

The University of Auckland and Landcare Research



LIUDD programme

The development process:
critical path analysis

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In this presentation



- a big picture overview of development controls
- stages in the *conventional* urban development process from the developer's point of view
- a glimpse of some of the critical points for wider uptake of LIUDD ... ?

A day in the life of Auckland



- 49 people a day
- 21 houses required
- 35 new cars
- 1 hectare of new land used for housing
- 14 years of land supply left
- currently urban area 14% covered in roads

and similar issues face most other regions

The big picture

International: OECD, UNEP etc

National: RMA, LGA, BA, standards, policies, orders, strategies - biodiversity, SDPOA, urban design ...

Regional: policy statements, coastal & other plans, iwi management plans, growth and other strategies

Specific regional plans eg ARC ALW plan
LTCCPs, **District** plans and rules

Catchment and **Asset** management plans

Engineering codes & utility connection standards; Stormwater/other bylaws
Structure plans

Regional/DOC and territorial council resource **consents** and conditions

On-**site** operating procedures

increasing detail

increasing detail

The big picture



Issue #1: too many documents –

- high level documents too fluffy to be useful
- some lower level ones conflict with each other
- no monitoring or evaluation of effectiveness before charging off to write another one
- changes to statutory and other documents consequent on new requirements a major burden on councils and consent applicants

The journey to development

developers

regulators

Māori

communities

financial and
major utility
players

legislators and
policy-makers

and more...



The journey to development - The developer's point of view

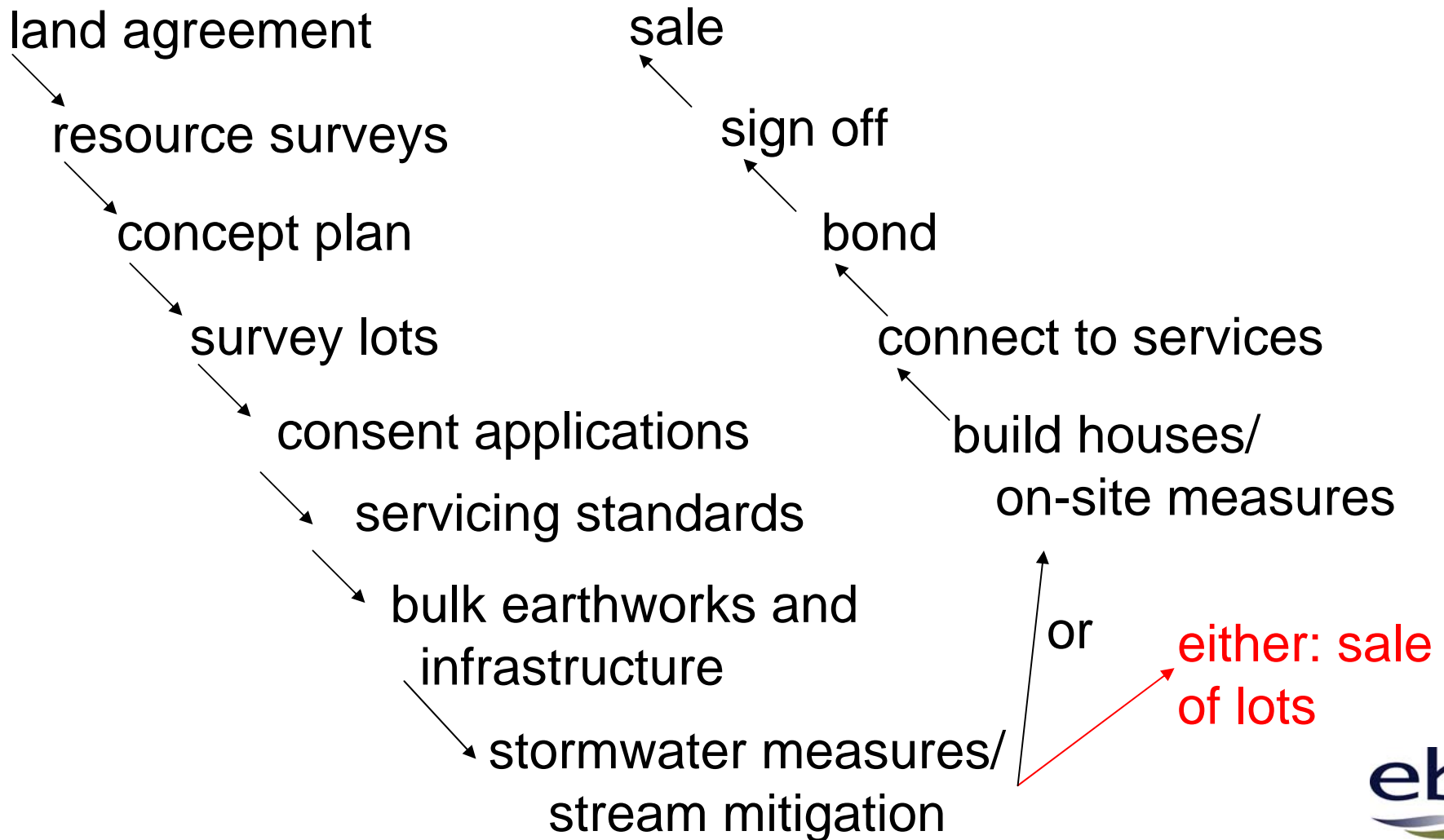
Later on, we will have time to reflect on:



how these ideas relate to:

- your science
- who you are doing your science with –
and who you are not doing it with
- how they are involved

The journey to development - The developer's point of view



The developer's point of view

1. Land agreement



Purchase often conditional on due diligence / economic analysis

The developer's point of view

2. Do resource surveys



- topographic / key feature mapping
- geotechnical (soils/slopes/stability)
- landscape, hydrology
- terrestrial and aquatic biodiversity
- archaeology
- contamination



return = (yield – cost of development)

The developer's point of view

3. Prepare concept plan/draft scheme plan

Iterative process: do a first cut, then talk with the council and iterate with:

- regional/district plan rules, reserve, stormwater requirements and CCMP - comprehensive catchment management plan
- council roading plans
- site opportunities and
- constraints
- yield vs value and costs of development



The developer's point of view

4. Formally survey lots

- shops and other services
- reserve areas and financial contributions
- riparian and other stormwater management and mitigation areas – BUT
- slopes too steep or too low cause problems with on-site stormwater measures and swales



The developer's point of view



4. Formally survey lots

Issue #2: too little communication –

- regional council requirements eg on imperviousness conflict with TLA's eg for density
- parts of TLAs have conflicting requirements with each other and the regional council eg geotech vs stormwater (water in vs water out of soils)
- reserve contributions – and credits

The developer's point of view

5. Develop detailed subdivision and lot servicing standards

- specific regional plans
eg ARC air, land and water plan
- detailed district plan rules
- catchment management plans
- asset management plans
- national standards
- local engineering codes
- local stormwater and other bylaws
- other – eg Long Bay design provisions



The developer's point of view



Issue # 3: lack of co-ordination

- **lack of integration of the many instruments - water and sanitary services assessments, asset and catchment management plans, GIS, LIM and rating databases, network consent applications, indicators etc...**
- **councils should prepare CCMPs well before development –a fundamental information need for subdivision design and servicing**
- **or else costs are externalised onto individual developers only developing part of the catchment**
- **risks leaving not enough land for essential stormwater and other infrastructure**

The developer's point of view

5. Develop detailed subdivision and lot servicing standards

Issue # 4: lack of consistency –

- district plans promote LIUDD
- engineering codes prevent it
- TP 124 and SNZ HB 44:2001 (New Zealand Handbook, Subdivision for People and the Environment) and MfE's Urban Design Protocol are not design standards



The developer's point of view

6. Scope utility requirements



3-waters

- water supply
- wastewater
- stormwater

Energy and other

- electricity
- gas
- phone

Transport/access

- regional roads
- local roads
- other access

- decide levels of service
- scope connection standards
- map required reticulation
- quantity survey pipes & materials

The developer's point of view

6. Scope utility requirements



Issue # 5: infrastructure provision or capacity lags behind growth –

- the TLA usually provides reticulated services and major roads
- if growth is ahead of services, the developer provides them if council agrees to funding arrangements, **OR** development is delayed
- infrastructure contributions a major problem - \$16,000 in RDC in 1992 (10 years in the courts) and \$25,000 in the Coromandel (current discussions)

The developer's point of view

6. Scope utility requirements



Issue # 6: inconsistent infrastructure funding policies –

- TLA power of general competence for infrastructure funding
- if done under RMA (only way in the past): appealable
- if done under LGA (recent provisions): High Court only on points of law ∴ = option of choice
- how well do councils work together to avoid reinventing the wheel?

The developer's point of view

7. Apply for resource consents and other permits



Territorial: district plan, LGA

- zone change if needed
- subdivision application &/or land use consent
- building consent
- plumbing and drainage consent

Regional: RMA/plan

- bulk earthworks
- stream works
- stormwater quality/ quantity
- sewage if needed

Coastal

- from DoC if in the coastal marine area

The developer's point of view

7. Apply for resource consents and other permits



- **pre-consent meeting/s**
- **AEE**
- **consultation**
- **time to process**
- **section 92 – more information**
- **to notify or not to notify? s 94**
- **council hearing?**
- **appeal?**

The developer's point of view

Issue # 7: dealing with uncertainty in AEEs

- cumulative effects and managing what we don't know
- how much does dirt hurt?
- what is the environment's capacity to assimilate stormwater contaminants?
- ARC catchment sediment budgets
- on-site controls vs bank erosion
- Auckland TLA regional network consents projects



The developer's point of view

7. Apply for resource



- **lack of confidence by council staff: play it by the book**
- **staff too young with too little experienced supervision**
- **no limit to how much information councils can ask for**
- **keep drip-feeding requests instead of just 1 big s92 letter**
- **councils have become far too risk-averse and society as a whole too litigious**

The developer's point of view

7. Apply for resource consents



- **councils are risk averse:**
- **take too long to send out s 94 letters (publicly notify or not)**
- **often err too far on the side of caution and notify when not really justified – too risk averse**
- **just get to yes – or no – QUICKLY!**

The developer's point of view

7. Apply for resource consent

Issue # 8: timeframes, needlessly bureaucratic processes

→ consecutive not concurrent scrutiny of applications by different council departments

→ conflicting requirements by different departments or staff in same department

→ staff turnover → new requirements from new staff



The developer's point of view

7. Apply for resource consents

Issue # 9: too hard to innovate

- developers become risk-averse: they build conventional developments even when they want to do better**
- district plans often leave too little discretion to let a good innovative development “get round the rules”**
- alternative ideas incur cost penalties (more expert evidence required) and time delays (closer scrutiny by council and external consultants)**



The developer's point of view

8. Do bulk earthworks



Stream piping

Recontouring: cut to fill

- level building platforms
- retaining walls a real issue
- suit lots to topography/services
- maximise lot yield - and gain density specified in district plan
- provide access

Erosion and sediment control plans

- condition of consent
- monitored
- change as works progress

The developer's point of view

8. Do bulk earthworks



Issue # 10: conflicting technical needs

- geotech requirements demand highly compacted slopes**
- soil sustainability and hydrological requirements better off with no or less compaction**
- water in (stormwater disposal) vs water out (slope stability and roading integrity)**

The developer's point of view

8. Do bulk earthworks



Issue # 11: frustration

- developers often just START without all their resource consents because of losing \$2,000/day in cost of money and opportunity costs**
- despite getting pinged with abatement notices – may be cheaper and quicker**

The developer's point of view

8. Do bulk earthworks



Issue # 12: sending the right signals

→ scoring? ARC scoring system for earthworks standards: 1 – 4; immediate improvement in performance because simple and easy to understand

The developer's point of view

Site stabilisation



Risk management



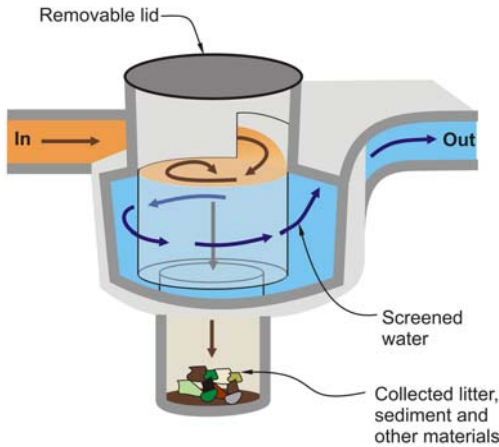


Transit NZ

- leading the way in earthworks standards for major roading developments
- innovative contractual standards: non-price attributes are an incentive for improved performance
- trickle-down effect on earthworks standards for residential developments
- trickle-down for other aspects?

The developer's point of view

9. Install stormwater measures and mitigation



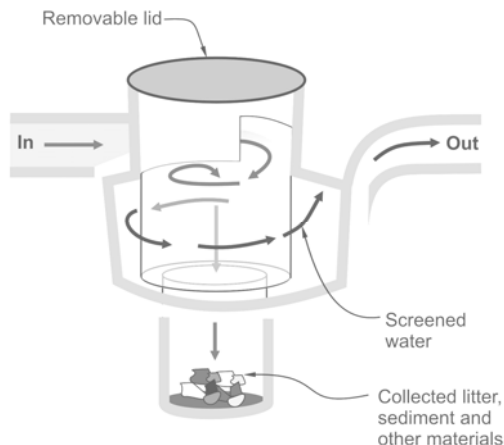
The developer's point of view

9. Install stormwater measures and mitigation



Issue # 13: Perverse outcomes

- developer contributions where LIUDD measures are installed act as a disincentive - \$3,500 per lot in Dannemora/Flatbush
- what about a rebate...?



The developer's point of view



9. Install stormwater measures and mitigation

Issue # 14: Operation and maintenance

- ➔ streams need maintenance too (as well as pipes)
- ➔ reluctance by councils to permit on-site stormwater devices because of risk due to:
 - lack of information on options for ongoing operation and maintenance (O&M)
 - lack of collection of cost and monitoring data in a consistent and comparable format

The developer's point of view



9. Install stormwater measures and mitigation

Issue # 15: Life cycle / QBL cost-benefit

- one council demanded up front payment of full life cycle costs of \$160,000 for a CDS – with no transparent policy development process or contestability – “putting LIUDD out of business”**
- is rain tank + garden on every site better than one big pond at the bottom? OR – *double* belt + braces?**
- how to determine the horse for the course (or herds of horses for the courses)?**

The developer's point of view



9. Install stormwater measures and mitigation

Issue # 16: equity

- ➔ some land owners lose development opportunities because of where their land is, if servicing is not carefully planned
- ➔ the view of John Tik, Harrison and Grierson:
 1. plan the natural and built stormwater infrastructure for the whole catchment and value those built and natural assets
 2. estimate the market value of the average lot + assets
 3. pay land owners that value for the lots that can't be developed because they house the infrastructure that enables the rest of the catchment to develop

The developer's point of view

10. Build



← building consent



compliance issues →

The developer's point of view

10. Build

Issue # 17: enforcement on small sites

- Digger Dunlop in Sydney and the market opportunity - \$6/m for silt fencing to install, maintain and remove
- but no buyers in New Zealand because no enforcement



The developer's point of view

10. Build

Issue # 18: links to new Building Code –

- how do we co-ordinate internal building, on-site and catchment measures with wider natural and built infrastructure planning (water, energy, biodiversity, transport)?
- do we need to?



- educating builders and other trades professionals about new measures



The developer's point of view

11. On-site services

- tradespeople
- compliance inspectors



Issue # 18: capacity (numbers)

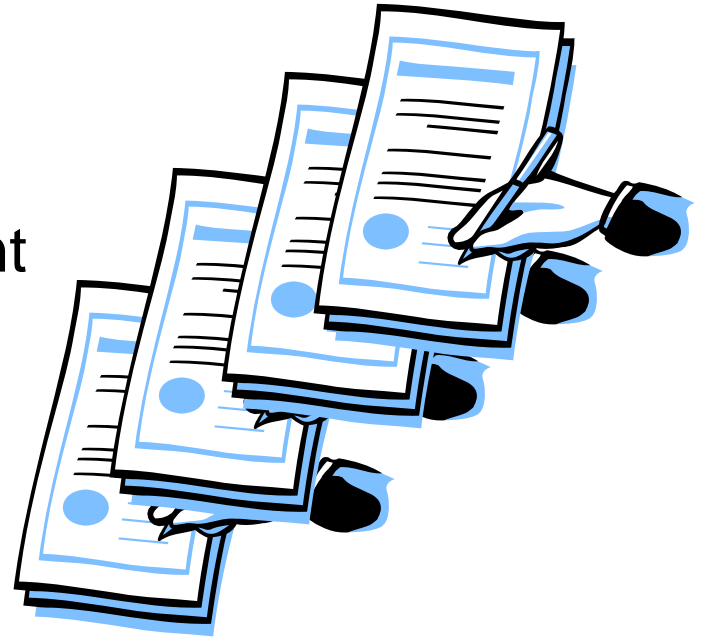
- severe lack of industry capacity for both trades people and council staff - delays
- one developer is seeking to bring in 85 tradesmen from China
- one council had 5 compliance and monitoring staff vacancies in mid-2004



The developer's point of view

12. Sign off

- building consent
- plumbing and drainage consent
- fees, bonds and financial and other contributions made/paid
- resource consents



The developer's point of view

13. Sale




The developer's point of view



12. Sign off

Issue # 19: Ownership, operation and maintenance

- 
- ➔ reluctance by councils to permit on-site stormwater management devices because of risk due to:
 - lack of information on options for ongoing operation and maintenance (O&M)
 - lack of collection of cost and monitoring data in a consistent and comparable format

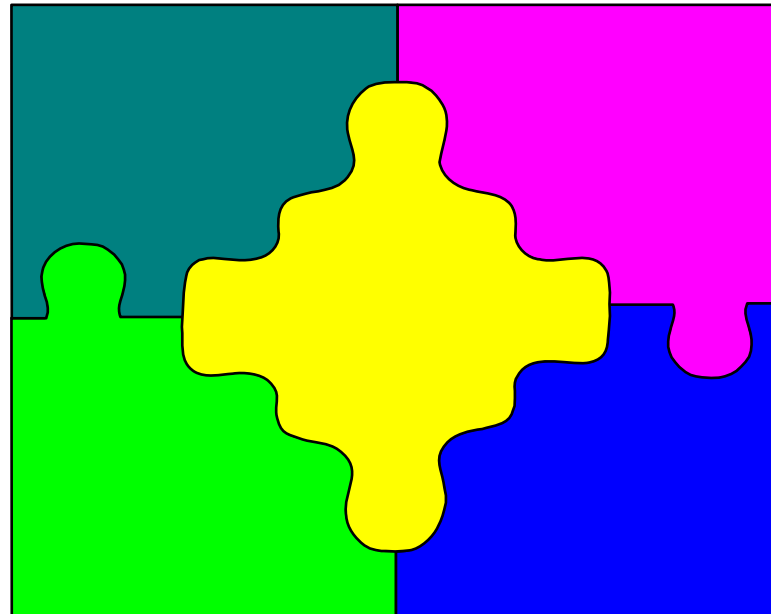
Is the train being derailed?



What happened to the '1-stop shop'!

- trends in evidence in the 1980s under the 1977 Town and County Planning and 1967 Water and Soil Conservation Acts
 - more detail
 - more experts
 - more public scrutiny -
- intensified but not new under the 1991 Resource Management Act
- we're all still learning

So much information - so little time ...



Proliferate ... evaluate ...integrate?

So ...



- this is how urban development happens
- what does this mean for our work and the people we are working with?

Where we are ...



What needs to change?

- driving documents (plans, rules, consents)
- processes and procedures
- staffing and resourcing (policy, consents and compliance)
- education and training – political, technical, community

Where to after that?



- skills and capacity building - note:
 - long lead times (3-5 years for building code changes)
 - recruitment, pay, induction, staff turnover, retention in councils
 - working with supply chains to provide new measures
- sharing of good information and best practice
- continual improvement of environmental management programmes
- measurable progress towards sustainability ...?

Capacity-building

- how do different people learn?
- how do we attract and retain skilled people?
- needs are right across the wider development sector, public and commercial



A peek into another carriage on the train -the regulators' point of view



The journey to development - The developer's point of view

Later on, we will have time to reflect on:



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