



FUTURE READY™

Case Study

LAND IQ






PROJECT OVERVIEW

Land iQ is a spatially enabled whole of government strategic land use evaluation tool. It supports the Department of Planning and Environment (DPE) in its alignment with the New South Wales (NSW) Government's Strategic Land and Property Framework (SLPF). There are a significant number of bespoke methodologies, tools and systems used across government for land use analysis. Land iQ brings all of these into one place which will streamline existing planning and pre-development processes.

The tool was developed to reduce the number of related, yet different methodologies and tools used across Government to assess the impacts of different land uses and reduce due diligence timeframes and government spending on consultants. It leverages a common database of inputs and assumptions to inform evidence-based decision making on land use. It enables users to analyse land and property assets in a more consistent and strategic way.

DPE's Homes, Property and Development Group led the development of Land iQ in collaboration with agencies across NSW Government and in partnership with WSP, Giraffe and Aerometrex.

WHAT FUTURE TRENDS DID WE CONSIDER?

 A Networked World	 Data, Transparency & Cyber Security	 Indigenous Influence
 Automation & Digital Augmentation	 Local Places	

HOW DID WE CONSIDER THESE TRENDS?

Society



Indigenous Influence – LandiQ continues to be refined to be made available for Local Aboriginal Land Councils, researchers and industry to assess the impacts of different land uses and reduce due diligence timeframes.

Local Places – To support government priorities in housing delivery Land iQ provides a consistent, whole of government approach to site identification. The tool will allow users to understand planning context and identify sites with acceptable environmental risks when delivering residential development.

Land iQ can be used to:

- Identify areas of priority for housing development, type of housing and short list sites using multi-criteria search.
- Assessing site and LGA resilience and impacts for planning tasks and site development considerations.
- Undertake preliminary site due diligence using the data library.
- Display the alignment between the delivery of critical infrastructure with development of new homes.
- Generate or upload 3D designs to understand built form and environmental impacts.
- Use all modules to consolidate relevant data, strategic plans, SEPPs and analytics to assess DAs / rezoning proposals.

Technology



A Networked World – Land iQ delivers an in-house solution and makes it easier for government to work together – provides a collaborative spatial environment for sharing projects, datasets and developing scenarios to test potential use of land.

It integrates over 40 land use typologies into one platform making it easy to search more than 8 million lots and properties and test different scenarios for land use. It enables place-based scenario analysis. This functionality provides a standardised approach to creating, sharing, and evaluating land use scenarios against one other and measuring potential impacts.

Land iQ features advanced multiple-criteria site searching including ownership, size, planning controls, proximity to services / infrastructure / amenities / constraints and many more.

The tool is accessible to all NSW Government agencies with a license.

Data, Transparency & Cyber Security – Land iQ is a comprehensive spatial and government data library including typology assumptions sourced from relevant delivery entities (e.g. School Infrastructure, Health Infrastructure). There are currently over 100 data sources in Land iQ's spatial data library. This includes an expanding suite of data from open access sources, government data sources and indicators.

The tool can be used to identify sites with a set of criteria, undertake site layouts/feasibilities, make preliminary assessment of business cases, and assist strategic planning and development assessment by analysing the local context from street/suburb scale, to LGA and regional context to understand the existing economic, social, demographic, cultural and environmental context.

Land iQ also provides the opportunity to capture insights for future projects and move away from the more traditional approach of sharing information via email.

Automation & Digital Augmentation – It is designed to be modular and flexible to evolve and adapt to the future needs of its users, leveraging new digital resources. Users can add their own data sets and customise certain aspects of Land iQ which is a unique offering across government.

HOW WAS OUR APPROACH BETTER ?

Our combined strengths in effective stakeholder engagement, holistic land use planning, applied software engineering and data science enabled our team to deliver an innovative tool to support enhanced strategic decision making that is underpinned by Future Ready™. Our partnership with Giraffe and Aerometrex was essential as we developed the NSW Government's vision of Land iQ to its full potential.

Innovating beyond the traditional engineering know-how is what we do best at WSP. Future Ready allowed us to think beyond the conventional so that we could plan, design and deliver infrastructure that's ready for today's conditions and tomorrow's challenges. This project exemplifies how we can be future focused, by understanding what the world might look like in the next few decades and take action to prepare for it.

THE OUTCOMES

Land iQ has already assisted the Housing Recovery Taskforce (HRT) to identify and analyse sites for temporary accommodation. The tool will be utilised for identification of sites for long-term residential dwellings.



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