informed the land area assumption adopted. Table 4 outlines the boundary setback assumptions adopted by KAA in determining the land areas.

Table 4: Boundary Setback Assumptions

Boundary Setback	Setback (SQM) Assumption
Front setback	4.5 sqm to building 5.5 sqm to garage
Side setback	6.0 sqm from rear wall
Rear setback	1.5 sqm minimum

Source: KAA reference designs, 2022

Across all House and Group Home configurations KAA's assumptions represented an average site coverage ratio of 41% enclosed floor area to land area. EY consider this reasonable as planning controls typically have a maximum site coverage of 50%.

Apartment and Villa/ Townhouse/ Duplex Area Assumption

While reference designs were provided for individual apartments and villas, no reference designs were developed by KAA for the overall site and communal areas.

EY have used Archistar software to assess planning controls across various local councils in each State and Territory to understand what a reasonable site coverage assumption would be for apartments and villas. Our research found that site coverage for villas, townhouses and duplex's typically ranged from 50% to 60%, whereas apartments typically ranged from 50% to 80%.

We have adopted a site coverage ratio of 50% for villas, townhouses and duplex's and 65% for apartments. For villas, townhouses and duplex's where there is minimal difference in GFA across Design Categories we have adopted the same land area.

Refer to ***Annexure C – Apartment and Villa/ Townhouse/ Duplex Area Calculations*** for the detailed site coverage calculations.

Table 5 represents the new land area assumptions on a rate per square meter for each Build Type and Design Category.

Table 5: Land Area (SQM) per Dwelling

Dwelling type	Beds	Basic	Improved liveability		Fully accessible		Robust		High Physical Support	
			No OOA	With OOA	No OOA	With OOA	No OOA	With OOA	No OOA	With OOA
Apartment	1	29	30	N/A[1]	31	N/A[1]	N/A[2]	N/A[2]	31	N/A[1]
	2 (1 Resident)	37	40	N/A[1]	42	N/A[1]	N/A[2]	N/A[2]	42	N/A[1]
	2 (2 Resident)	37	41	N/A[1]	43	N/A[1]	N/A[2]	N/A[2]	43	N/A[1]
	3	53	57	N/A[1]	58	N/A[1]	N/A[2]	N/A[2]	58	N/A[1]
Villa/ Townhouse/ Duplex	1	150	150	160	150	160	140	128	150	160
	2	200	200	214	200	214	200	214	200	214
	3	300	300	321	300	321	300	321	300	321
House	2	287	464	493	490	519	464	493	493	522
	3	297	468	518	508	538	468	518	511	541
Group home	4	359	534	579	584	613	534	579	587	615
	5	366	585	614	619	663	585	614	619	663

Source: KAA reference designs, 2022, Archistar, EY analysis

1. A land area has not been developed for apartments with OOA, as OOA is provided through a separate apartment and the SDA Pricing Model calculates this.
2. No land area for Robust apartments has been developed, as there is no allowance for these within the SDA Pricing Arrangements.

Land Value

The land value assumptions have been developed to determine what a reasonable average land value is, and estimate the efficient cost of land for providing SDA. The assumption aims to ensure that land can be purchased within the SA4 area, but does not mean that any parcel of land is suitable for SDA.

There are many factors which impact the value of land including, but not limited to:

1. Variation in planning controls and zoning: Planning controls such as zoning vary between each State, Territory and local council. This may have a material impact on the land value as zoning is a key driver of highest and best use, with higher density residential zonings typically achieving higher land values to reflect the potential yield of the parcel of land.
2. Individual site characteristics: Individual parcels of land have different characteristics which impact value. The size, shape, topography, frontage and presence of flood or bushfire areas all impact the land value.
3. Location: Where a parcel of land is situated, from both a suburb and individual lot perspective impacts the land value. Across an SA4 region land values can vary based on suburb prestige and proximity to services (public transport, hospitals, shops etc).
4. Availability of land: Limited availability of land suitable for development can not only impact land values, but increase the difficulty in sourcing vacant land with no improvements. In established brownfield locations developers may consider purchasing land with improvements suitable for redevelopment i.e. an older house nearing the end of its economic life.

Analysis was conducted on CoreLogic market trends data to estimate the land cost at an SA4 level. The CoreLogic data sourced incorporates all residential market transactions on both an improved and unimproved basis at an SA2 level. Therefore, rather than using the median EY adopted the 25th percentile data values to reflect the lower value of unimproved sites or lower value improved sites where the asset is reaching the end of its economic life which may be more suitable for redevelopment. Where required, outliers were removed at an SA2 level.

An overview of each step taken to calculate the estimate of value per square meter was calculated is provided below:

1. Divide the 25th percentile residential House sales price as at December 2022 by the average land size for each individual SA2 Australia-wide, resulting in a rate per square meter.
2. Remove any SA2's that are outliers, such as those where the average land area may be impacting the value on a rate per square meter. An example of this would be a regional location where the average land area is over 10,000 SQM and dilutes the value per square meter that would be achieved on a parcel of land within the regional town.
3. Calculate the average of each included SA2 rate per square meter to determine the average at an SA4 level

Refer to ***Annexure D – CoreLogic Market Trends Data*** for a detailed overview of the CoreLogic data analysed.

Limitations

Land cost data was limited by the below three factors, therefore an alternative approach of escalating the historic land cost Analysis of land cost data was limited by the below three factors:

1. Difficulty in obtaining Valuer General data: obtaining Valuer General data was challenging as each State and Territory publishes different reports and varying levels of information. Valuer General data reports on the unimproved land value which would support land value assumptions. Several avenues were investigated including utilising the Government Reference Group, procuring data from CoreLogic and extracting publicly available information from each respective Valuer General however no suitable reliable data was able to be obtained. Without the Valuer General data analysis was limited to the CoreLogic data which includes both unimproved and improved market transactions.
2. Granularity of data: Land costs vary significantly across SA4 regions therefore assessing data and developing land cost estimates at an SA3 level may be more appropriate. While this was the intention through our initial methodology, the data analysed did not allow for this. Through the process of removing outliers in the CoreLogic market trends data, some SA3 areas had limited data points remaining to determine an average value with a high degree of confidence. The absence of Valuer General data did not allow for further analysis to support the CoreLogic data at an SA3 level.
3. Market volatility: The economic conditions and market trends over the past three years have contributed to increased market volatility in land prices. For example the CoreLogic 36 month change in median sales prices to December 2022 shows an average national increase of 15.3% annually, which is irregular growth when compared with the 20 year average annual growth of 7.0%. Within the national averages there is volatility at an SA4 level, with Sydney – Northern Beaches sales prices decreasing 6.4% and QLD - Wide Bay increasing 25.6% over the same 12 month period to December 2022. As such, analysis of the previous 12 months transaction data may not be reflective of current and short to medium term land costs.

Based on these limitations, an alternative approach of escalating the historic land cost assumptions based on real market growth could be considered by the NDIA. Growth assumptions have been outlined on Page 28.

Land Cost Input

Table 6 provides a summary of the estimated residential value per square meter for each SA4 region per our analysis of CoreLogic 25th percentile residential sales (improved and unimproved) data. Using the 25th percentile rather than median represents the likely average cost of land to a developer within each SA4 region and reduces the limitation of CoreLogic data including improved sales. The data is as at December 2022.

Table 6: Estimated Residential Values per Square Meter

SA4	Classification	Value	Land Size (sqm)	$/sqm
New South Wales				
Capital Region	Outer Regional	$717,375	2,066	$347
Central Coast	Inner Regional	$814,909	931	$875
Central West	Outer Regional	$547,500	2,820	$194
Coffs Harbour - Grafton	Outer Regional	$754,500	2,674	$282
Far West and Orana	Remote	$284,100	3,143	$90
Hunter Valley exc Newcastle	Outer Regional	$605,925	1,745	$347
Illawarra	Outer Regional	$799,188	663	$1,206
Mid North Coast	Outer Regional	$641,125	2,143	$299
Murray	Outer Regional	$368,225	2,222	$166
New England and North West	Outer Regional	$384,750	2,886	$133
Newcastle and Lake Macquarie	Outer Regional	$706,806	740	$955
Richmond - Tweed	Outer Regional	$939,852	1,796	$523
Riverina	Outer Regional	$386,766	2,614	$148
Southern Highlands and Shoalhaven	Outer Regional	$840,438	2,104	$399
Sydney - Baulkham Hills and Hawkesbury	Inner Regional	$1,686,006	1,397	$1,207
Sydney - Blacktown	Major City	$765,393	614	$1,246
Sydney - City and Inner South	Major City	$1,526,100	245	$6,228
Sydney - Eastern Suburbs	Major City	$2,460,250	405	$6,081
Sydney - Inner South West	Major City	$1,073,339	578	$1,858
Sydney - Inner West	Major City	$1,788,341	486	$3,683
Sydney - North Sydney and Hornsby	Inner Regional	$2,020,893	803	$2,517
Sydney - Northern Beaches	Major City	$2,207,500	785	$2,811

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm
Sydney - Outer South West	Inner Regional	$784,417	1,108	$708
Sydney - Outer West and Blue Mountains	Inner Regional	$799,602	1,303	$614
Sydney - Parramatta	Major City	$1,052,800	609	$1,728
Sydney - Ryde	Major City	$1,726,250	798	$2,164
Sydney - South West	Major City	$832,438	742	$1,122
Sydney - Sutherland	Major City	$1,333,438	702	$1,899
Victoria				
Ballarat	Outer Regional	$492,650	1,529	$322
Bendigo	Outer Regional	$577,875	1,690	$342
Geelong	Inner Regional	$551,667	725	$761
Hume	Outer Regional	$442,171	3,070	$144
Latrobe - Gippsland	Inner Regional	$463,341	2,310	$201
Melbourne - Inner	Major City	$1,305,083	412	$3,170
Melbourne - Inner East	Major City	$1,506,875	752	$2,003
Melbourne - Inner South	Major City	$1,133,000	595	$1,903
Melbourne - North East	Major City	$781,575	1,282	$609
Melbourne - North West	Inner Regional	$694,550	2,141	$324
Melbourne - Outer East	Major City	$829,292	1,570	$528
Melbourne - South East	Inner Regional	$719,795	952	$756
Melbourne - West	Major City	$591,107	582	$1,016
Mornington Peninsula	Major City	$976,920	1,557	$628
North West	Outer Regional	$294,850	2,799	$105
Shepparton	Outer Regional	$392,188	2,089	$188
Warrnambool and South West	Outer Regional	$458,750	1,916	$239
Northern Territory				
Darwin	Major City	$478,810	826	$580
Northern Territory - Outback	Remote	$415,781	2,754	$151

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm
Western Australia				
Bunbury	Outer Regional	$348,269	1,170	$298
Mandurah	Inner Regional	$362,500	1,076	$337
Perth - Inner	Major City	$1,316,038	583	$2,255
Perth - North East	Major City	$451,426	854	$529
Perth - North West	Major City	$508,651	580	$877
Perth - South East	Inner Regional	$497,474	818	$608
Perth - South West	Major City	$528,146	702	$752
Western Australia – Outback South	Remote	$331,571	1,031	$322
Western Australia – Outback North	Remote	$227,855	2,281	$100
Western Australia - Wheat Belt	Outer Regional	$370,708	3,047	$122
Australian Capital Territory				
Australian Capital Territory	Major City	$684,117	829	$826
Tasmania				
Hobart	Major City	$691,260	1,618	$427
Launceston and North East	Outer Regional	$433,286	2,854	$152
South East	Outer Regional	$578,250	7,984	$72
West and North West	Outer Regional	$343,227	1,601	$214

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	Classification	Value	Land Size (sqm)	$/sqm
Queensland				
Brisbane - East	Major City	$711,123	922	$772
Brisbane - North	Major City	$725,922	645	$1,126
Brisbane - South	Major City	$819,742	645	$1,271
Brisbane - West	Major City	$949,780	829	$1,146
Brisbane Inner City	Major City	$1,132,023	503	$2,250
Cairns	Outer Regional	$419,875	1,746	$241
Central Queensland	Outer Regional	$295,823	1,503	$197
Darling Downs - Maranoa	Outer Regional	$300,000	5,188	$58
Gold Coast	Inner Regional	$806,014	1,156	$697
Ipswich	Inner Regional	$458,719	1,298	$353
Logan - Beaudesert	Inner Regional	$553,599	1,573	$352
Mackay - Isaac – Whitsunday	Outer Regional	$347,271	1,241	$280
Moreton Bay - North	Inner Regional	$612,357	1,202	$509
Moreton Bay - South	Inner Regional	$687,286	1,247	$551
Outback	Remote	$188,375	1,588	$119
Sunshine Coast	Inner Regional	$835,342	2,011	$415
Toowoomba	Outer Regional	$432,357	1,708	$253
Townsville	Outer Regional	$314,714	1,259	$250
Wide Bay	Outer Regional	$394,924	2,430	$163
South Australia				
Adelaide - Central and Hills	Major City	$881,438	841	$1,049
Adelaide - North	Inner Regional	$461,938	903	$512
Adelaide - South	Major City	$635,910	796	$799
Adelaide - West	Major City	$599,139	573	$1,046
Barossa - Yorke - Mid North	Inner Regional	$294,080	2,353	$125
Outback	Remote	$165,833	1,717	$97
South East	Inner Regional	$337,729	2,483	$136

Source: EY analysis of CoreLogic Market Trends, December 2022

Five Year Growth Rates

Due to the limitations with the approach to estimate land value outlined on Page 23, real growth in residential values has been considered. Given these limitations, an interim land cost may be derived by escalating the historic land cost assumptions by the real growth experienced by each SA4 since 2017. CoreLogic have provided average annual compound growth rate in median transaction values for 12 months, 5 years, 10 years and 20 years at an SA2 level. We have assessed the 5 year measure as the most suitable to reflect the market volatility of recent years. Table 7 provides the average annual growth rate of residential sale prices over the last 5 years at an SA4 level.

Table 7: Residential Market Value Growth

SA4	5 Year Average Annual Growth Rate
New South Wales	NSW average 7.5%
Capital Region	12.2%
Central Coast	8.6%
Central West	10.8%
Coffs Harbour - Grafton	10.8%
Far West and Orana	8.1%
Hunter Valley exc Newcastle	9.7%
Illawarra	8.0%
Mid North Coast	10.7%
Murray	9.9%
New England and North West	7.6%
Newcastle and Lake Macquarie	8.8%
Richmond - Tweed	12.0%
Riverina	10.0%
Southern Highlands and Shoalhaven	10.1%
Sydney - Baulkham Hills and Hawkesbury	5.8%
Sydney - Blacktown	4.9%
Sydney - City and Inner South	2.9%
Sydney - Eastern Suburbs	6.3%
Sydney - Inner South West	4.0%
Sydney - Inner West	4.8%
Sydney - North Sydney and Hornsby	4.8%
Sydney - Northern Beaches	6.8%
Sydney - Outer South West	5.6%
Sydney - Outer West and Blue Mountains	6.0%
Sydney - Parramatta	3.6%
Sydney - Ryde	5.4%
Sydney - South West	5.4%
Sydney - Sutherland	4.9%
Victoria	VIC average 8.3%
Ballarat	13.0%
Bendigo	11.6%
Geelong	11.4%
Hume	13.0%
Latrobe - Gippsland	12.7%
Melbourne - Inner	2.8%
Melbourne - Inner East	2.2%
Melbourne - Inner South	3.9%
Melbourne - North East	4.5%
Melbourne - North West	5.2%
Melbourne - Outer East	4.3%
Melbourne - South East	4.9%
Melbourne - West	4.4%
Mornington Peninsula	8.2%
North West	11.8%
Shepparton	12.7%
Warrnambool and South West	14.0%

Source: EY analysis of CoreLogic Market Trends, December 2022

SA4	5 Year Average Annual Growth Rate
Queensland	QLD average 8.3%
Brisbane - East	9.2%
Brisbane - North	9.8%
Brisbane - South	9.1%
Brisbane - West	9.6%
Brisbane Inner City	8.5%
Cairns	6.1%
Central Queensland	7.7%
Darling Downs - Maranoa	4.6%
Gold Coast	10.5%
Ipswich	9.0%
Logan - Beaudesert	8.6%
Mackay - Isaac – Whitsunday	7.2%
Moreton Bay - North	10.3%
Moreton Bay - South	9.8%
Outback	3.9%
Sunshine Coast	12.5%
Toowoomba	7.3%
Townsville	4.8%
Wide Bay	10.0%
South Australia	SA average 7.3%
Adelaide - Central and Hills	8.1%
Adelaide - North	8.6%
Adelaide - South	9.0%
Adelaide - West	8.5%
Barossa - Yorke - Mid North	6.6%
Outback	2.2%
South East	8.2%

SA4	5 Year Average Annual Growth Rate
Western Australia	WA average 5.6%
Bunbury	5.2%
Mandurah	4.7%
Perth - Inner	6.3%
Perth - North East	4.0%
Perth - North West	4.5%
Perth - South East	4.0%
Perth - South West	4.8%
Western Australia – Outback South	12.2%
Western Australia – Outback North	5.8%
Western Australia - Wheat Belt	4.6%
Australian Capital Territory	
Australian Capital Territory	9.3%
Tasmania	TAS average 14.2%
Hobart	13.3%
Launceston and North East	14.7%
South East	15.8%
West and North West	13.3%
Northern Territory	NT average 3.6%
Darwin	3.4%
Northern Territory - Outback	3.8%

Source: EY analysis of CoreLogic Market Trends, December 2022

Other Cost Considerations

When an entity purchases land there are other costs incurred over and above the market value of the land within the transaction. Stamp duty, conveyancing and fees are also incurred by the purchaser at the time of transfer. The historic assumptions used by NDIA incorporated these as "Buying Costs" within the exit fee assumptions however as they are incurred at the time of purchasing land, the NDIA may consider reflecting them as a land cost within the model.

Stamp Duty

Stamp Duty is a tax applied by state and territory governments on the purchase of real estate. The historic model used by NDIA adopts a fixed **4.0%** allowance for stamp duty irrespective of region. EY have provided stamp duty ranges for various states and territories based on asset values between $250,000 to $2,000,000 within ***Annexure B – Total Buying Costs***. The indicative stamp duty rates are based on purchases for investment purposes and reflect a range between 1.4% to 5.5% with an average of 4.3%.

Conveyancing and Other Buying Costs

Conveyancing reflects the process of transferring legal ownership of an asset from a vendor to a purchaser and incorporates other buying costs including mortgage registration and transfer fees. The historic assumption within the Model used by NDIA incorporates these costs based on **0.3%** of the sale price.

Based on our research, conveyancing fees typically range between $800 - $2,200 on a national basis, with higher value transactions incurring fees towards the higher end of the range. For the purposes of determining an appropriate percentage range we have adopted a range of $1,000 to $2,000.

Mortgage registration fees range from $124 to $209 on a national basis and are a fixed fee (i.e. are not influenced by the value of the transaction). Victoria has the lowest fees with Queensland reflecting the highest.

Government transfer fees are impacted significantly depending on the state or territory and the value of the transaction. Notably, New South Wales reflects the lowest government transfer fee of $154 with South Australia reflecting the highest of $18,151.

Table 8: Historic Model Assumptions vs Market Benchmarks

	Model	Benchmark		
	Historic	Min	Ave.	Max
Stamp Duty	4.0%	1.4%	4.3%	5.5%
Plus Conveyancing and other buying costs	0.3%	0.1%	0.4%	1.3%
Equals Total Buying Costs*	4.3%	2.0%	4.7%	6.2%

*Reflects the minimum/maximum ranges based on the overall total buying cost rather than the sum of the minimum/maximum of each component.
Source: Stamp Duty Calculator Australia/NAB/EY Analysis

Total Buying Costs

Each state and territory apply their own rates of stamp duty and other buying costs largely associated with the transaction value of an asset, therefore a matrix approach rather than a single assumption could be considered by the NDIA. Based on our research, total buying costs average 4.7% of the transaction value on a national basis.

Refer to ***Annexure B – Total Buying Costs*** for a breakdown of the abovementioned rates.

5 Appendices

Annexure A: Glossary

Term	Meaning
AVM	CoreLogic's Automated Valuation Model.
Building Type	The Design Category as per the SDA Framework - Apartment, Duplex/Villa/Townhouse, House or Group Home.
Apartment	Self-contained units that are part of a larger residential building.
Duplex, Villa, Townhouse	Separate but semi-attached properties within a single land title or strata titled area. This also includes stand-alone villas or granny-flats.
House	Detached low-rise buildings with garden or courtyard areas with fewer than 4 bedrooms.
Group Home	Houses that have 4 or 5 bedrooms.
Design Category	The Design Category as per the SDA Framework - Basic, Improved Liveability, Fully Accessible, Robust or High Physical Support.
Basic	Housing without specialised design features but with other important SDA characteristics (e.g. location, privacy, shared supports).
Improved Liveability (IL)	Housing that has been designed to improve 'Liveability' by incorporating a reasonable level of physical access and enhanced provision for people with sensory, intellectual or cognitive impairment.
Fully Accessible (FA)	Housing that has been designed to incorporate a high level of physical access provision for people with significant physical impairment.
Robust	Housing that has been designed to incorporate a high level of physical access provision and be very resilient, reducing the likelihood of reactive maintenance and reducing the risk to the participant and the community.
High Physical Support (HPS)	Housing that has been designed to incorporate a high level of physical access provision for people with significant physical impairment and requiring very high levels of support.
Enrolled Dwelling	A dwelling enrolled under section 26 of the *NDIS (Specialist Disability Accommodation) Rules 2020* to provide SDA.
GBA	Gross building area
GFA	Gross floor area
Improved value	Improved value reflects that amount that both the land and structural improvements are worth subject to highest and best use i.e. the price that a dwelling on a parcel of land would be expected to transact for.
NDIA	National Disability Insurance Agency.
NDIS	National Disability Insurance Scheme.

Term	Meaning
SA4	Statistical Areas Level 4 (SA4) are geographical areas. The SA4 regions are the largest sub-State regions in the Main Structure of the Australian Statistical Geography Standard (ASGS). A minimum of 100,000 persons was set for the SA4s, although there are some exceptions to this. In regional areas, SA4s tend to have populations closer to the minimum (100,000 - 300,000). In metropolitan areas, the SA4s tend to have larger populations (300,000 - 500,000).
SA3	Statistical Areas Level 3 (SA3) are geographical areas. SA3s are often the functional areas of regional towns and cities or clusters of related suburbs around urban commercial and transport hubs within the major urban areas. In general, SA3s are designed to have populations between 30,000 and 130,000 people. However, the creation of meaningful regional areas takes priority over population criteria.
SA2	Statistical Areas Level 2 (SA2) are geographical areas. SA2s generally have a population between 3,000 and 25,000 with an average of about 10,000 people. Their purpose is to represent a community that interacts together socially and economically.
SDA	Specialist Disability Accommodation.
SDA Type	The SDA type under the SDA Framework - Existing, Legacy, New Build or New Build (refurbished).
New Build	An SDA dwelling that was built (has a certificate of occupancy dated) after 1 April 2016 and meets all of the requirements under the SDA Rules and NDIS Price Guide.
Existing	Dwellings built before 1 April 2016 that were used as disability related supported accommodation under a previous State, Territory or Commonwealth scheme. Existing dwellings must substantially comply with the requirements of a new build, and must meet the maximum resident requirement (5 residents or less).
Legacy	Existing dwellings that do not meet the maximum resident requirement of 5 residents or less. Over time, the NDIA will stop making SDA payments towards Legacy dwellings.
New Build (refurbished)	A dwelling that was built before 1 April 2016 but has been significantly refurbished since and now meets all of the requirements for a new build in the SDA Rules and NDIS Price Guide. In order to qualify for as a New Build (refurbished) providers must spend a minimum amount. These minimum amounts are specified per dwelling type in the SDA Price Guide.
Unimproved capital value	Unimproved capital value reflects the amount land only is worth subject to its highest and best use i.e. the price that a parcel of land would be expected to transact for without any above ground or structural improvements. The Valuer General of each State and Territory reports on unimproved capital value. Market transactions of vacant land can also be used to estimate unimproved capital value, however in established regions vacant land transactions can be limited
Historic Model	2016 SDA Pricing Model developed by NDIA.

Annexure B - Total Buying Costs

A worked example of the total estimated asset purchase costs on a State by State Basis is outlined in Table 9 below.

Table 9: Total Estimated Buying Costs

Fee Category	Asset Value	WA	NSW	VIC	QLD	SA	TAS	NT	ACT
Stamp Duty	**$250,000**	$6,935	$7,110	$10,070	$7,175	$8,955	$7,935	$7,857	$3,500
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$238	$154	$687	$484	$2,139	$223	$156	$429
Conveyancing		$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Stamp Duty	**$500,000**	$17,765	$17,590	$25,070	$15,925	$21,330	$18,248	$23,929	$11,400
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$278	$154	$1,272	$1,464	$4,427	$223	$156	$429
Conveyancing		$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Stamp Duty	**$750,000**	$29,741	$28,840	$40,070	$26,775	$35,080	$28,935	$37,125	$22,200
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$338	$154	$1,857	$2,444	$6,714	$223	$156	$429
Conveyancing		$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500
Stamp Duty	**$1,000,000**	$42,616	$40,090	$55,000	$38,025	$48,830	$40,185	$49,500	$36,950
Mortgage Fees		$188	$154	$124	$209	$179	$145	$256	$160
Transfer Fees		$378	$154	$2,442	$3,425	$9,002	$223	$156	$429
Conveyancing		$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500

Source: Stamp Duty Calculator Australia/NAB/EY Analysis

Fee Category	Asset Value	WA	NSW	VIC	QLD	SA	TAS	NT	ACT
Stamp Duty	**$1,250,000**	$55,491	$52,950	$68,750	$52,400	$62,580	$51,425	$61,875	$52,950
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$438	$154	$3,027	$4,405	$11,289	$223	$156	$429
Conveyancing		$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Stamp Duty	**$1,500,000**	$68,366	$66,700	$82,500	$66,775	$76,330	$62,685	$74,250	$68,100
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$478	$154	$3,612	$5,386	$13,576	$223	$156	$429
Conveyancing		$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Stamp Duty	**$1,750,000**	$81,241	$80,450	$96,250	$81,150	$90,080	$73,935	$86,625	$79,450
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$538	$154	$3,612	$6,366	$15,864	$223	$156	$429
Conveyancing		$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Stamp Duty	**$2,000,000**	$94,116	$94,200	$110,000	$95,525	$103,830	$85,185	$99,000	$90,800
Mortgage Fees		$188	$154	$124	$209	$179	$145	$156	$160
Transfer Fees		$578	$154	$3,612	$7,347	$18,151	$223	$156	$429
Conveyancing		$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000

Source: Stamp Duty Calculator Australia/NAB/EY Analysis

The percentage of Total Estimated Buying Costs attributed to the overall asset value on a State by State and average basis are outlined in Table 10 below.

Table 10: Total Estimated Buying Costs by Region and Price Point

Asset Value	Average	WA	NSW	VIC	QLD	SA	TAS	NT	ACT
$250,000	3.67%	3.34%	3.37%	4.75%	3.55%	4.91%	3.72%	3.67%	2.04%
$500,000	4.22%	3.85%	3.78%	5.49%	3.72%	5.39%	3.92%	5.05%	2.60%
$750,000	4.57%	4.24%	4.09%	5.81%	4.12%	5.80%	4.11%	5.19%	3.24%
$1,000,000	4.76%	4.47%	4.19%	5.91%	4.32%	5.95%	4.21%	5.14%	3.90%
$1,250,000	4.96%	4.65%	4.42%	5.91%	4.72%	6.08%	4.30%	5.13%	4.44%
$1,500,000	5.06%	4.74%	4.60%	5.88%	4.96%	6.14%	4.34%	5.10%	4.71%
$1,750,000	5.10%	4.80%	4.73%	5.83%	5.13%	6.18%	4.36%	5.08%	4.69%
$2,000,000	5.13%	4.84%	4.83%	5.79%	5.25%	6.21%	4.38%	5.07%	4.67%

Source: Stamp Duty Calculator Australia/NAB/EY Analysis

The percentage of Estimated Stamp Duty Costs attributed to the overall asset value on a State by State and average basis are outlined in Table 11 below.

Table 11: Estimated Stamp Duty by Region and Price Point

Asset Value	Average	WA	NSW	VIC	QLD	SA	TAS	NT	ACT
$250,000	2.98%	2.77%	2.84%	4.03%	2.87%	3.58%	3.17%	3.14%	1.40%
$500,000	3.78%	3.55%	3.52%	5.01%	3.19%	4.27%	3.65%	4.79%	2.28%
$750,000	4.15%	3.97%	3.85%	5.34%	3.57%	4.68%	3.86%	4.95%	2.96%
$1,000,000	4.39%	4.26%	4.01%	5.50%	3.80%	4.88%	4.02%	4.95%	3.70%
$1,250,000	4.58%	4.44%	4.24%	5.50%	4.19%	5.01%	4.11%	4.95%	4.24%
$1,500,000	4.71%	4.56%	4.45%	5.50%	4.45%	5.09%	4.18%	4.95%	4.54%
$1,750,000	4.78%	4.64%	4.60%	5.50%	4.64%	5.15%	4.22%	4.95%	4.54%
$2,000,000	4.83%	4.71%	4.71%	5.50%	4.78%	5.19%	4.26%	4.95%	4.54%

Source: Stamp Duty Calculator Australia/NAB/EY Analysis

The percentage of Other Estimated Buying Costs (fees and conveyancing) attributed to the overall asset value on a State by State and average basis are outlined in Table 12 below.

Table 12: Other Estimated Buying Costs by Region and Price Point

Asset Value	Average	WA	NSW	VIC	QLD	SA	TAS	NT	ACT
$250,000	0.69%	0.57%	0.52%	0.72%	0.68%	1.33%	0.55%	0.52%	0.64%
$500,000	0.44%	0.29%	0.26%	0.48%	0.53%	1.12%	0.27%	0.26%	0.32%
$750,000	0.43%	0.27%	0.24%	0.46%	0.55%	1.12%	0.25%	0.24%	0.28%
$1,000,000	0.37%	0.21%	0.18%	0.41%	0.51%	1.07%	0.19%	0.19%	0.21%
$1,250,000	0.37%	0.21%	0.18%	0.41%	0.53%	1.08%	0.19%	0.18%	0.21%
$1,500,000	0.34%	0.18%	0.15%	0.38%	0.51%	1.05%	0.16%	0.15%	0.17%
$1,750,000	0.32%	0.16%	0.13%	0.33%	0.49%	1.03%	0.14%	0.13%	0.15%
$2,000,000	0.30%	0.14%	0.12%	0.29%	0.48%	1.02%	0.12%	0.12%	0.13%

Source: Stamp Duty Calculator Australia/NAB/EY Analysis

Annexure C – Apartment and Villa/ Townhouse/ Duplex Land Area Calculations

Table 12 provides a summary of the site coverage calculations used to determine the land area assumptions for the apartment Build Type.

Table 12: Apartment Land Area Calculations

Design Category/ Bed	Land Size (SQM)	Building Height	Site Coverage	Max GFA (SQM)	Floor Efficiency	Net Saleable Area (SQM)	Unit GBA (SQM)	Total Units	Land Area per Unit (SQM)	Recommended Land Area Input (SQM)
Basic 1 Bed	1,400	4 storeys	50%	2,800	85%	2,380	60	40	35	29
Basic 1 Bed	880	4 storeys	80%	2,816	85%	2,394	60	40	22	
IL 1 Bed	1,500	4 storeys	50%	3,000	85%	2,550	63	40	38	30
IL 1 Bed	920	4 storeys	80%	2,944	85%	2,502	63	40	23	
FA 1 Bed	1,540	4 storeys	50%	3,080	85%	2,618	65	40	39	31
FA 1 Bed	950	4 storeys	80%	3,040	85%	2,584	65	40	24	
HPS 1 Bed	1,540	4 storeys	50%	3,080	85%	2,618	65	40	39	31
HPS 1 Bed	950	4 storeys	80%	3,040	85%	2,584	65	40	24	
IL 2 Bed (1 Resident)	1,950	4 storeys	50%	3,900	85%	3,315	83	40	49	40
IL 2 Bed (1 Resident)	1,225	4 storeys	80%	3,920	85%	3,332	83	40	31	
FA 2 Bed (1 Resident)	2,050	4 storeys	50%	4,100	85%	3,485	87	40	51	42
FA 2 Bed (1 Resident)	1,275	4 storeys	80%	4,080	85%	3,468	87	40	32	
HPS 2 Bed (1 Resident)	2,050	4 storeys	50%	4,100	85%	3,485	87	40	51	42
HPS 2 Bed (1 Resident)	1,275	4 storeys	80%	4,080	85%	3,468	87	40	32	

Source: Source: Archistar 2023, EY Analysis 2023

Design Category/ Bed	Land Size (SQM)	Building Height	Site Coverage	Max GFA (SQM)	Floor Efficiency	Net Saleable Area (SQM)	Unit GBA (SQM)	Total Units	Land Area per Unit (SQM)	Recommended Land Area Input (SQM)
Basic 2 Bed	1,850	4 storeys	50%	3,700	85%	3,145	79	40	46	37
Basic 2 Bed	1,150	4 storeys	80%	3,680	85%	3,128	79	40	29	
IL 2 Bed	2,000	4 storeys	50%	4,000	85%	3,400	85	40	50	41
IL 2 Bed	1,250	4 storeys	80%	4,000	85%	3,400	85	40	31	
FA 2 Bed	2,100	4 storeys	50%	4,200	85%	3,570	90	40	53	43
FA 2 Bed	1,320	4 storeys	80%	4,224	85%	3,590	90	40	33	
HPS 2 Bed	2,100	4 storeys	50%	4,200	85%	3,570	90	40	53	43
HPS 2 Bed	1,320	4 storeys	80%	4,224	85%	3,590	90	40	33	
Basic 3 Bed	2,600	4 storeys	50%	5,200	85%	4,420	111	40	65	53
Basic 3 Bed	1,640	4 storeys	80%	5,248	85%	4,461	111	40	41	
IL 3 Bed	2,780	4 storeys	50%	5,560	85%	4,726	119	40	70	57
IL 3 Bed	1,750	4 storeys	80%	5,600	85%	4,760	119	40	44	
FA 3 Bed	2,820	4 storeys	50%	5,640	85%	4,794	121	40	71	57
FA 3 Bed	1,800	4 storeys	80%	5,760	85%	4,896	121	40	45	
HPS 3 Bed	2,820	4 storeys	50%	5,640	85%	4,794	121	40	71	58
HPS 3 Bed	1,800	4 storeys	80%	5,760	85%	4,896	121	40	45	

Source: Source: Archistar 2023, EY Analysis 2023

Table 13 provides a summary of the site coverage calculations used to determine the land area assumptions for the villa/ townhouse/ duplex Build Type.

Table 13: Villa/ Townhouse/ Duplex Land Area Calculations

Design Category/ Bed	Land Size (SQM)	Building Height	Site Coverage	Max GFA (SQM)	Floor Efficiency	Net Saleable Area (SQM)	Unit GBA (SQM)	Total Units	Land Area per Unit (SQM)	Recommended Land Area Input (SQM)
Basic 1 Bed	750	1 storey	50%	375	95%	356	64	5	150	150
Basic 1 Bed	600	1 storey	60%	360	95%	342	64	5	120	
IL 1 Bed	750	1 storey	50%	375	95%	356	64	5	150	150
IL 1 Bed	600	1 storey	60%	360	95%	342	64	5	120	
FA 1 Bed	750	1 storey	50%	375	95%	356	68	5	150	150
FA 1 Bed	630	1 storey	60%	378	95%	359	68	5	126	
Robust 1 Bed	420	1 storey	50%	210	95%	200	64	3	140	140
Robust 1 Bed	350	1 storey	60%	210	95%	200	64	3	117	
HPS 1 Bed	750	1 storey	50%	375	95%	356	68	5	150	150
HPS 1 Bed	600	1 storey	60%	360	95%	342	68	5	120	
Basic 2 Bed	400	1 storey	50%	200	95%	190	85	2	200	200
Basic 2 Bed	300	1 storey	60%	180	95%	171	85	2	150	
IL 2 Bed	400	1 storey	50%	200	95%	190	85	2	200	200
IL 2 Bed	300	1 storey	60%	180	95%	171	85	2	150	
FA 2 Bed	400	1 storey	50%	200	95%	190	89	2	200	200
FA 2 Bed	320	1 storey	60%	192	95%	182	89	2	160	
Robust 2 Bed	400	1 storey	50%	200	95%	190	85	2	200	200
Robust 2 Bed	300	1 storey	60%	180	95%	171	85	2	150	
HPS 2 Bed	400	1 storey	50%	200	95%	190	89	2	200	200
HPS 2 Bed	320	1 storey	60%	192	95%	182	89	2	160	

Source: Source: Archistar 2023, EY Analysis 2023

Design Category/ Bed	Land Size (SQM)	Building Height	Site Coverage	Max GFA (SQM)	Floor Efficiency	Net Saleable Area (SQM)	Unit GBA (SQM)	Total Units	Land Area per Unit (SQM)	Recommended Land Area Input (SQM)
Basic 3 Bed	600	1 storey	50%	300	95%	285	109	3	300	300
Basic 3 Bed	400	1 storey	60%	240	95%	228	109	2	200	
IL 3 Bed	600	1 storey	50%	300	95%	285	115	2	300	300
IL 3 Bed	400	1 storey	60%	240	95%	228	115	2	200	
FA 3 Bed	600	1 storey	50%	300	95%	285	125	2	300	300
FA 3 Bed	450	1 storey	60%	270	95%	257	125	2	225	
Robust 3 Bed	600	1 storey	50%	300	95%	285	115	2	300	300
Robust 3 Bed	400	1 storey	60%	240	95%	228	115	2	200	
HPS 3 Bed	600	1 storey	50%	300	95%	285	125	2	300	300
HPS 3 Bed	450	4 storeys	60%	270	95%	257	125	2	225	

Source: Source: Archistar 2023, EY Analysis 2023

Annexure D – CoreLogic Market Trends Data

The NDIA commissioned a Market Trends Back Series Report (December 2022) from CoreLogic for EY's use in determining the land cost assumptions. The Market Trends Back Series report provided residential sale data aggregated for each SA2 located within Australia calculated at monthly intervals from the CoreLogic database. This data incorporates both improved and unimproved transactions.

Table 14 provides a summary of all data fields included within the Market Trends Back Series Report. The data fields highlighted in grey were utilised within the land cost analysis which informed the Estimated Residential Values per Square Meter assumption. All other data fields were excluded from the analysis underpinning this assumption, however may have been used within related analysis.

Table 14: CoreLogic Market Trends Data Fields

Category	Metric	Definition
General	Property Type	Determines the property type, where H indicates House, U indicates Unit.
Underlying Property	Total number of properties	The number of dwellings recorded - data as at the most recent month end (non-delayed)
Underlying Property	Average distance from GPO	The average distance from the GPO for properties transacted.
Underlying Property	Owner-occupier ratio	% of properties that are defined as Owner Occupied - data as at the most recent month end (non-delayed)
Underlying Property	Renter ratio	% of properties that are defined as Rented - data as at the most recent month end (non-delayed)
Underlying Property	Government owned ratio	% of properties that are defined as Government Owned - data as at the most recent month end (non-delayed)
Listings	# of listings in the last 1 month	The total unique number of properties that have been advertised for sale and captured over the past month.
Listings	# of listings in the last 12 months	The total unique number of properties that have been advertised for sale and captured over the last 12 months.
Listings	1 month change in listing volumes	The percentage change in Total listings in the same period compared to 1 month ago.
Listings	3 month change in listing volumes	The percentage change in Total listings in the same period compared to 3 months ago.
Listings	12 month change in listing volumes	The percentage change in Total listings in the same period compared to 12 months ago.
Listings	% stock on market last 12 months	The percentage of dwellings that have been listed for sale over the past year.
Listings	# of new listings last 12 months	The total number of new listings for properties recorded after 180 days after the last listing over the past year.
Listings	# of auction listings last 12 months	The total number of auction listings that have been observed over the past year.
Listings	Median time on market last 12 months	The median number of days it has taken to sell those properties sold by private treaty during the last 12 months. The calculation excludes auction listings and listings where an asking price is not advertised. The days on market calculation uses the contract date on the property compared with the first advertised date.

Source: CoreLogic, 2022

Annexure D – CoreLogic Market Trends Data

Category	Metric	Definition
Listings	Median vendor discount last 12 months	The median difference between the contract price on a property and the first advertised price. The figure is expressed as a percentage and is an average of all private treaty sales which sold for less than their initial asking price
Sales	# of sales last 1 month	A count of all transactions over the last month
Sales	# of sales last 3 months	A count of all transactions over the last 3 months
Sales	# of sales last 6 months	A count of all transactions over the last 6 months
Sales	# of sales last 12 months	A count of all transactions over the last 12 months.
Sales	1 month change in sales volume	The percentage change in sales volumes in the same period compared to 1 month ago.
Sales	3 month change in sales volume	The percentage change in sales volumes in the same period compared to 3 months ago.
Sales	12 month change in sales volume	The percentage change in sales volumes in the same period compared to 12 months ago.
Sales	Sales turnover last 12 months	The percentage of total dwellings that have sold over the last 12 months
Sales	# of repeat sales last 12 months	A count of all repeat sale transactions over the last 12 months
Sales	# of new property sales last 12 months	A count of all transactions on properties not previously sold over the last 12 months
Sales	Median sales price last 3 months	The median sale price of all transactions recorded during the 3 month period. Note that sale prices lower than $10,000 and higher than $100,000,000 are excluded from the analysis.
Sales	Median sales price last 6 months	The median sale price of all transactions recorded during the 6 month period. Note that sale prices lower than $10,000 and higher than $100,000,000 are excluded from the analysis.
Sales	Median sales price last 12 months	The median sale price of all transactions recorded during the last 12 month period
Sales	3 month change in median sales price (12 months)	The percentage change in the median sale price in the same period compared to 3 months ago.
Sales	12 month change in median sales price (12 months)	The percentage change in the median sale prices in the same period compared to 12 months ago.
Sales	36 month change in median sales price (12 months)	The percentage change in the median sale price in the same period compared to the three years ago.
Sales	60 month change in median sales price (12 months)	The percentage change in the median sale prices in the same period compared to five years ago.
Sales	5 year annual compound growth rate in median sales price (12 months)	The compound annual change in median sale price based on the same period compared to 5 years ago. The calculation indicates the average annual growth rate and is expressed as a percentage.
Sales	10 year annual compound growth rate in median sales price (12 months)	The compounding annual change in median sale price based on the same period compared to 10 years ago. The calculation indicates the average annual growth rate and is expressed as a percentage.
Sales	20 year annual compound growth rate in median sales price (12 months)	The compound annual change in median sale price based on the same period compared to 20 years ago. The calculation indicates the average annual growth rate and is expressed as a percentage.

Source: CoreLogic, 2022

Annexure D – CoreLogic Market Trends Data

Category	Metric	Definition
Sales	25th Percentile sales price last 12 months	The 25th percentile sale price of sales over the last 12 months.
Sales	75th Percentile sales price last 12 months	The 75th percentile sale price of sales over the last 12 months.
Sales	Median repeat sales price last 12 months	The median sale price of all repeat sale transactions recorded during the last 12 month period.
Sales	Median new property sales price last 12 months	The median sale price of all transactions on properties not previously sold and recorded during the last 12 month period.
Sales	Total sales value last 1 month	The total value of all property transactions recorded over the last month.
Sales	Total sales value last 12 months	The total value of all property transactions recorded over the last year.
Sales	Average hold period	The average number of years a property has been held between sales. The calculation includes all properties sold over the last year and is the difference between the most recent date of sale and the previous date of sale
Sales	Average land size	The average size of land/floor for properties transacted, for houses land size and for units total floor area
Valuation Estimate	# of dwellings with valid AVM	The number of properties within the geographical boundary type for which the CoreLogic Hedonic Index model has been able to produce an AVM.
Valuation Estimate	Median AVM	The median value of all properties across the geography based on the AVM.
Valuation Estimate	3 month change in median AVM	The percentage change in the median AVM value in the same period compared to the last three months prior.
Valuation Estimate	12 month change in median AVM	The percentage difference between the median AVM value in the same period compared 12 months ago.
Valuation Estimate	36 month change in median AVM	The percentage change in the median AVM value in the same period compared to the three years ago.
Valuation Estimate	60 month change in median AVM	The percentage change in the median AVM value in the same period compared to 5 years ago.
Valuation Estimate	Median AVM FSD	The Median Value for all FSD within the geography
Valuation Estimate	Minimum AVM	The lowest value of all properties across the geography based on the AVM.
Valuation Estimate	10th Percentile AVM	10th Percentile for all AVM in the geography
Valuation Estimate	20th Percentile AVM	20th Percentile for all AVM in the geography
Valuation Estimate	25th Percentile AVM	25th Percentile for all AVM in the geography
Valuation Estimate	30th Percentile AVM	30th Percentile for all AVM in the geography
Valuation Estimate	40th Percentile AVM	40th Percentile for all AVM in the geography
Valuation Estimate	60th Percentile AVM	60th Percentile for all AVM in the geography
Valuation Estimate	70th Percentile AVM	70th Percentile for all AVM in the geography

Source: CoreLogic, 2022

Annexure D – CoreLogic Market Trends Data

Category	Metric	Definition
Valuation Estimate	75th Percentile AVM	75th Percentile for all AVM in the geography
Valuation Estimate	80th Percentile AVM	80th Percentile for all AVM in the geography
Valuation Estimate	90th Percentile AVM	90th Percentile for all AVM in the geography
Valuation Estimate	Maximum AVM	The highest value of all properties across the geography based on the AVM.
Valuation Estimate	Median equity value	Growth between the last sale price and the current AVM value expressed in dollar terms - data as at the most recent month end (non-delayed)
Valuation Estimate	% median equity	The percentage growth between the last sale price and the current AVM value - data as at the most recent month end (non-delayed)
Rentals	# of rental listings last 12 months	The number of rental properties listed over the last 12 months.
Rentals	Median asking rent last 12 months	The median value of advertised weekly rents captured during the last 12 months.
Rentals	12 month change in median asking rent (12 months)	The percentage change in the median weekly advertised rental rate in the same period compared to 12 months ago.
Rentals	60 month change in median asking rent (12 months)	The percentage change in the median weekly advertised rental rate in the same period compared to 5 years ago.
Rentals	Indicative gross rental yield (12 months)	The indicative gross rental yield provides a guide about the gross rental return achieved during the last 12 months. This is calculated at the geography and is based on the annualised rent (Median Asking Rent x 52 (weeks)), divided by the median sale price.
Rentals	Median AVM rental yield	The AVM rental yield is calculated at the geography and is based on the annualised rent (Median Asking Rent x 52 (weeks)), divided by the median AVM of those properties advertised for rent.
Rentals	Average vacancy rate last 12 months	Percentage of days the average listed property is vacant over the last 12 months

Source: CoreLogic, 2022

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