

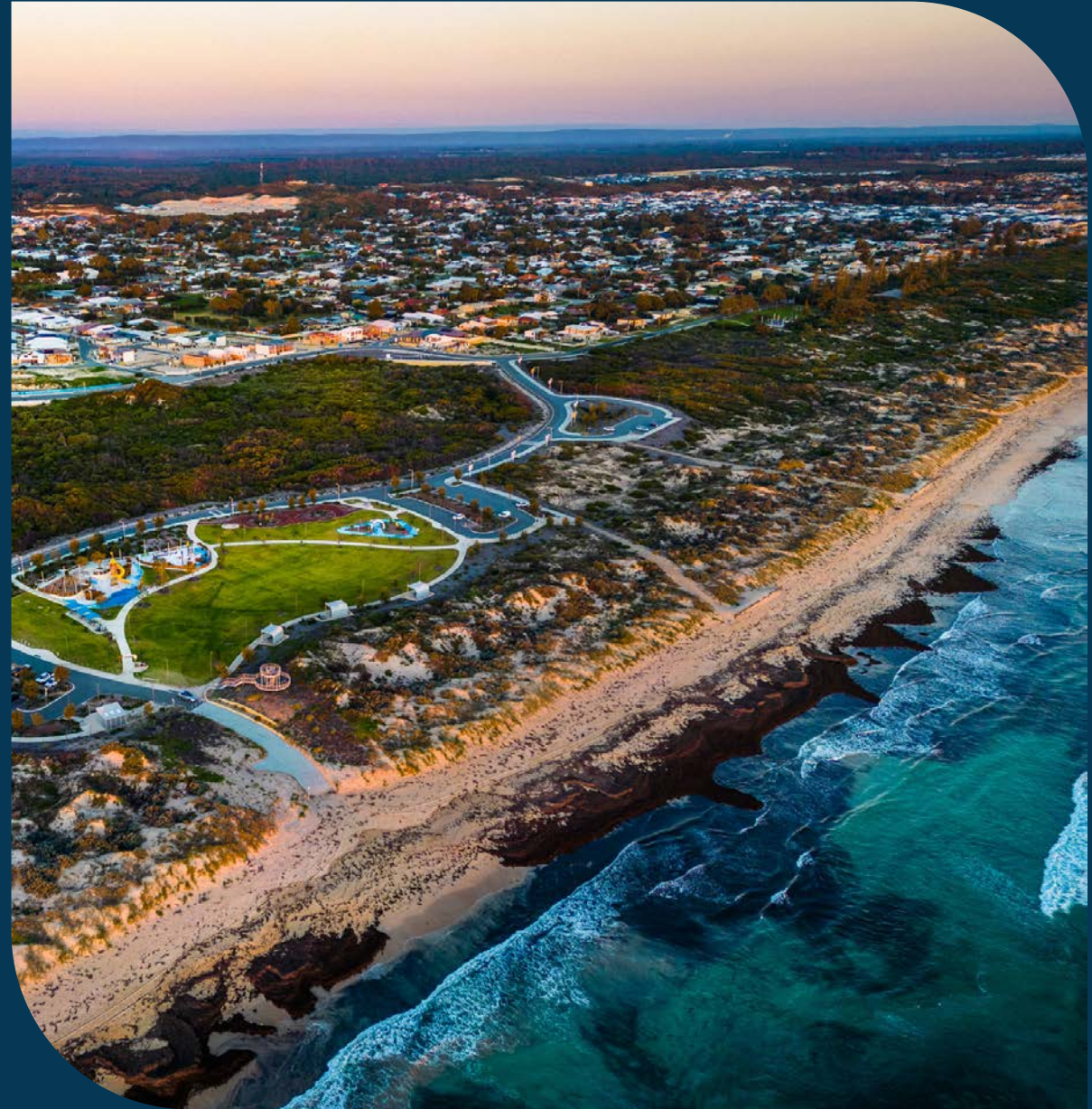


UDIA National Housing Pipeline

Presenting Partner



Perth and Peel Pilot Report
November 2023



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The housing pipeline

With a deepening, nation-wide housing crisis it has never been more important to ensure access to diverse and affordable housing options for all Australians. The Urban Development Institute of Australia (UDIA) has long argued that maintaining consistent and robust supply pipelines of appropriately zoned and serviced land for new homes is critical.

Unfortunately, development ready land supply pipelines have often not kept pace with demand across many of Australia's capital cities. This has contributed to a steep escalation in dwelling prices and an erosion of housing affordability, with Australia now having some of the most unaffordable housing markets in the world.

While there is land that is zoned for urban or future urban development, the reality is not all that land can be readily developed to provide housing due to a myriad of constraints – some of which effectively sterilize parcels of land from development.

A consistent challenge for both the development industry and governments has been the lack of a clear picture of the status of land availability and land readiness across jurisdictions.

UDIA has launched its National Housing Pipeline project to fill this void. The driving ambition is to supplement existing government led land supply monitoring programs with a nationally consistent, industry vetted source of residential land and dwelling supply, development constraint, planning and environmental approval, and enabling infrastructure information.

In response to the housing crisis, the National Housing Accord established a stretch target of 1.2 million homes to be created over the next five years. WA's share equates to approximately 25,000 new homes each year. Over the past 15 years though, there has only been three instances when WA has exceeded that number of completions.

We are experiencing a perfect storm of headwinds – not least the record high construction costs and severe lack of skilled construction labour. This impacts industry's capacity to deliver sufficient and affordable supply to meet year-on-year demand, let alone these stretch targets.

In this increasingly challenging climate, UDIA's National Housing Pipeline will be key in helping inform solutions to tackle identified delivery constraints and support industry and government in working collaboratively to get more housing on the ground, more efficiently and affordably.



Col Dutton, UDIA National President

The UDIA WA acknowledge the Traditional Custodians of the land on which we are located, the Whadjuk People of the Noongar Nation. We also recognise Traditional Custodians continuing connection to the land and waters where our members operate across the state of Western Australia.

We wish to acknowledge the strength of their continuing culture and offer our respects to elders past, present and emerging.

About the UDIA National Housing Pipeline Pilot

In mid-2022, UDIA initiated an innovative new project to develop and deploy a nationally consistent and robust methodology to measure and analyse the forward availability and readiness of land for the development of new housing in Australia's mainland capital cities over the forthcoming 15 years.

The pilot of UDIA's National Housing Pipeline (NHP) project has been undertaken over the past year for the Perth and Peel region (the NHP Pilot). This has informed the national program, which is now being rolled out with an anticipated launch of mid-2024.

The methodology utilises a combination of 'top-down' and 'bottom-up' data inputs to provide a holistic perspective of the status of and implications for future housing supply, that is intended to be updated annually to remain current.

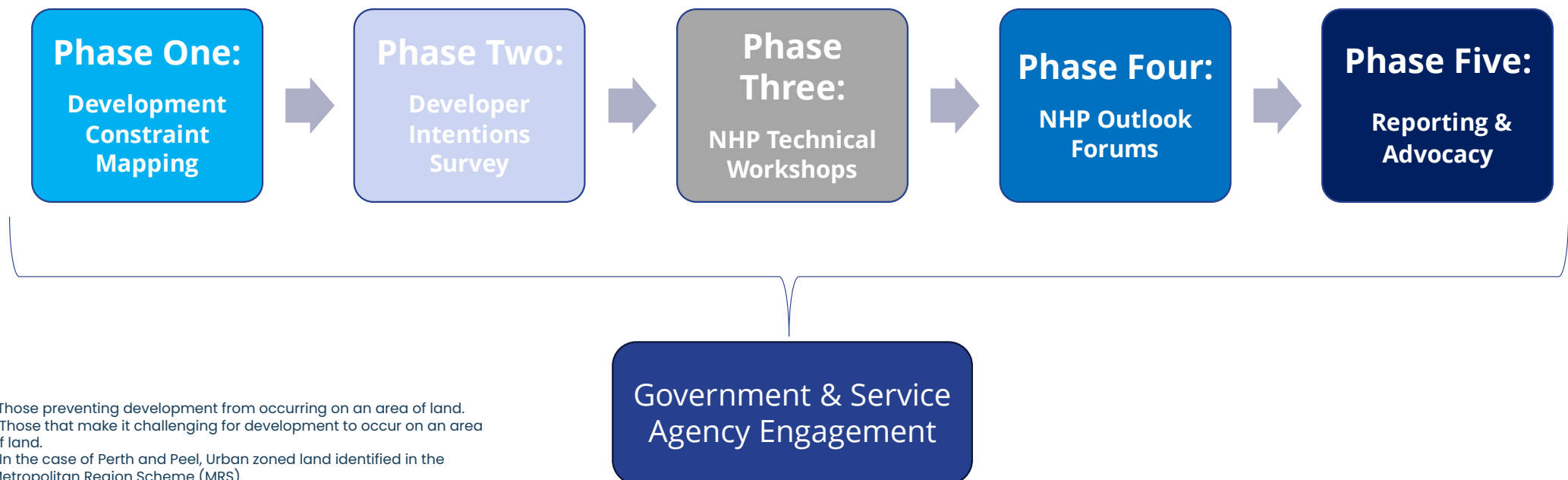
This includes: 'sieve' mapping of identified development constraints (in the case of Perth and Peel, 14 'fundamental constraints'¹ and three 'additional constraints'² – refer to Appendix A) overlaid on undeveloped urban zoned³ and future urban zoned⁴ land (Phase 1 – refer to Appendix A and B for more detail on this GIS spatial analysis); an online survey exploring yield and annualised timing intentions of developers for their

current landholdings and the status of approvals and infrastructure requirements to release these yields (Phase 2); technical workshops and an outlook forum to pressure test the methodology (approach, rules and assumptions) and analysis in the context of on-the-ground realities with those involved in delivering housing (Phase 3 and 4); and reporting and ongoing advocacy (Phase 5).

The NHP Pilot has also been complemented throughout by a meaningful engagement program with State Government departments, service agencies, local governments and Ministers involved in policy making, regulation setting and infrastructure planning and delivery which impacts what new homes get built, where and when.

The rich industry and market intelligence generated by the UDIA NHP is intended to complement existing State and Federal government housing supply and forecasting programs, such as the WA Government's Urban Growth Monitor (refer to Appendix B for comparative detail) and Housing Australia's *State of the Nation's Housing* reporting.

This report summarises the methodology and key findings from the NHP Pilot for Perth and Peel.




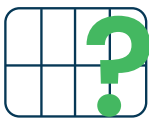




¹ Those preventing development from occurring on an area of land.

² Those that make it challenging for development to occur on an area of land.

³ In the case of Perth and Peel, Urban zoned land identified in the Metropolitan Region Scheme (MRS).

⁴ In the case of Perth and Peel, MRS Urban Deferred zoned land, MRS Urban Expansion designed areas, Urban Investigation Areas, and Planning Investigation Areas.

Summary of key findings from the UDIA NHP Pilot

14% of land is 'Fundamentally Constrained'		Over 3,900 hectares of undeveloped urban zoned and potential future urban zoned land is fundamentally constrained for residential development, meaning no new homes are able to be built. This equates to 14% of total current and future urban zoned land across Perth and Peel. Fundamental constraints include wetlands, Bush Forever and future school sites, and future infrastructure corridors.
An additional 15% of land is 'Constrained'		A further 4,200 hectares of undeveloped urban zoned and potential future urban zoned land has 'additional constraints' including the presence of Threatened Ecological Communities and State Forests. While there is potential for development, these additional constraints will prove challenging to deliver new homes in a timely fashion.
Up to 160,000 potential new homes lost		Accounting for both fundamental and additional constraints means that these lands are likely to be unavailable for future development, which equates to between 120,000 to 160,000 potential new homes that cannot be realised.
35% of lots need enabling infrastructure commitment		Enabling infrastructure commitment and funding from service agencies is required for over one third of all new lots scheduled to be delivered over the next ten years.
Up to 50% shortfall of metro annual dwelling production v demand		The current profile of development ready land and the development sector's capacity to deliver new homes in the current environment is heading toward a significant undershooting of year-on-year supply. This could see between 25% to 50% under production against the Perth & Peel @ 3.5 Million annual target of ~20,000 dwellings per annum.
All sub-regions will miss dwelling targets by at least 50%		Significant dwelling shortfalls versus Perth & Peel @ 3.5M annual targets is most acute in the Peel Region (~80%), followed by the South West sub-region (~70%) and the North-East sub-region (~60%). In all areas there is a lack of both development ready land and industry capacity to deliver sufficient new homes for our growing city.

Perth & Peel overview

Phase One: Development Constraints Mapping

UDIA WA commissioned MNG to undertake a comprehensive geo-spatial analysis of development constraint coverage over all undeveloped Metropolitan Region Scheme urban and urban deferred zoned land, and all potential future urban zoned land across the Perth Metropolitan and Peel Regions.

In total 14 'fundamental development constraints' and three 'additional development constraint layers' were utilised (see Appendix A) in the development constraints assessment, with the 'potential future urban zoned land' categories including Urban Expansion, Urban Investigation and Planning Investigation Areas as set out in the Perth and Peel @ 3.5 million Sub-Regional Planning Frameworks, and as further updated by the Department of Planning, Lands and Heritage (DPLH).

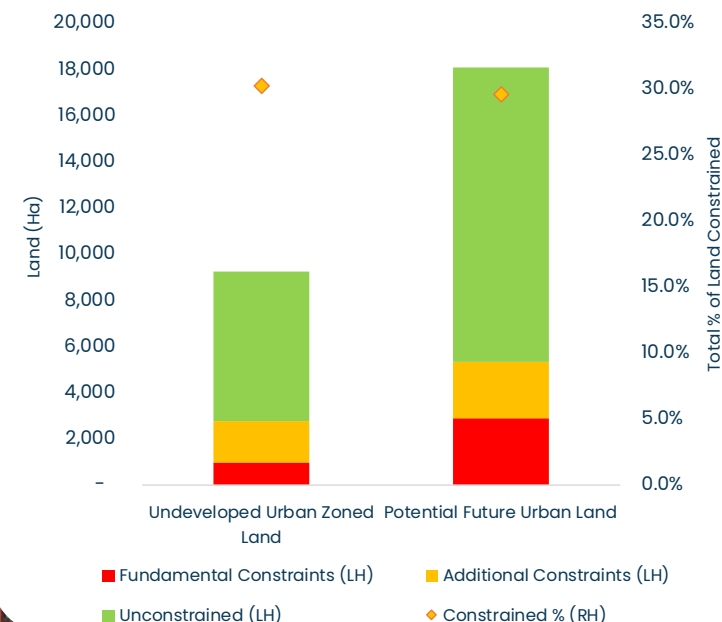
14% OF UNDEVELOPED URBAN OR POTENTIAL FUTURE URBAN ZONED LAND IS 'FUNDAMENTALLY CONSTRAINED'

The granular spatial assessment assessed cadastral parcel 'intersects' with the 17 constraints layers. When a cadastral parcel features coverage with a fundamental constraint, that parcel (or portion of the parcel) is coloured red in the spatial mapping outputs and equates to that land being unavailable for forward development. Coverage with an 'additional constraint' layer turns the parcel (or portion of the parcel) orange, and if there is not constraint layer coverage the subject cadastral parcels are coloured green.

Perth & Peel: Development Constraints Assessment (June 2023)



Urban Zoned & Potential Future Urban Land: Constraint Level, Perth & Peel (June 2023)



15% OF UNDEVELOPED URBAN OR POTENTIAL FUTURE URBAN ZONED LAND IS 'CONSTRAINED'

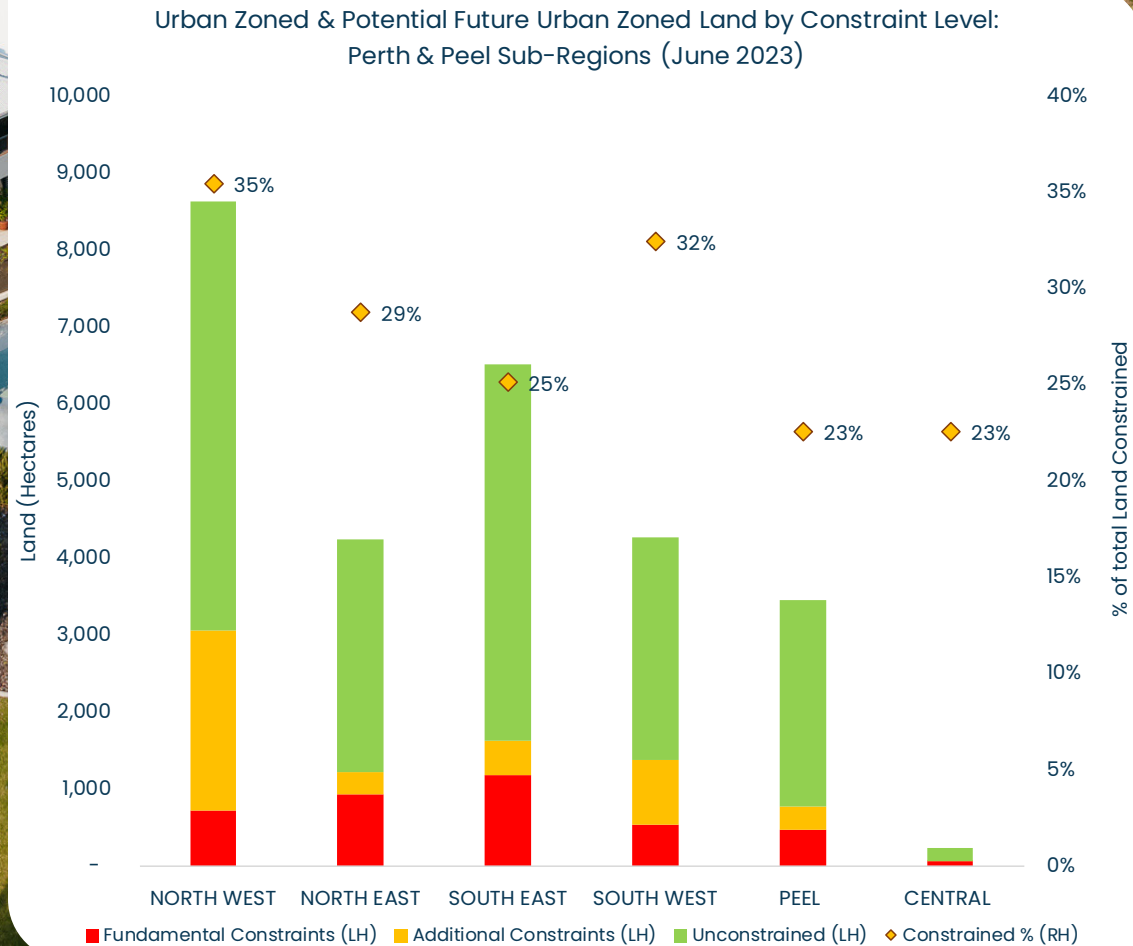
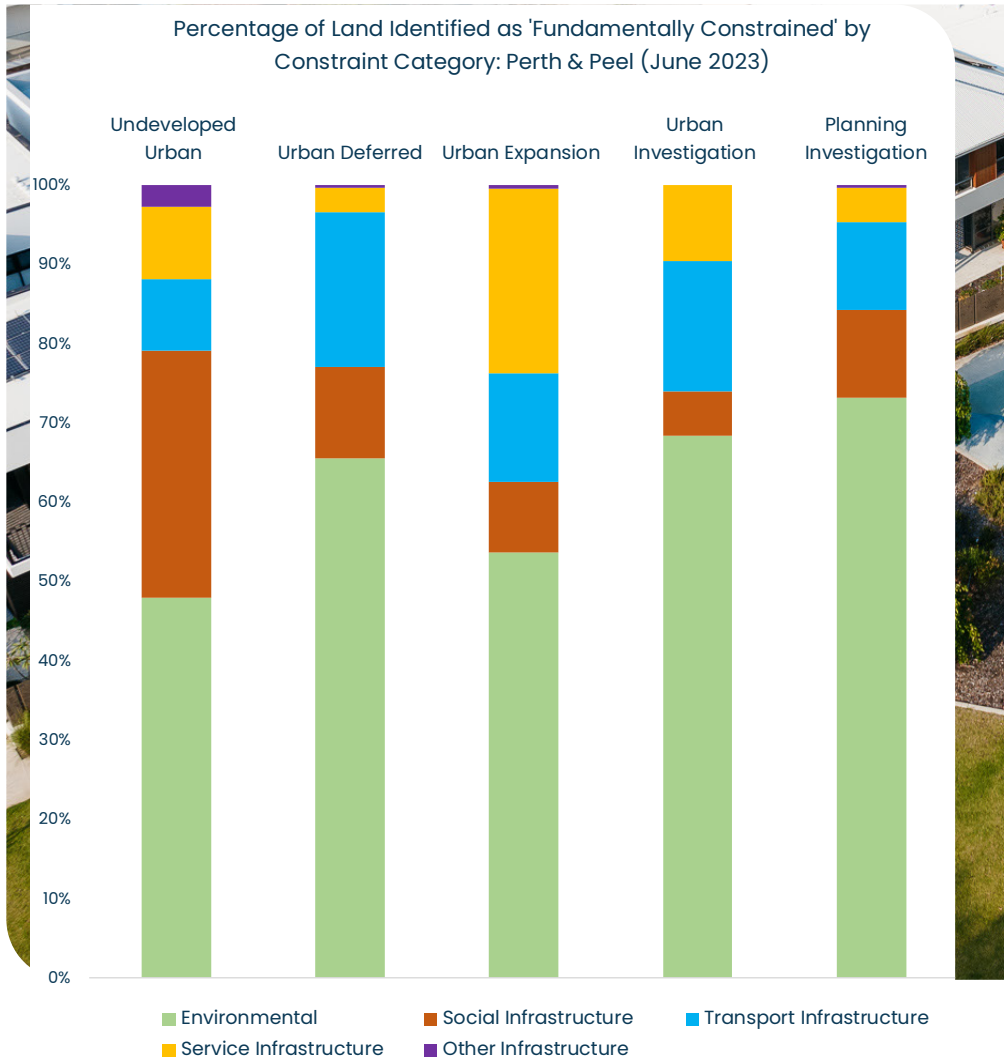
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Perth & Peel overview

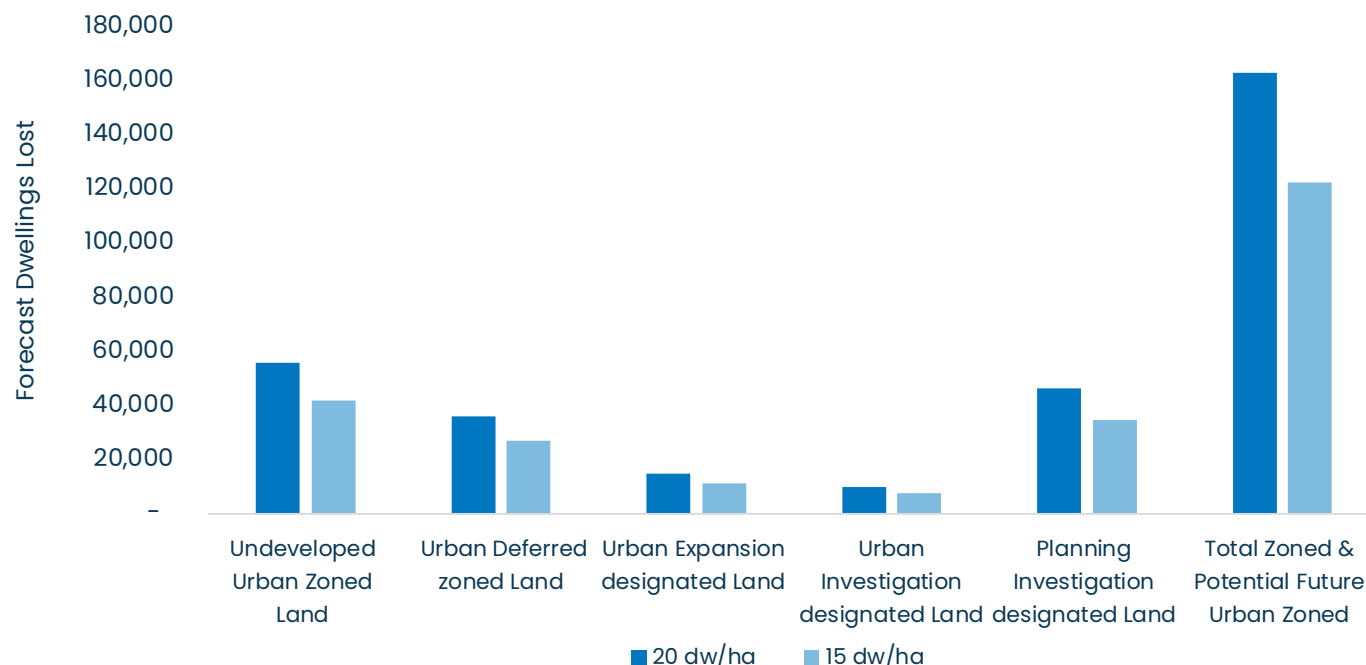
ENVIRONMENTAL FEATURES ACCOUNT FOR 63% OF FUNDAMENTAL CONSTRAINTS

THE NORTH WEST SUB-REGION IS THE MOST CONSTRAINED WITH 35% OF ALL AVAILABLE AND POTENTIAL FUTURE URBAN ZONED LAND **CONSTRAINED FOR FORWARD DEVELOPMENT**



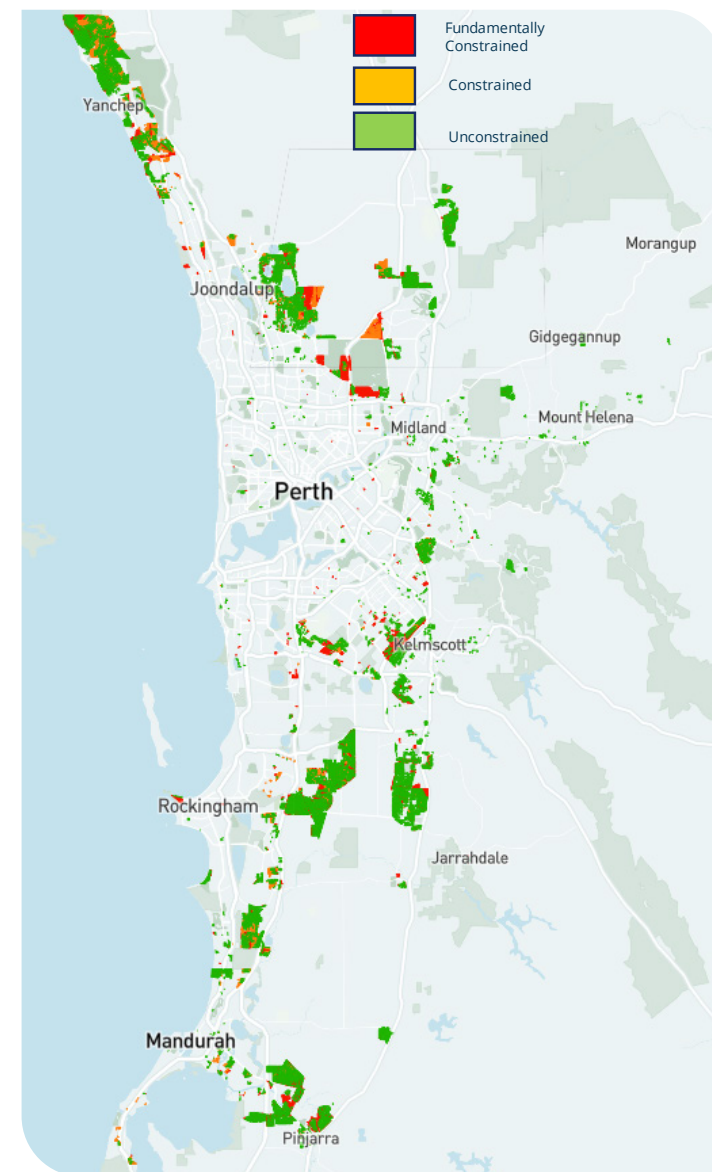
Perth & Peel overview

Forecast Aggregate Dwelling Yields Lost from Identified Constraints on Undeveloped Urban Zoned & Potential Future Urban Designated Land: PMR & Peel*



BETWEEN **120,000 AND 160,000** POTENTIAL LOTS ARE ASSESSED AS BEING UNAVAILABLE FOR RESIDENTIAL DEVELOPMENT DUE TO FUNDAMENTAL AND ADDITIONAL CONSTRAINTS. ON CURRENT PRODUCTION LEVELS THAT EQUATES TO BETWEEN **8 AND 11 YEARS OF LOST ANNUAL METROPOLITAN DWELLING SUPPLY¹**

UDIA NHP Development Constraints Mapping (June 2023)



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Perth & Peel overview

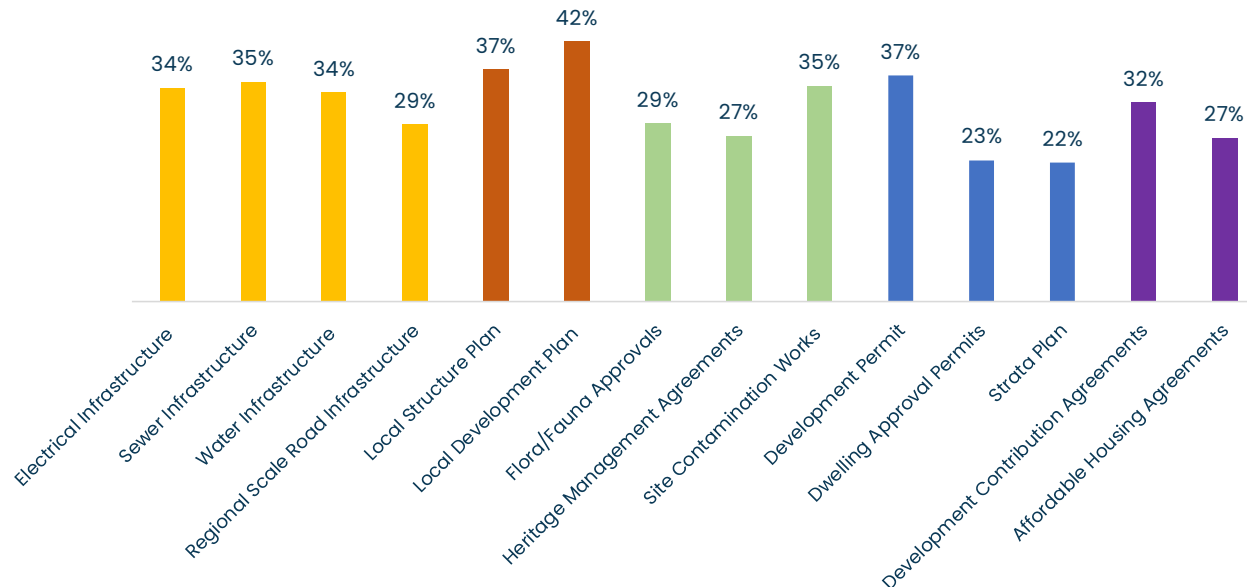
Phase Two: NHP Developer Intentions Survey & additional project supply

UDIA WA engaged the Australian Urban Design Research Centre (AUDRC) at the University of Western Australia to design and deploy a fit-for-purpose digital survey tool, which allows developers and land owners to submit confidential information about their undeveloped land holdings.

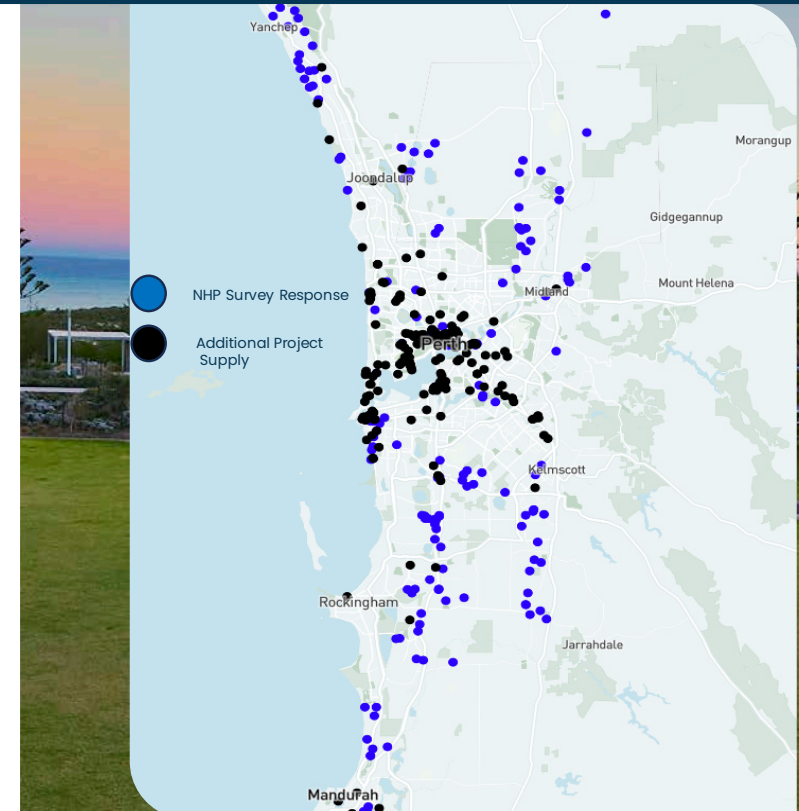
In the Perth and Peel NHP Pilot we received a total of 162 survey responses spread across the study region. In addition to developers plotting the location and boundaries of their land holdings they also provided information about the status of enabling infrastructure and various types of approvals as well as the total dwelling capacity and a fifteen year-on-year forecast of dwelling commencements.

This rich data set on land supply has been supplemented with additional project supply information sourced from the Cordell Connect projects database which has identified an additional 222 landholdings with development potential and having entered a planning approval pathway. This additional project supply information assists with providing greater coverage of infill/multi-unit development opportunities.

Percentage of Total Development Yield Requiring Enabling Infrastructure Commitment/Funding/Approval by Type - PMR & Peel (NHP Survey)



THE UDIA NHP DEVELOPER SURVEY CAPTURED **~10,000 HECTARES** OF UNDEVELOPED LAND IN DEVELOPMENT COMPANY CONTROL WITH A TOTAL YIELD POTENTIAL OF +110,000 DWELLINGS

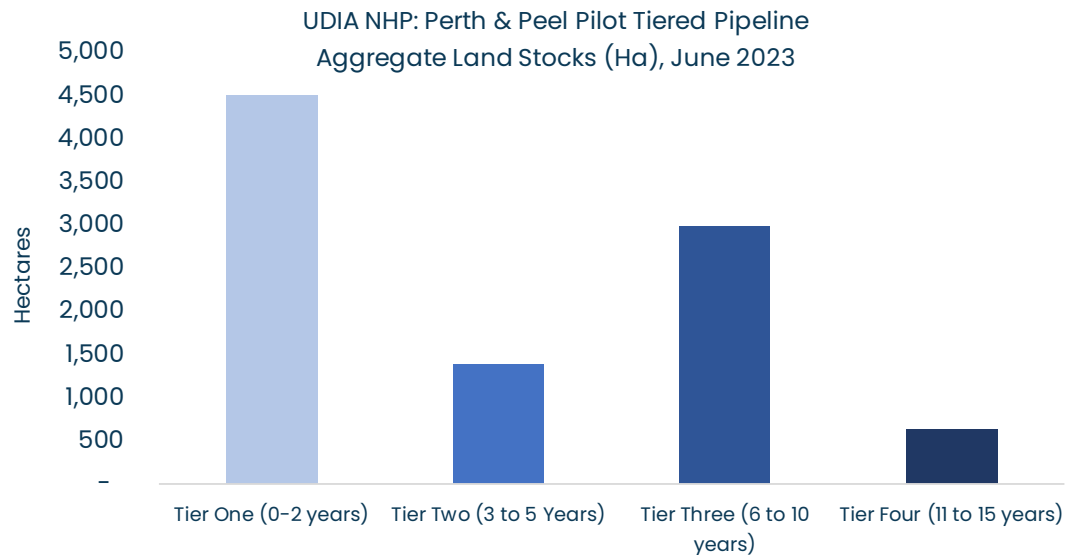


35% OF POTENTIAL LOTS UNDER THE NHP SURVEY REQUIRE SERVICE AGENCY FUNDING AND COMMITMENT TO BE ABLE TO BE DELIVERED OVER THE NEXT TEN YEARS

Phase Three: NHP Technical Workshops & Pipeline Assembly

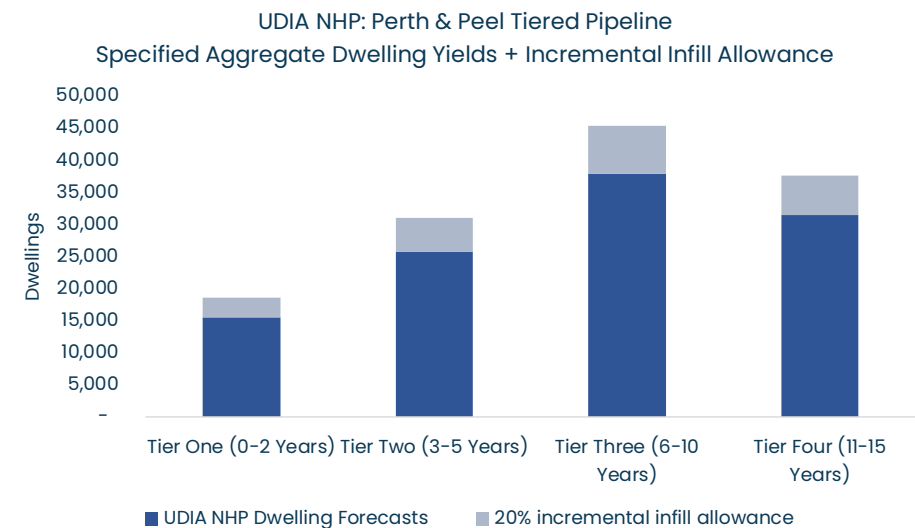
UDIA WA convened Technical Workshops and liaised with various experts and authorities to help pressure-test and verify the analysis undertaken through the early work phases. This consultation helped fine tune the development constraints mapping, land ownership patterns and forward yield projections towards the development of the inaugural UDIA NHP Tiered Pipeline.

The Tiered Pipeline is designed to provide an annual update on the forward supply of development ready land based on the status of approvals and enabling infrastructure. Assessment of land stocks in this manner allows a clear line of sight as to where pinch-points in forward land supply maybe in the short, medium and longer term.



Tier One	Dwelling commencement possible 0 to 2 years Eg land available for immediate development commencement, no rezoning or approvals outstanding, enabling infrastructure delivered/under construction.
Tier Two	Dwelling commencement likely 3 to 5 years Eg Land zoned with majority of approvals in place & enabling infrastructure committed.
Tier Three	Dwelling commencement likely 6 to 10 years Eg Land zoned/rezoning underway with multiple approvals not in place & enabling infrastructure not committed.
Tier Four	Dwelling commencement likely 11 to 15 years Eg Unzoned land (earmarked for potential future urban zoning) with future dwelling potential. No approvals in place or enabling infrastructure committed.

A TOTAL OF **4,500 HECTARES** IS ASSESSED AS CURRENTLY BEING IN TIER ONE WITH A THEORETICAL POTENTIAL FOR **60,000 TO 80,000 DWELLINGS ACROSS PERTH AND PEEL**



TIER TWO PIPELINE STOCKS ARE FAR LESS ROBUST WITH THE POTENTIAL FOR JUST 22,000 DWELLINGS BASED ON AN AVERAGE OF 20 DWELLINGS A HECTARE YIELD SCENARIO

Perth & Peel overview

Assessment of the development sector's capacity to deliver new dwellings in the current environment highlights a major disconnect between theoretical development potential versus realisable supply.

UDIA's assessment shows that there are 110,583 dwelling within the 15-year tiered pipeline with just 15,500 dwellings specified in Tier One and 25,500 in Tier Two.

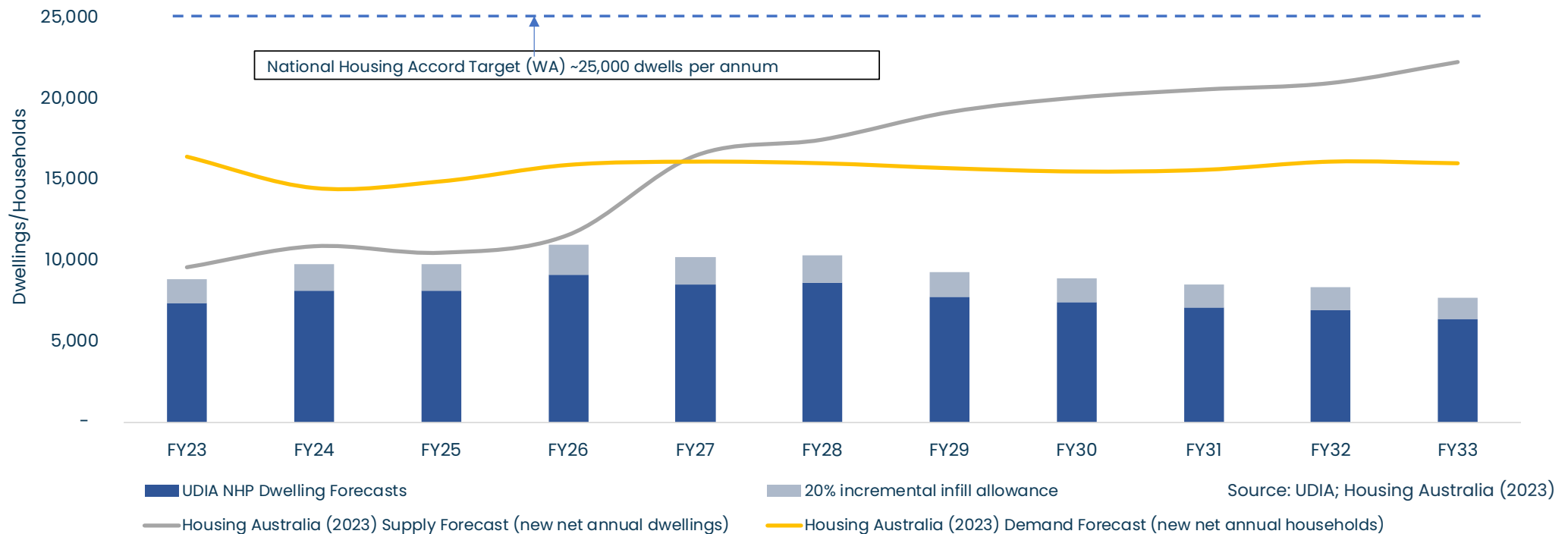
To account for project supply not covered in the NHP survey and additional project supply assessment an additional 20% 'incremental infill' allowance is displayed in the above forecasts.

UDIA NHP DWELLINGS FORECASTS ~40% BELOW HOUSING AUSTRALIA ANNUAL DEMAND FORECASTS

The NHP annualised dwelling commencement forecasts for Perth and Peel highlights that forward dwelling supply will be between 30% and 50% below Housing Australia's net underlying demand forecasts for metropolitan Perth over the coming ten years.

There is an even larger gulf between the 'stretch target' of ~25,000 dwellings per year set under the National Housing Accord for Western Australia and the actual industry capacity to deliver new housing

UDIA NHP: Perth & Peel Annualised Dwelling Forecasts
v Housing Housing Forecasts



UDIA NHP DWELLINGS FORECASTS ~63% BELOW NATIONAL HOUSING ACCORD ANNUAL TARGET

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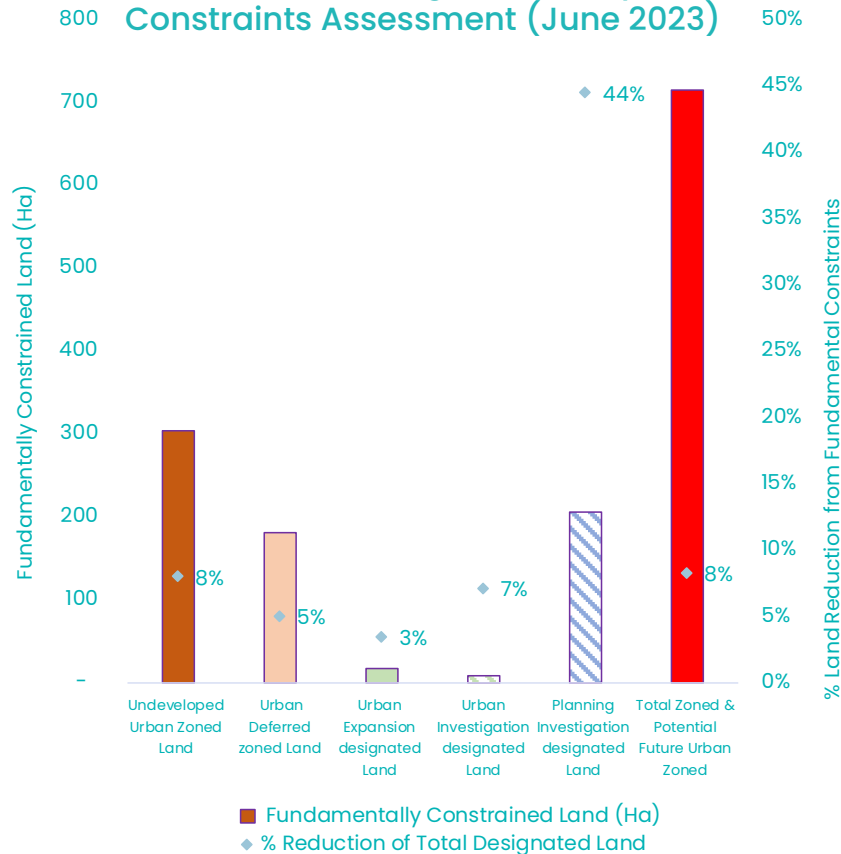


North West Sub-Region

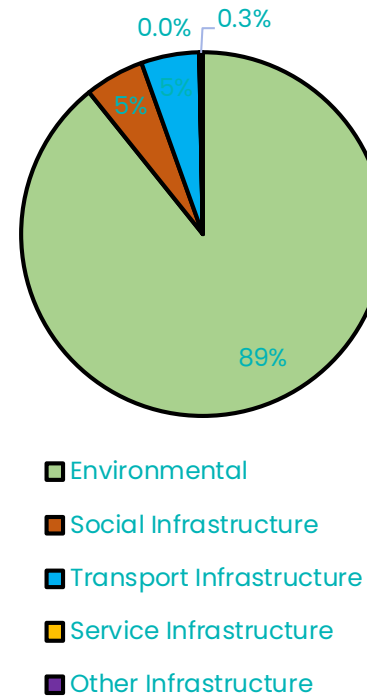
3,060 HA

OF UNDEVELOPED URBAN ZONED AND POTENTIAL FUTURE URBAN ZONED LAND IN THE NORTH WEST HAS A FUNDAMENTAL OR ADDITIONAL CONSTRAINT EQUATING TO **35%** OF TOTAL LAND SUPPLY

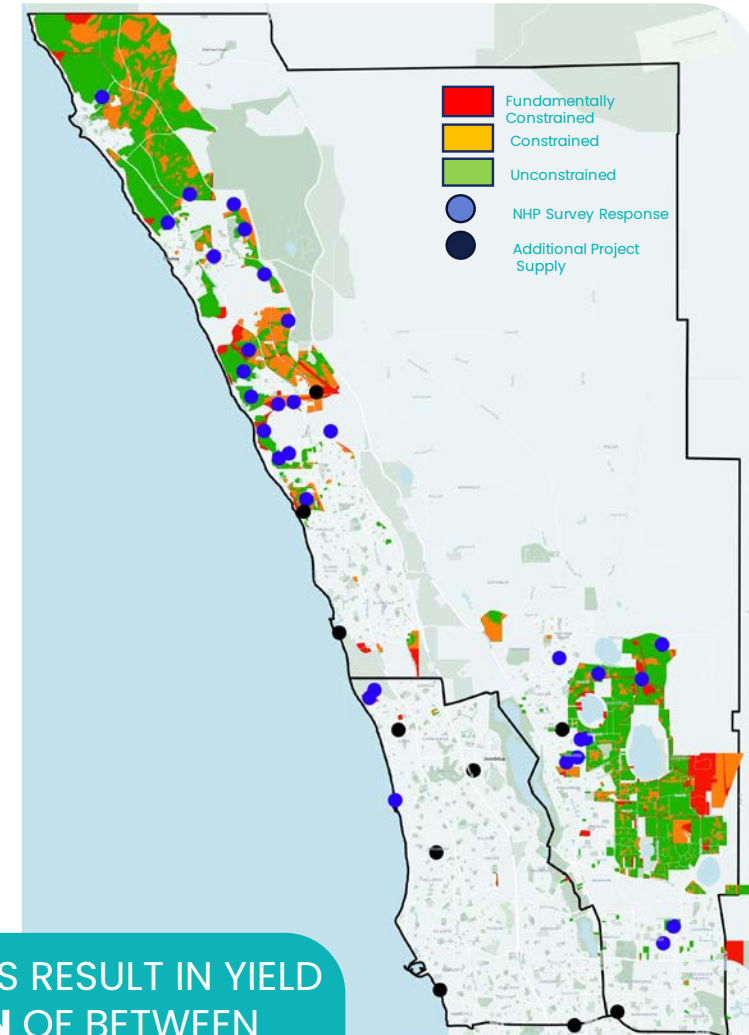
North West Sub-Region: Development Constraints Assessment (June 2023)



Percentage of constrained land by constraint category* North West



Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment North West Sub-Region



IDENTIFIED CONSTRAINTS RESULT IN YIELD **LOSS/STERILIZATION** OF BETWEEN **14,000 AND 61,000** NEW HOMES*

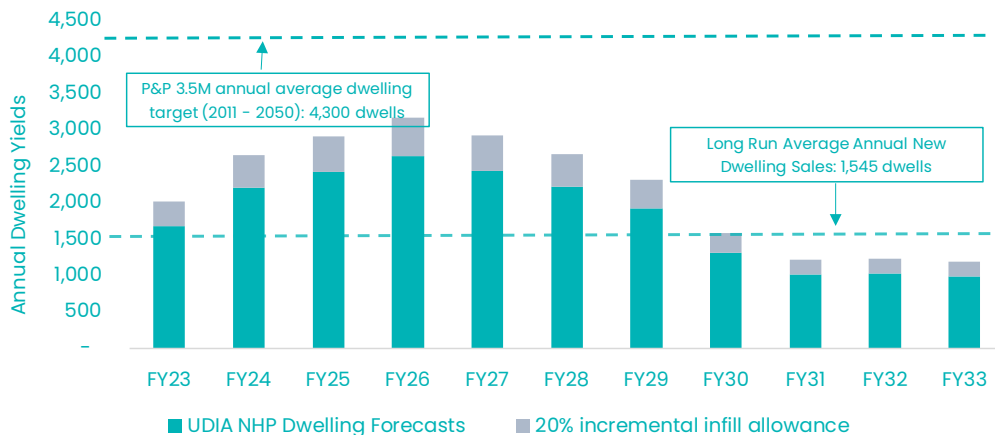
North West Sub-Region

UDIA National Housing Pipeline Pipeline: North West Sub-Region
Developer Specified Dwelling Yields (June 2023)



EXPRESSED DEVELOPER INTENTIONS OR ABILITY TO GENERATE NEW DWELLING COMMENCEMENTS EQUATES TO JUST **11%** OF THEORETICAL DWELLING YIELD FROM THESE LAND STOCKS OR **4,100** NEW HOMES OVER THE COMING TWO YEARS

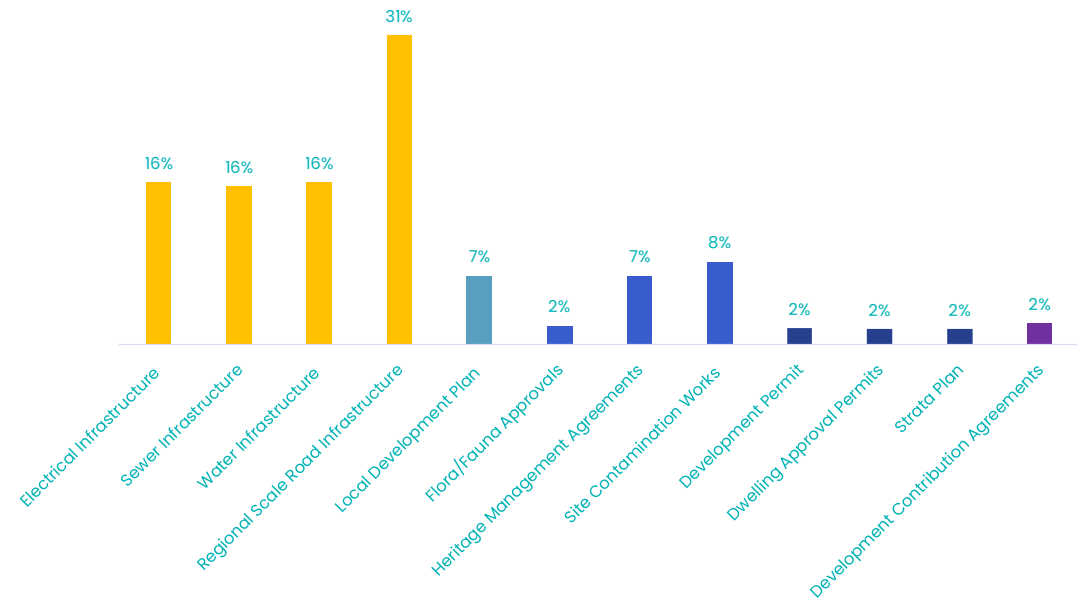
UDIA NHP Annual Dwelling Forecasts: North West Sub-Region



1,800 HA

OF LAND STOCKS IN THE NORTH WEST IDENTIFIED IN TIER ONE (0 – 2 YEARS) OF THE UDIA NHP

Percentage of Total Development Yield Requiring Enabling Infrastructure & Approvals by Type



ACROSS THE NEXT TEN YEARS IT IS ESTIMATED THE NORTH WEST WILL **UNDERDELIVER** AGAINST P&P@3.5M DWELLING TARGETS BY BETWEEN **40% AND 58%**

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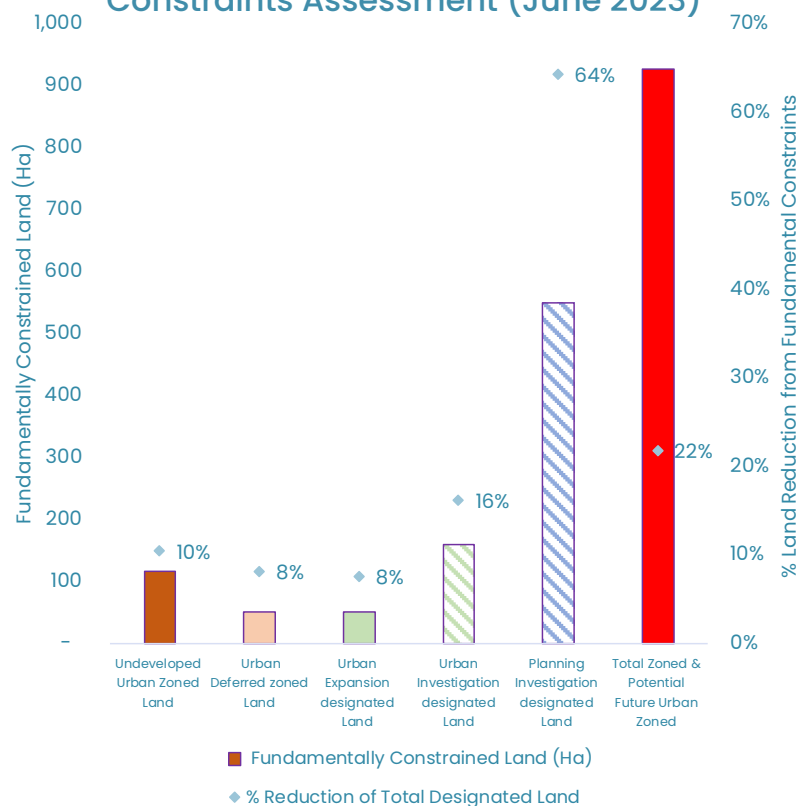


COMPARED TO THE METROPOLITAN AVERAGES THE NORTH WEST HAS HALF THE PROPORTION OF FORWARD LAND SUPPLY THAT REQUIRES ELECTRICAL, SEWER OR WATER ENABLING INFRASTRUCTURE

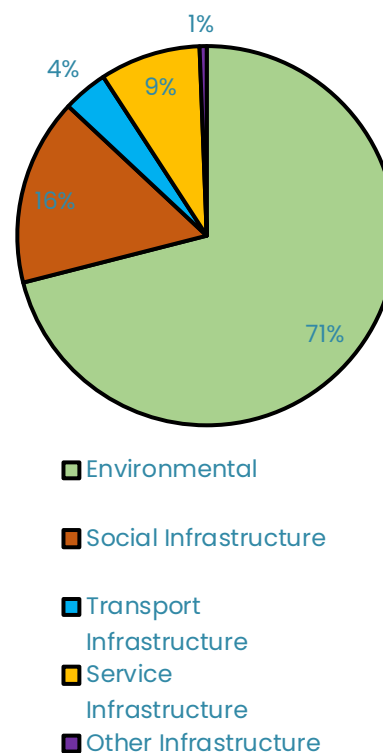
North East Sub-Region

THE NORTH EAST HAS THE LARGEST PROPORTION OF **FUNDAMENTALLY CONSTRAINED LAND** ACROSS THE GROWTH CORRIDORS WITH **22% (902 HA)** OF UNDEVELOPED URBAN ZONED AND POTENTIAL FUTURE URBAN ZONED LAND STERILIZED FOR RESIDENTIAL DEVELOPMENT

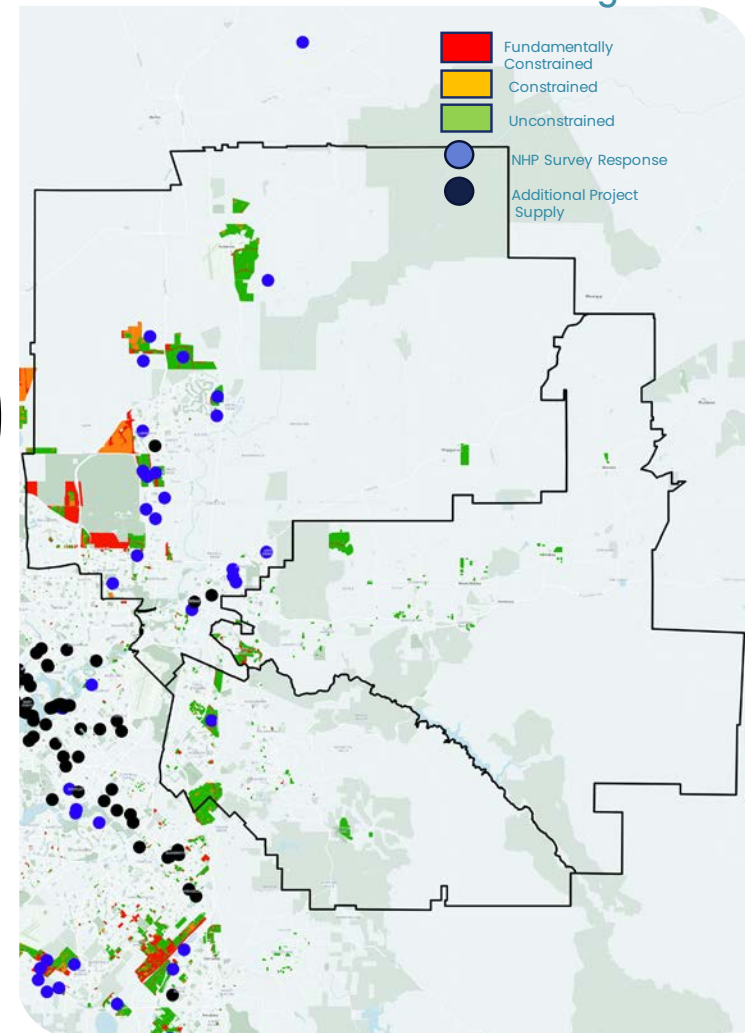
North East Sub-Region: Development Constraints Assessment (June 2023)



Percentage of constrained land by constraint category* North East



Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment North East Sub-Region



WHEN ADDITIONAL CONSTRAINTS ARE FACTORED IN THERE IS A NET LOSS/STERILIZATION OF BETWEEN **18,000 AND 24,400 NEW HOMES***

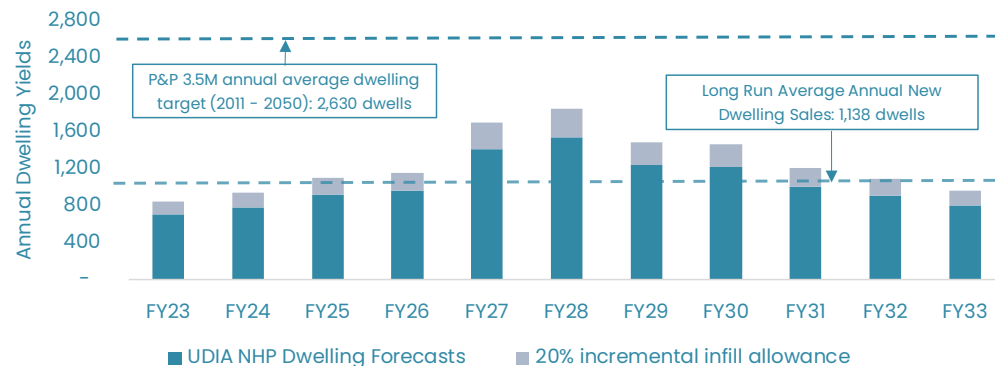
North East Sub-Region

UDIA National Housing Pipeline: NE Sub-Region
Developer Specified Dwelling Yields (June 2023)



ACTUAL EXPRESSED DEVELOPER INTENTIONS/ABILITY TO GENERATE NEW DWELLING COMMENCEMENTS EQUATES TO AROUND **20%** OF THEORETICAL DWELLING YIELD FROM THESE LAND STOCKS OR **5,800 NEW HOMES** OVER THE COMING FIVE YEARS

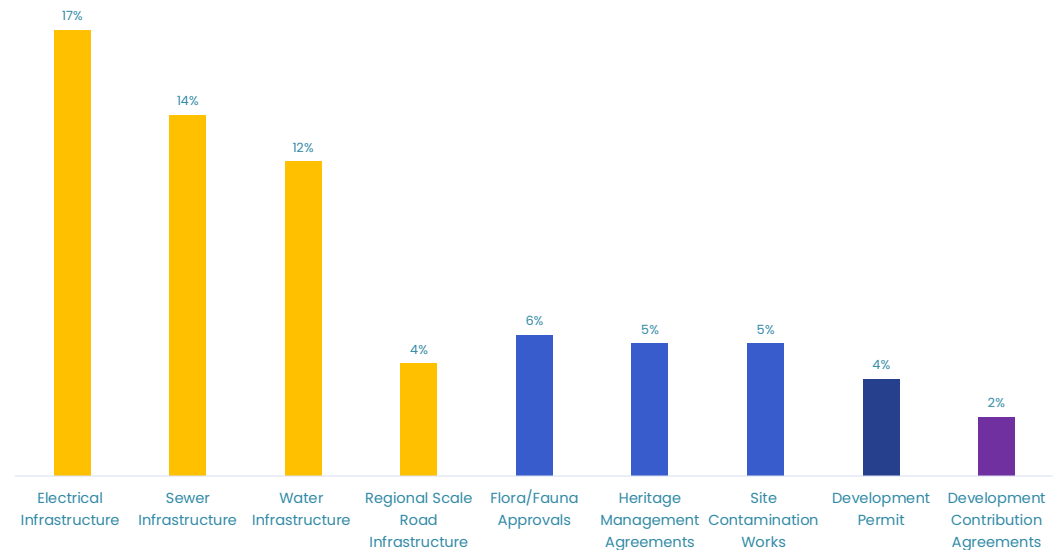
UDIA NHP Annual Dwelling Forecasts: North East Sub-Region



1,030 HA

OF LAND STOCKS IN THE NORTH EAST IDENTIFIED ACROSS TIER ONE AND TIER TWO OF THE UDIA NHP

Proportion of Total Development Yield Requiring Enabling Infrastructure & Approvals by Type



ACROSS THE NEXT TEN YEARS IT IS ESTIMATED THE NORTH EAST WILL **UNDERDELIVER** AGAINST P&P@3.5M DWELLING TARGETS BY BETWEEN **42% AND 73%**

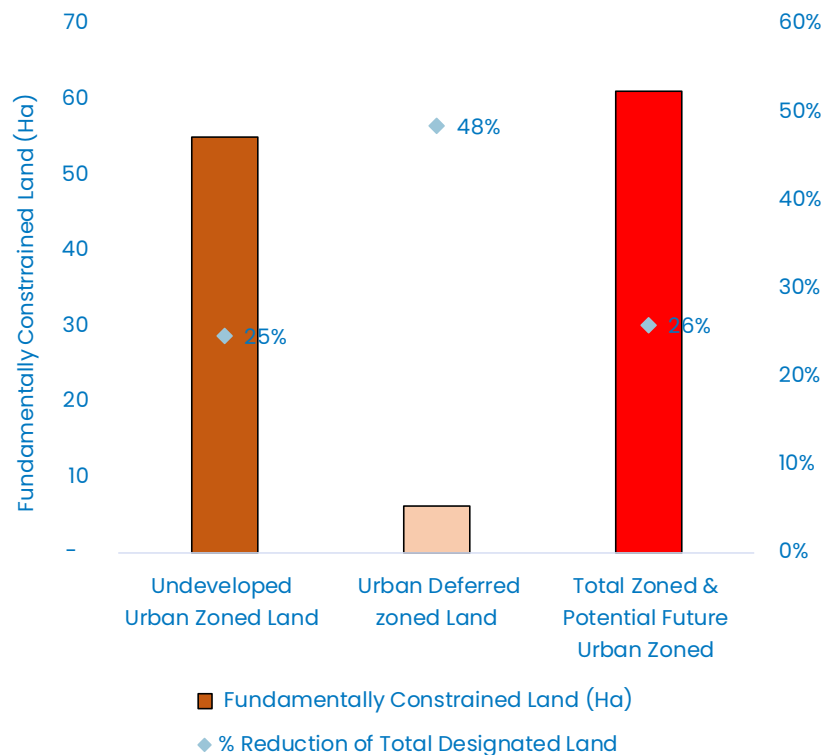
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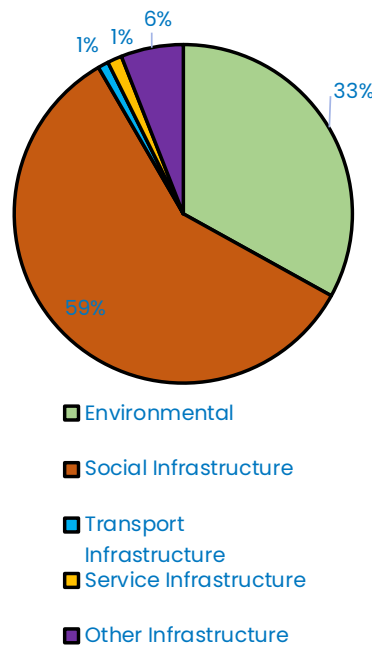
Central Sub-Region

CONTAINING PREDOMINATELY ESTABLISHED URBAN AREAS THE CENTRAL SUB-REGION HAS LIMITED UNDEVELOPED URBAN ZONED OR POTENTIAL FUTURE URBAN ZONED LAND, WITH A COMBINED ASSESSED QUANTUM OF JUST **61 HECTARES**

Central Sub-Region: Development Constraints Assessment (June 2023)

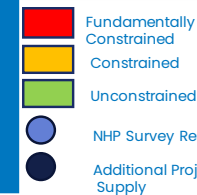
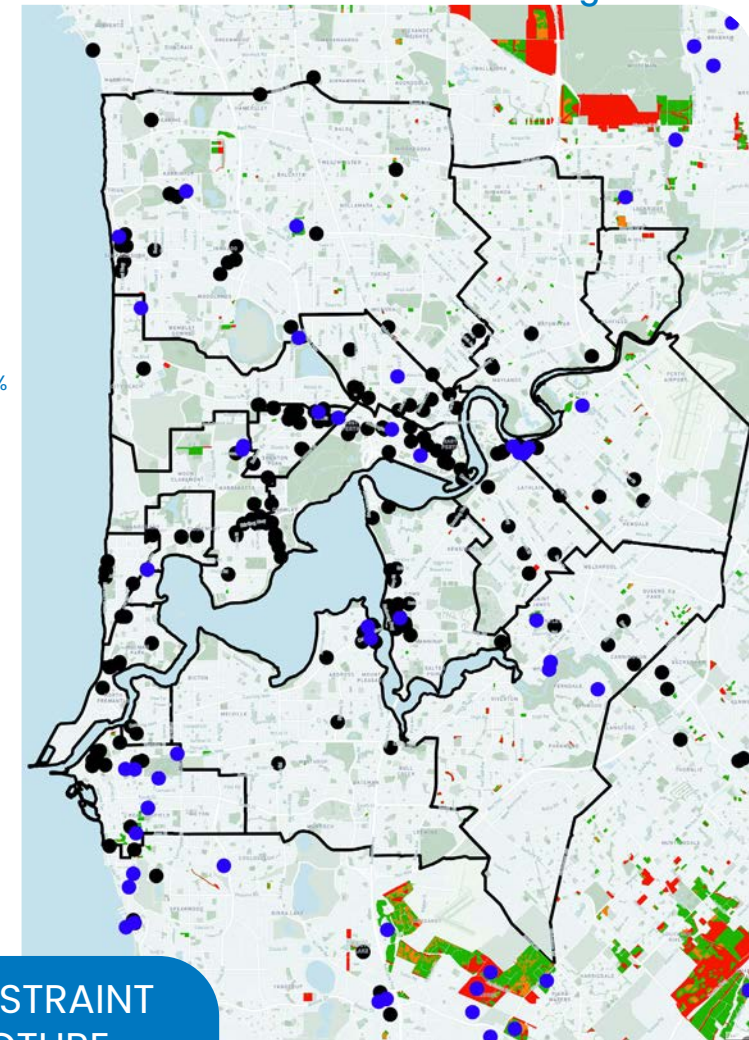


Percentage of constrained land by constraint category* Central



THE PREDOMINANT CONSTRAINT IS SOCIAL INFRASTRUCTURE DESIGNATION INCLUDING CURRENT OR FUTURE SCHOOL SITES, PARKS OR RESERVES OR PUBLIC OPEN SPACE

Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment Central Sub-Region

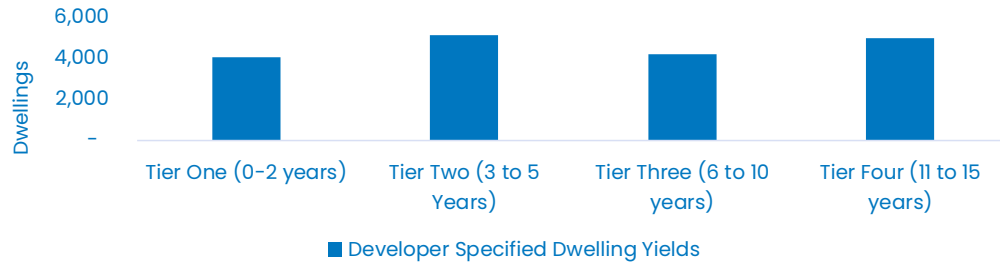


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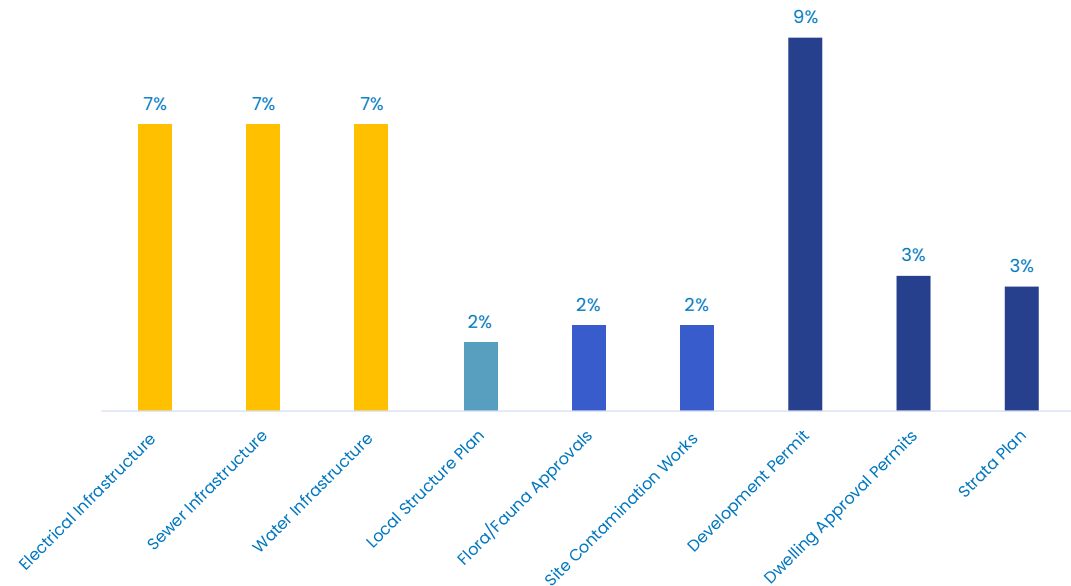
Central Sub-Region

UDIA National Housing Pipeline: Central Sub-Region
Developer Specified Dwelling Yields (June 2023)

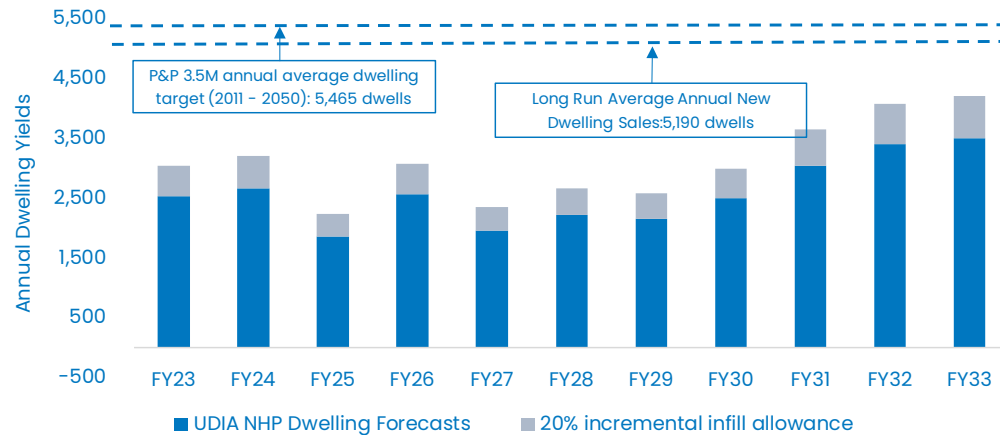


WHILE A LARGE VOLUME OF DEVELOPMENT SITES WITH YIELD POTENTIAL AND APPROVALS HAVE BEEN IDENTIFIED ACROSS THE CENTRAL SUB-REGION ONLY A SMALL PROPORTION OF PROJECTS ARE FORECAST TO TRANSLATE INTO APARTMENT AND MULTI-UNIT YIELD OVER THE COMING FIVE YEARS

Proportion of Total Development Yield Requiring Enabling Infrastructure & Approval by Type



UDIA NHP Annual Dwelling Forecasts: Central Sub-Region



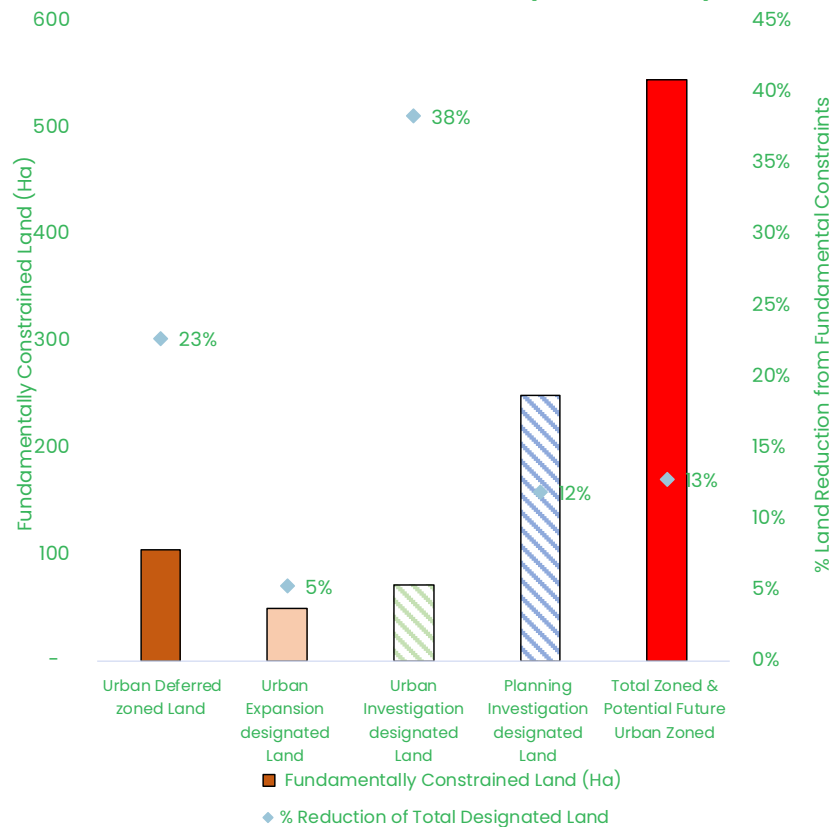
ACCORDING TO THE UDIA NHP ANALYSIS AN ESTIMATED **9,000 DWELLINGS** ARE FORECAST TO BE DELIVERED ACROSS THE ENTIRE CENTRAL SUB-REGION IN THE NEXT FIVE YEARS WHICH IS **LESS THAN HALF THE SUPPLY REQUIRED** AGAINST THE P&P@3.5M DWELLING TARGETS

South West Sub-Region

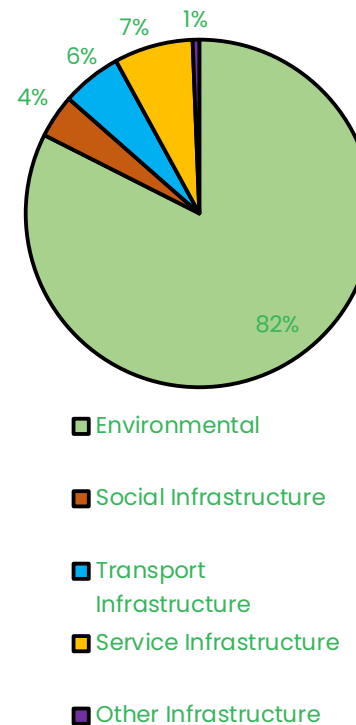
1,380 HA

OF UNDEVELOPED URBAN ZONED AND POTENTIAL FUTURE URBAN ZONED LAND IN THE SOUTH WEST HAS A FUNDAMENTAL OR ADDITIONAL CONSTRAINT EQUATING TO **32%** OF TOTAL LAND SUPPLY

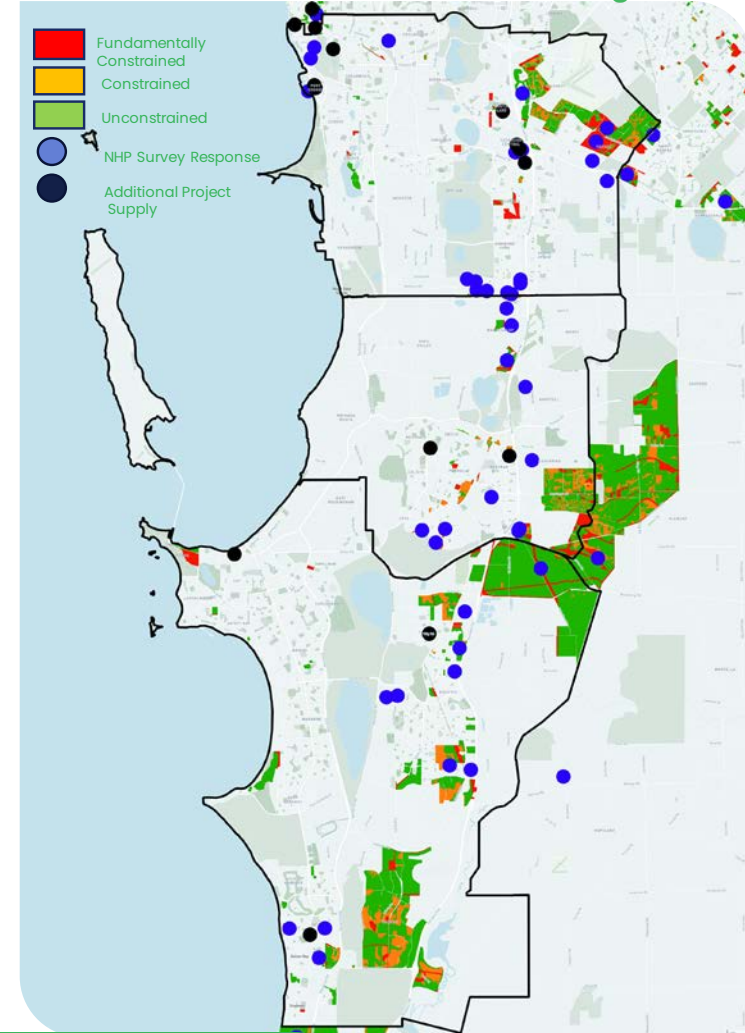
South West Sub-Region: Development Constraints Assessment (June 2023)



Percentage of constrained land by constraint category* South West



Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment South West Sub-Region



IDENTIFIED CONSTRAINTS RESULT IN YIELD LOSS/STERILIZATION OF BETWEEN 11,000 AND 27,000 NEW HOMES*

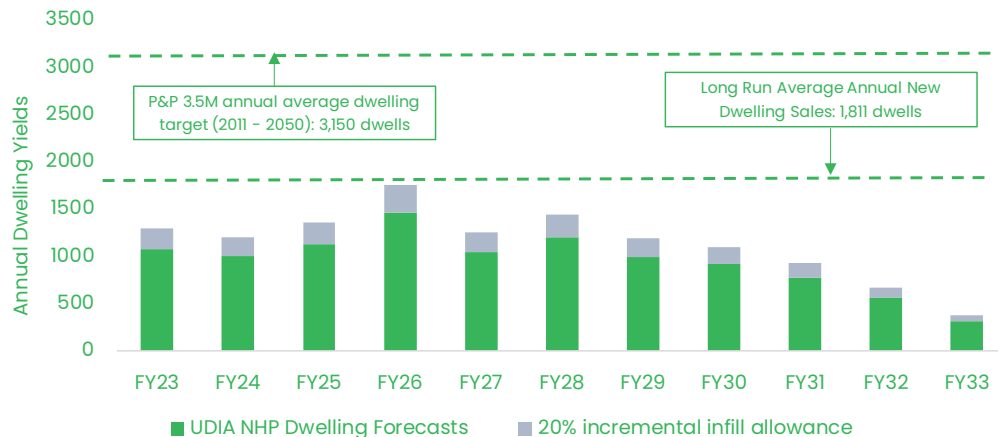
South West Sub-Region

UDIA National Housing Pipeline: South West Sub-Region
Theoretical & Developer Specified Dwelling Yields (June 2023)



ACTUAL EXPRESSED DEVELOPER INTENTIONS/ABILITY TO GENERATE NEW DWELLING COMMENCEMENTS EQUATES TO AROUND **20%** OF THEORETICAL DWELLING YIELD FROM THESE LAND STOCKS OR **5,800 NEW HOMES** OVER THE COMING FIVE YEARS

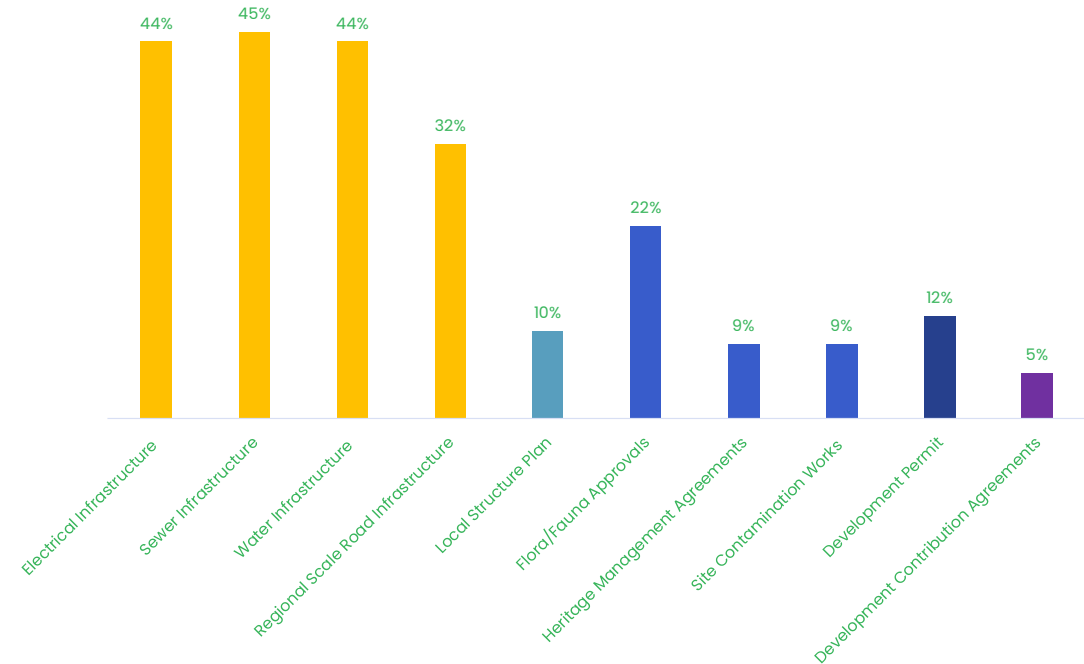
UDIA NHP Annual Dwelling Forecasts: South West Sub-Region



510 HA

OF LAND STOCKS IN THE SOUTH WEST IDENTIFIED ACROSS TIER ONE AND TIER TWO OF THE UDIA NHP

Proportion of Total Development Yield Requiring Enabling Infrastructure & Approval by Type



ACROSS THE NEXT TEN YEARS IT IS ESTIMATED THE SOUTH WEST WILL **UNDERDELIVER** AGAINST P&P@3.5M DWELLING TARGETS BY BETWEEN **54% AND 82%**

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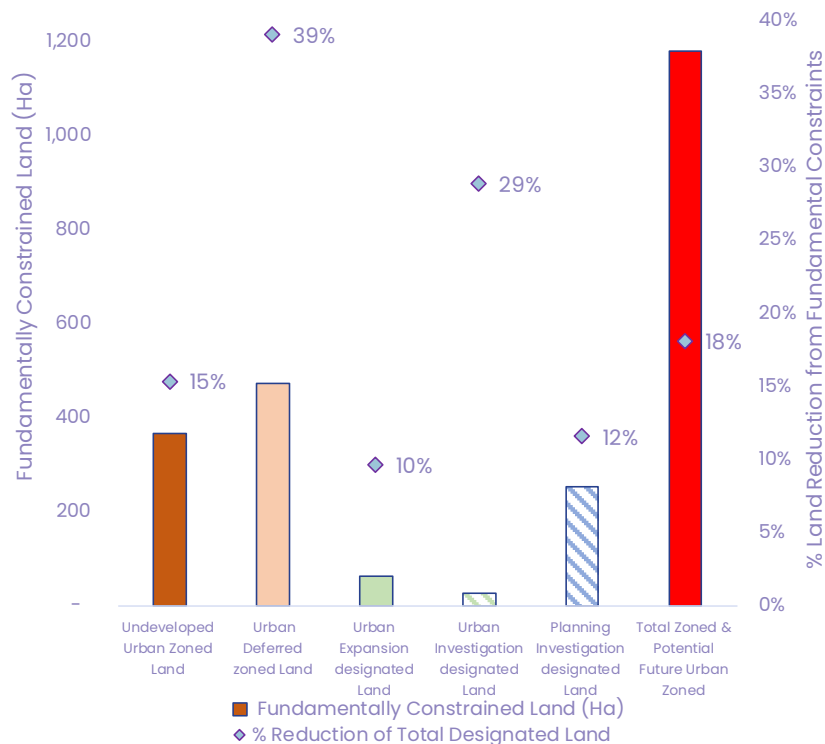


South East Sub-Region

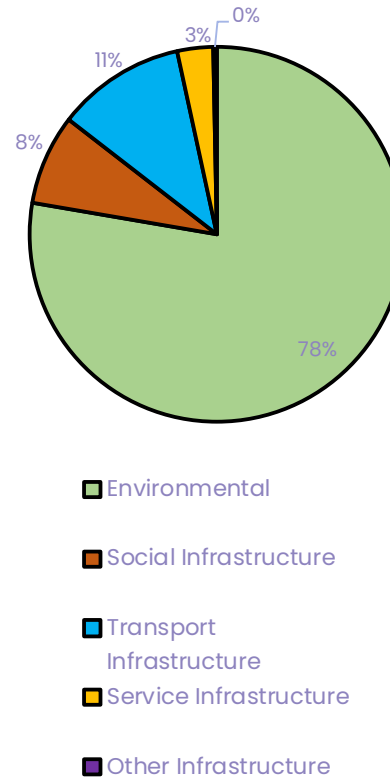
1,630 HA

OF UNDEVELOPED URBAN ZONED AND POTENTIAL FUTURE URBAN ZONED LAND IN THE SOUTH EAST HAS A FUNDAMENTAL OR ADDITIONAL CONSTRAINT EQUATING TO **25%** OF TOTAL LAND SUPPLY

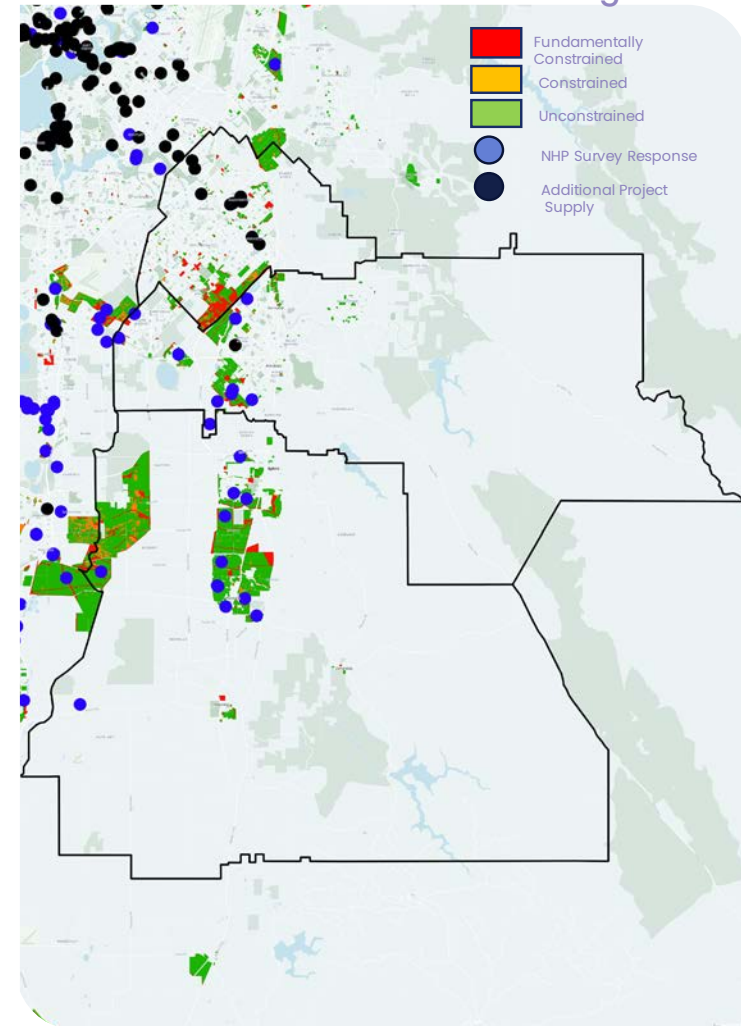
South East Sub-Region: Development Constraints Assessment (June 2023)



Percentage of constrained land by constraint category* South East



Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment South East Sub-Region



IDENTIFIED CONSTRAINTS RESULT IN YIELD LOSS/STERILIZATION OF BETWEEN 23,500 AND 32,000 NEW HOMES*

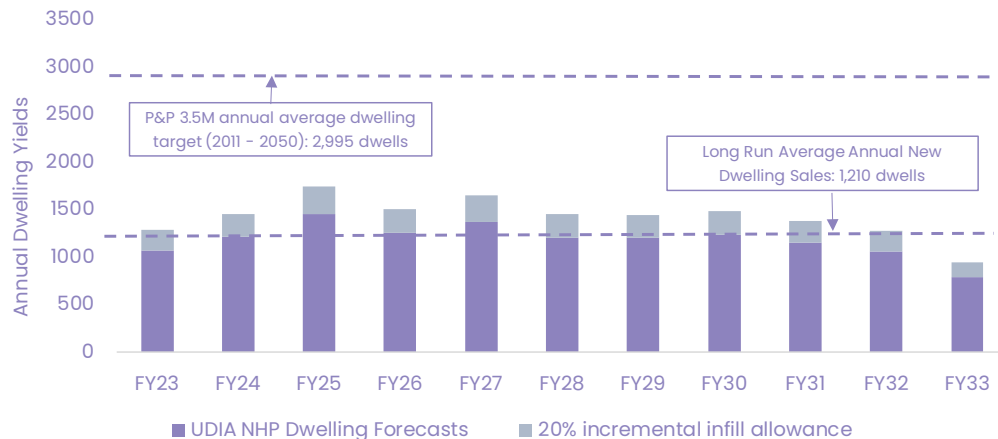
South East Sub-Region

UDIA National Housing Pipeline: South East Sub-Region
Developer Specified Dwelling Yields (June 2023)



ACTUAL EXPRESSED DEVELOPER INTENTIONS/ABILITY TO GENERATE NEW DWELLING COMMENCEMENTS EQUATES TO AROUND **20%** OF THEORETICAL DWELLING YIELD FROM THESE LAND STOCKS OR **6,630 NEW HOMES** OVER THE COMING FIVE YEARS

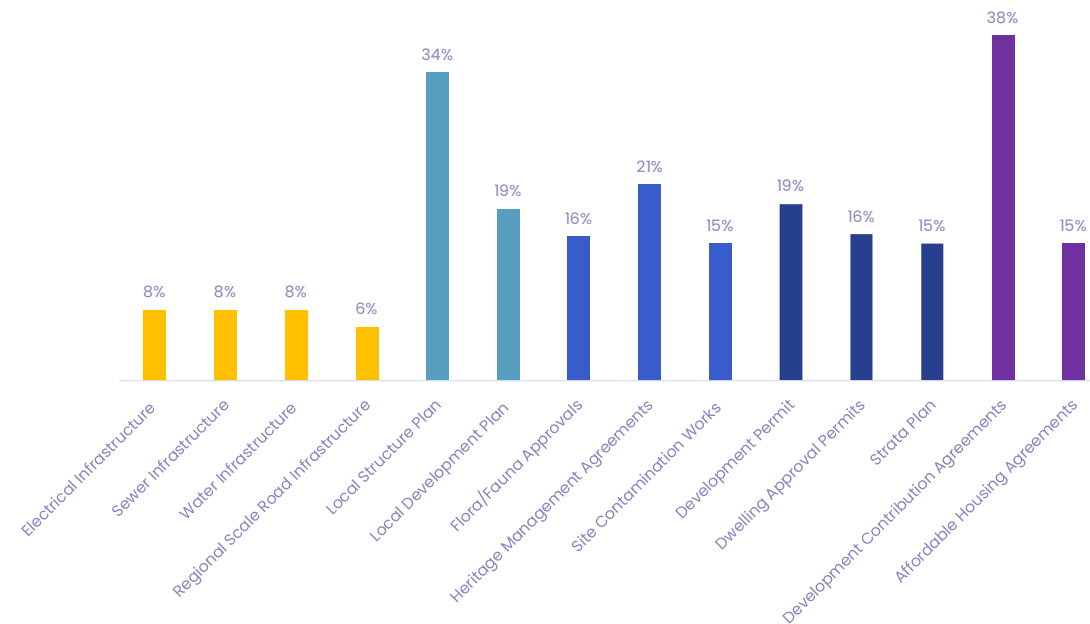
UDIA NHP Annual Dwelling Forecasts: South East Sub-Region



1,750 HA

OF LAND STOCKS IN THE SOUTH EAST IDENTIFIED ACROSS TIER ONE AND TIER TWO OF THE UDIA NHP

Percentage of Total Development Yield Requiring Enabling Infrastructure and Approvals by Type



ACROSS THE NEXT TEN YEARS IT IS ESTIMATED THE SOUTH EAST WILL **UNDERDELIVER** AGAINST P&P@3.5M DWELLING TARGETS BY BETWEEN **51% AND 74%**

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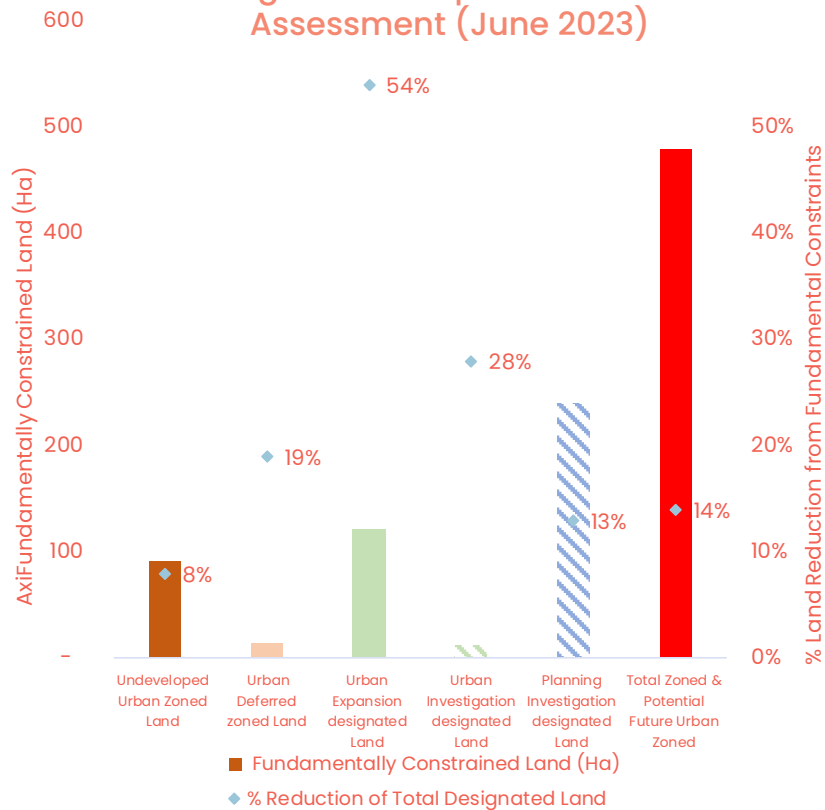


Peel Region

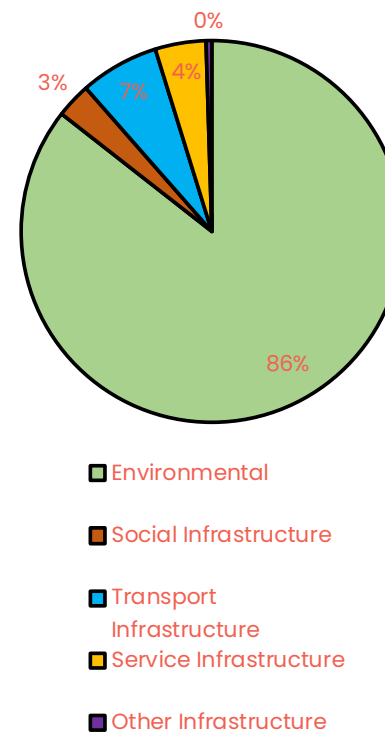
780 HA

OF UNDEVELOPED URBAN ZONED AND POTENTIAL FUTURE URBAN ZONED LAND IN THE PEEL REGION HAS A FUNDAMENTAL OR ADDITIONAL CONSTRAINT EQUATING TO **14%** OF TOTAL LAND SUPPLY

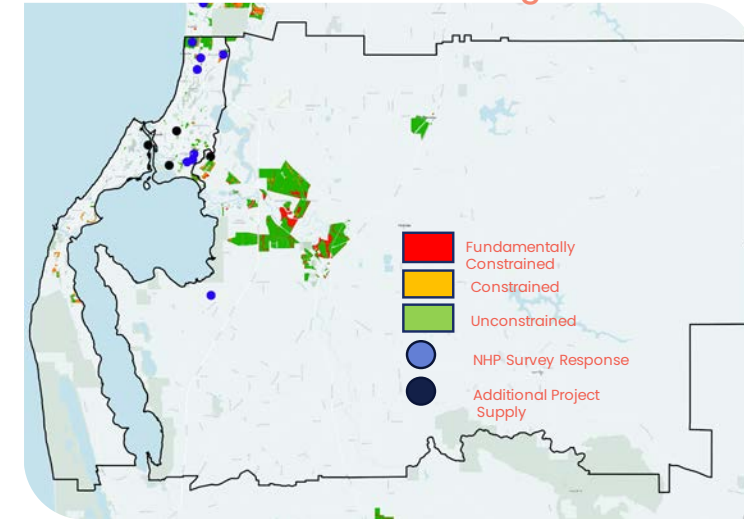
Peel Region: Development Constraints Assessment (June 2023)



Percentage of constrained land by constraint category* Peel



Spatial Distribution of NHP Survey Responses + Additional project Supply with Constraints Assessment Peel Region



AROUND TWO THIRDS OF ALL FORWARD DWELLING YIELDS ACROSS THE PEEL REGION REQUIRE ALL FOUR TYPES OF ENABLING INFRASTRUCTURE. THIS IS TWICE THE PROPORTION FEATURED ACROSS THE PERTH METROPOLITAN SUB-REGIONS

IDENTIFIED CONSTRAINTS RESULT IN YIELD LOSS/STERILIZATION OF BETWEEN **9,500 AND 15,600 NEW HOMES***

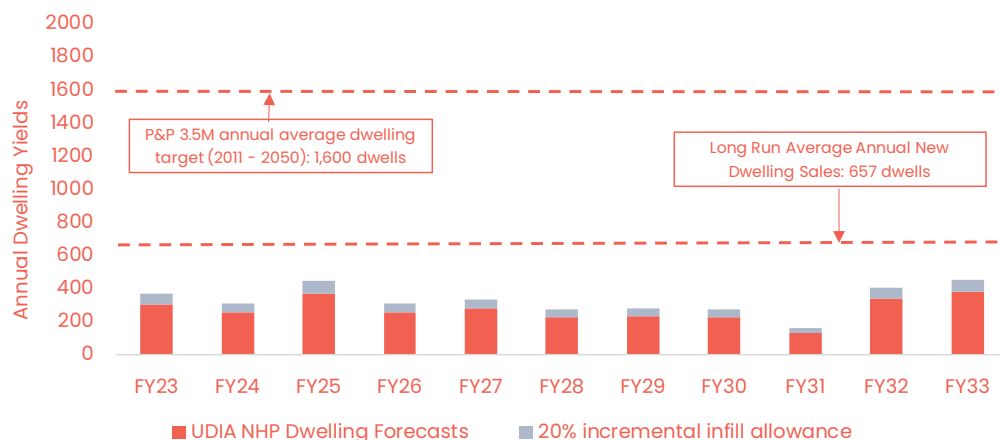
Peel Region

UDIA National Housing Pipeline: Peel Region
Developer Specified Dwelling Yields (June 2023)



ACTUAL EXPRESSED DEVELOPER INTENTIONS/ABILITY TO GENERATE NEW DWELLING COMMENCEMENTS EQUATES TO AROUND **23%** OF THEORETICAL DWELLING YIELD FROM THESE LAND STOCKS OR **13,000 NEW HOMES** OVER THE COMING FIVE YEARS

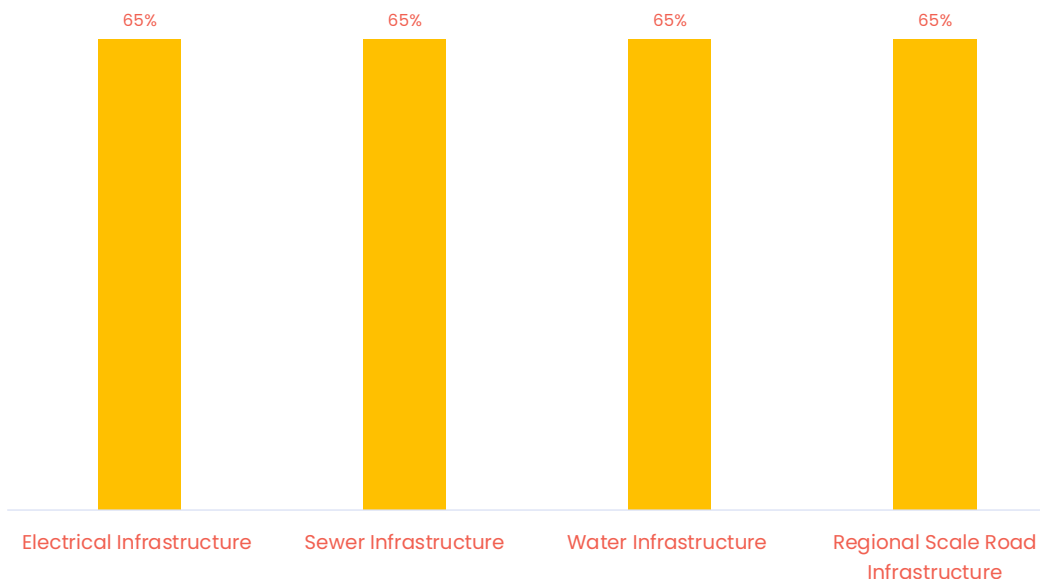
UDIA NHP Annual Dwelling Forecasts: Peel Sub-Region



546 HA

OF LAND STOCKS IN THE PEEL REGION IDENTIFIED ACROSS THE FOUR TIERS OF THE UDIA NHP

Proportion of Total Development Yield Requiring Enabling Infrastructure & Approvals by Type



BASED ON THESE YIELD FORECASTS IT IS ESTIMATED THAT THE PEEL REGION WILL **UNDERDELIVER** AGAINST P&P@3.5M DWELLING TARGETS BY BETWEEN **77% AND 92%**

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Next steps

The UDIA National Housing Pipeline methodology piloted in Western Australia is now being rolled out across each of the mainland capital cities.

The next round of NHP Developer Intentions Surveys for Perth and Peel will be in the field from late November 2023 with NHP Technical Workshops slated for February 2024, NHP Outlook Forums in March/April 2024 and the National launch of the UDIA National Housing Pipeline planned for June 2024.

The ambition is for the UDIA National Housing Pipeline to become enshrined as a core plank of the UDIA's annual Research and Advocacy Program. The success of the NHP rests on the ongoing support and inputs from our valued Members and close engagement and collaboration with a broad suite of government and service agency stakeholders.

UDIA WA is also progressing an associated piece of work to identify crucial enabling infrastructure requirements to unlock development in key growth areas. It will directly address aspects such as fragmented land ownership, requirements for service agency commitment ahead of traditional planning framework requirements, coordination of strategic infrastructure and industry and government collaboration. The NHP Infrastructure Requirements report will be finalised in early 2024 and is intended to be updated annually.



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Appendix A

Development Constraint Mapping – Perth Pilot

1	Wetlands (CCW & REW)	Environmental	
2	Creeks & Waterways	Environmental	
3	Floodways	Environmental	
4	Bush Forever	Environmental	
5	Environmental Protection Policy	Environmental	
6	Threatened Ecological Communities (TECs)	Environmental	
7	State Forest	Environmental	
8	MRS Parks & Recreation	Social Infrastructure	
9	LPS-POS	Social Infrastructure	
10	Private Recreation	Social Infrastructure	
11	School Sites	Social Infrastructure	
12	Major Roads	Transport Infrastructure	
13	Rail Corridors	Transport Infrastructure	
14	Rail Reserves	Transport Infrastructure	
15	Gas Pipeline Easements	Service Infrastructure	
16	Power Easements	Service Infrastructure	
17	Public Purpose	Other Infrastructure	



Note: The above table sets out 17 identified constraints which have been utilised in the Phase 1 works within the UDIA NHP Pilot for Perth and Peel. Please refer to Appendix B for the data sources of spatial layers with additional technical notes.

Appendix B

UDIA NHP spatial analysis informing notes

DATASETS & USES

Dataset	Source	Custodian	Use
Cadastre (lgate217)	SLIP	Landgate	Base Cadastre - Filtered as per methodology
MRS (DPLH-023)	SLIP	DPLH	Separation of Cadastral categories 'Urban' & 'Urban Deferred' and informing some constraints layers. Clipped to Perth/Peel regions
LPS (DPLH-072)	SLIP	DPLH	Filtering of cadastre for 'undeveloped urban', and informing some constraints layers
Sub-regional Framework	DPLH	DPLH	Separation of Cadastral categories 'Urban expansion', 'Urban Investigation' & 'Planning Investigation' and informing some constraints
EPP 2011 Western Swamp Tortoise Policy Boundary (DWER-062)	SLIP	DWER	Environmental Protection Policy layer
Current Active Schools Semester 1 2022 - Public (DET-020)	SLIP	DET	Used to generate school site layer
Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)	SLIP	DBCA	Wetlands layer extracted
FPM 1 in 100 AEP Floodway & Flood fringe (DWER-014)	SLIP	DWER	Floodways layer extracted
Carn Cocaktoot (BCA-057)	SLIP	DBCA	Part of TEC layer
Region scheme - Special areas (DPLH-022)	SLIP	DPLH	Bush forever layer data extracted
WA Petroleum Pipelines (DMIRS-007)	SLIP	DMIRS	Developing gas pipeline constraint layer
Transmission Overhead Powerlines (WP-032)	SLIP	WP	Developing power easement constraint layer

CONSTRAINT LAYERS

Constraint	Dataset/s	Comment
1. Floodways	DWER-014	Extracted by floodway attribute
2. Wetlands	DBCA-019	Extracted from wgs_wet01 field by 'Constraint' (CCW) and 'Resource Enhancement' (REW) attributes.
3. Major Roads	MRS, SRFW	Included from MRS dataset, as well as 40m buffer road data from Subregional Framework.
4. Bush forever	DPLH-022	Extracted from Special Areas dataset. Clipped to Perth/Peel
5. TEC	DBCA-057, DBCA-048	Combined Carn Cocaktoot and Tuart woodlands datasets. Secondary (orange) constraint only.
6. School sites	DET-020, SRFW, LGATE-217	Generated using existing schools points within land parcels, and added proposed school sites from Subregional framework.
7. Rail Corridors	SRFW	Existing and proposed rail corridors from Subregional framework included.
8. Public Purpose	MRS, LPS	Extracted from the MRS. Added further data extracted from planning scheme.
9. MRS Parks & Recreation	MRS, LPS	Extracted from the MRS. Added further data extracted from planning scheme.
10. LPS-POS	LPS, SRFW	Existing POS extracted from planning scheme data and future POS from Sub regional Framework.
12. Power Easements	WP-032	Buffers used: 66kV = 0, 132kV = 20m, 330kV = 60m
13. State Forest	MRS	Extracted from the MRS. Secondary (orange) constraint only
14. Gas pipeline Easements	WA Petroleum Pipelines (DMIRS-007)	APA and DBNGP pipelines extracted from dataset - 20m buffer applied to APA and 30m buffer applied to DBNGP
15. Creeks & Waterways	DWER	30m buffer
17. Private Recreation	LPS	Extracted from the Local Planning Scheme. Secondary (orange) constraint only
18. Rail Reserves	MRS	Extracted from the MRS.
19. Environment Protection Policy	DWER-062	Swamp Tortoise area data



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Appendix B

UDIA NHP spatial analysis informing notes



UDIA – WA Development Ready Pipeline Sieve Mapping - Datasets, Constraint Layers and methodological outline

METHODOLOGY

1. Lot zone categories
 - I Preparation of cadastre
 - i. Export cadastre to Perth and Peel MRS regions
 - ii. Remove unwanted cadastre use and land types ('Unallocated Crown Land', 'Parent lots', 'EASMT', 'OTHER', 'ROAD')
 - iii. Remove duplicate geometries
 - II Separate into categories
 - i. Join MRS 'Description' for Urban & Urban Deferred (*spatial join based on intersect with largest overlap*)
 - ii. Join SRFW 'land type' for remaining Urban Expansion, Urban Investigation & Planning Investigation (*spatial join based on intersect with largest overlap*)
 - iii. Export each urban category to separate files, URBAN & URBAN DEFERRED first from MRS description, then other 3 categories from SRFW landtype where not in first 2 categories.
 - III Refinement of Undeveloped Urban
 - i. Remove parcels <5000 sqm from listed central LGA's
 - ii. Remove parcels <10000 sqm from LGA's outside designated Central region
 - iii. Remove other unwanted land type categories "Reserves"
 - iv. Join LPS 'zone' – then extract zones from listed set (*spatial join based on intersect with largest overlap*)
 - v. Join R-codes 'rcode_no' – then extract values from listed set (*spatial join based on intersect with largest overlap*)
 - vi. Combine 2 results above and remove duplicates
 - vii. UDIA manual method to eliminate unwanted polygons
 - IV Manual check and clean of remaining 4 categories
2. Constraints Development
 - I Construct individual constraint layers as outlined in spreadsheet
 - II Prepare individual constraint layers for combining
 - i. Dissolve into single features
 - ii. Edit fields to single field with constraint as value
 - III Combine into single constraint layer with no overlapping features (based on provided hierarchy)
 - i. Union first two constraints
 - ii. For the single feature that has NULL in 1st field, copy value from 2nd field across to replace NULL
 - iii. Merge features with same values one by one
 - iv. Repeat with next constraint until all combined

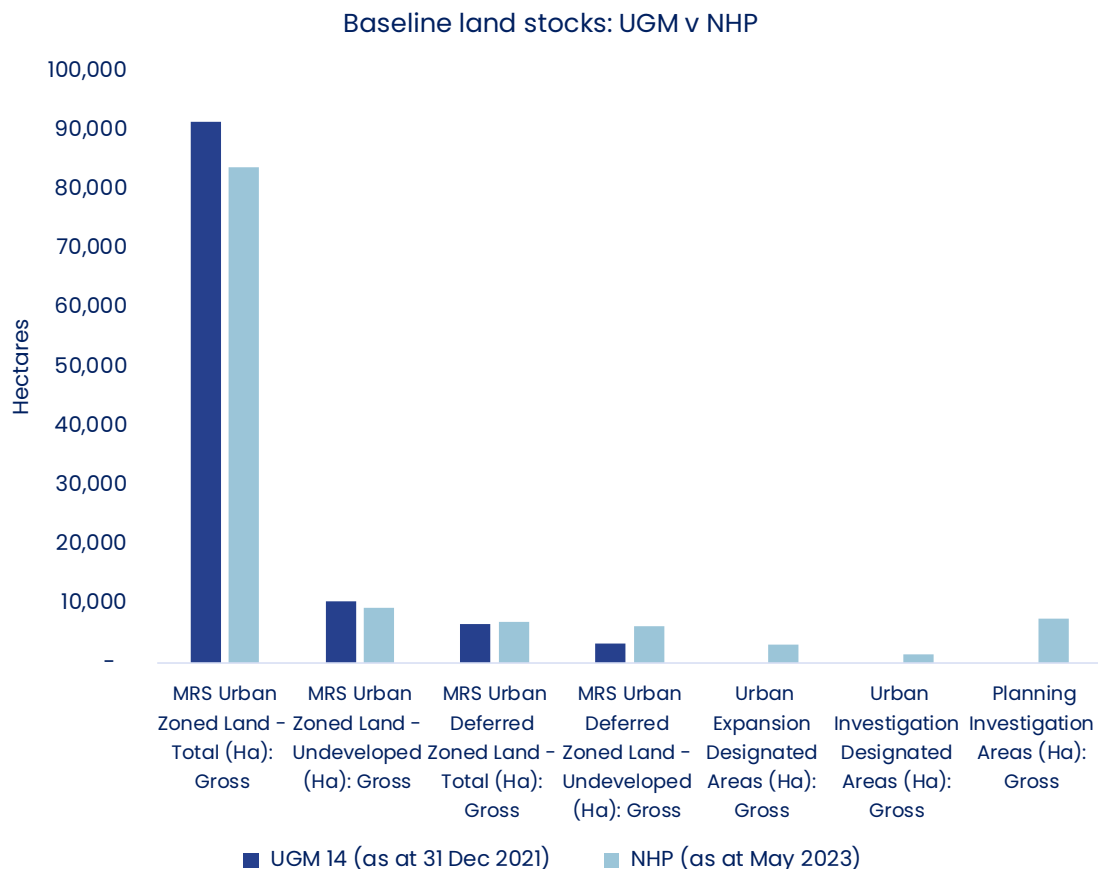
3. Sieve Mapping

- I For each of the 5 zone categories:
 - i. Union with combined constraints layer
 - ii. Remove features with no parcel information (parts of constraint layer that had no impact on parcels)
 - iii. Create new area field and populate via calculate geometry
- iv. Resultant datasets for each category have all features with designation of constraint layer impacting (based on given hierarchy). Further categorized into Yes or No constraint and Red, Orange or Green.



Appendix C

Urban Growth Monitor (UGM) v NHP: Baseline Land Stocks



Note: The Urban Growth Monitor (UGM) is an annually released publication produced by the Department of Planning, Lands and Heritage (DPLH). The chart and table above outline the baseline Metropolitan Region Scheme (MRS) Urban and Urban Deferred land stocks used in the latest UGM report and the UDIA NHP Perth and Peel Pilot.

	UGM 14 (as at 31 Dec 2021)	NHP (as at May 2023)
MRS Urban Zoned Land - Total (Ha): Gross	91,360	83,650
MRS Urban Zoned Land - Undeveloped (Ha): Gross	10,430	9,247
MRS Urban Deferred Zoned Land - Total (Ha): Gross	6,500	6,828
MRS Urban Deferred Zoned Land - Undeveloped (Ha): Gross	3,280	6,220
Urban Expansion Designated Areas (Ha): Gross	N/A	2,957
Urban Investigation Designated Areas (Ha): Gross	N/A	1,420
Planning Investigation Areas (Ha): Gross	N/A	7,502
MRS Urban Zoned Land - Undeveloped (Ha): Constrained	N/A	1,002
MRS Urban Deferred Zoned Land - Total (Ha): Constrained	N/A	828
Urban Expansion Designated Areas (Ha): Constrained	N/A	300
Urban Investigation Designated Areas (Ha): Constrained	N/A	278
Planning Investigation Areas (Ha): Constrained	N/A	1,496
MRS Urban Zoned Land - Undeveloped (Ha): Unconstrained	N/A	8,245
MRS Urban Deferred Zoned Land - Total (Ha): Unconstrained	N/A	5,392
Urban Expansion Designated Areas (Ha): Unconstrained	N/A	2,657
Urban Investigation Designated Areas (Ha): Unconstrained	N/A	1,142
Planning Investigation Areas (Ha): Unconstrained	N/A	6,006

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Unit 26, Level 1
3 Wexford Street
SUBIACO WA 6008

T 08 9215 3400

E udia@udiawa.com.au

www.udiawa.com.au



UDIAWA



Urban Development Institute of Australia (WA)



@UDIA_WA

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