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Pinion Advisory Scheme Engineering & Attributes

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Agenda

- Who is Pinion?
- Our irrigation development experience
  - Some recent highlight projects
- Examples of agricultural developments on the back of ‘new’ water
- HIPCo project – nuts and bolts
  - Flows and pressures
  - How the scheme can be utilized
  - Examples

Who are Pinion?

- Subconsultant to KBR
- Worked on HIPCo Detailed Business Case
- We are Food and Agriculture
- National consultancy, with over 110 staff Australia wide
- Team includes, water engineers, agronomists, environmental & agribusiness consultants

pinion
ADVISORY

Our Experience with Larger Irrigation Developments

- Tasmanian Irrigation Development since 1983 with direct involvement as consultants/project managers and proponents 2005 till present

Meander Dam (2001- 2007)

Our Experience with Irrigation Developments

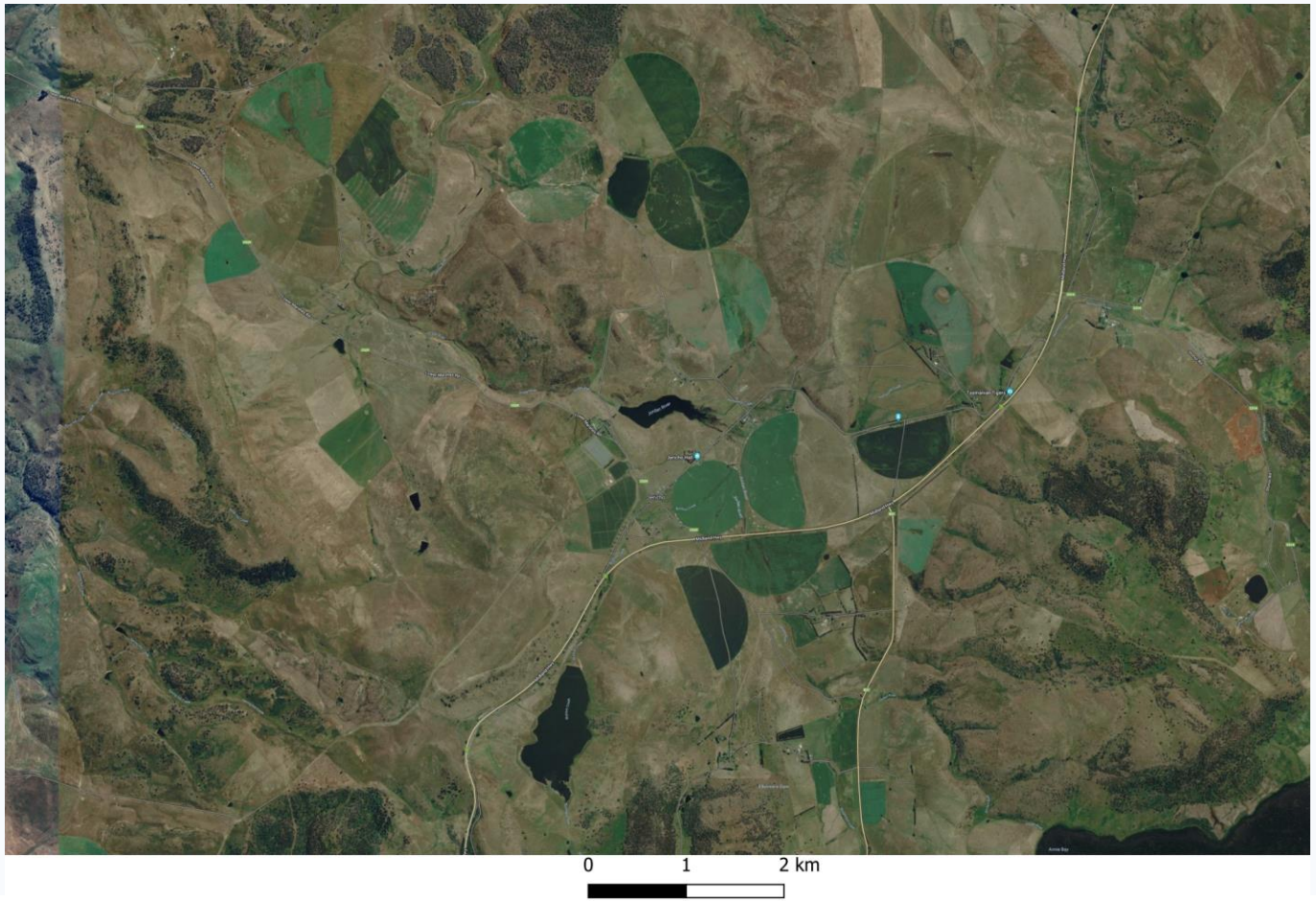
- Tasmanian Irrigation Development since 2005 to present

Midlands Water Scheme

Landholder take-up on new irrigation scheme developments

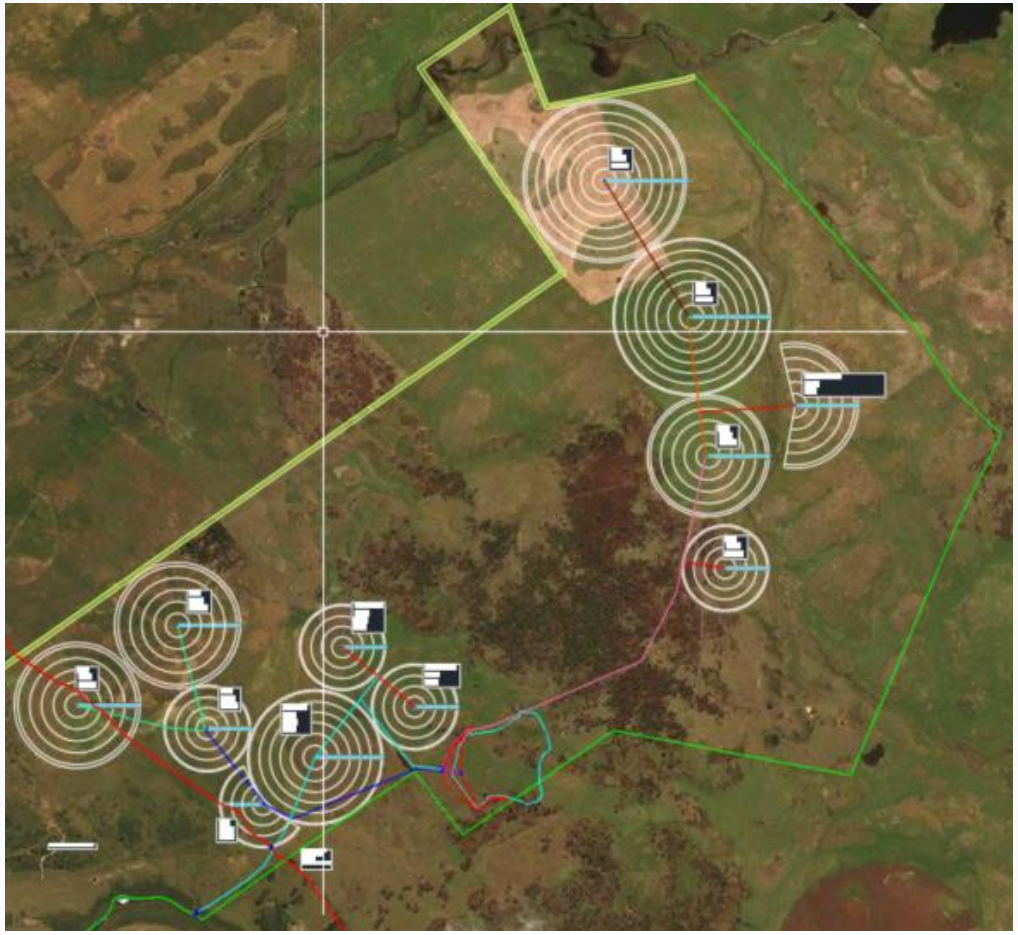
Farm development example (Jericho, Tasmania)

- Irrigated cereals, poppies, pasture and cherries

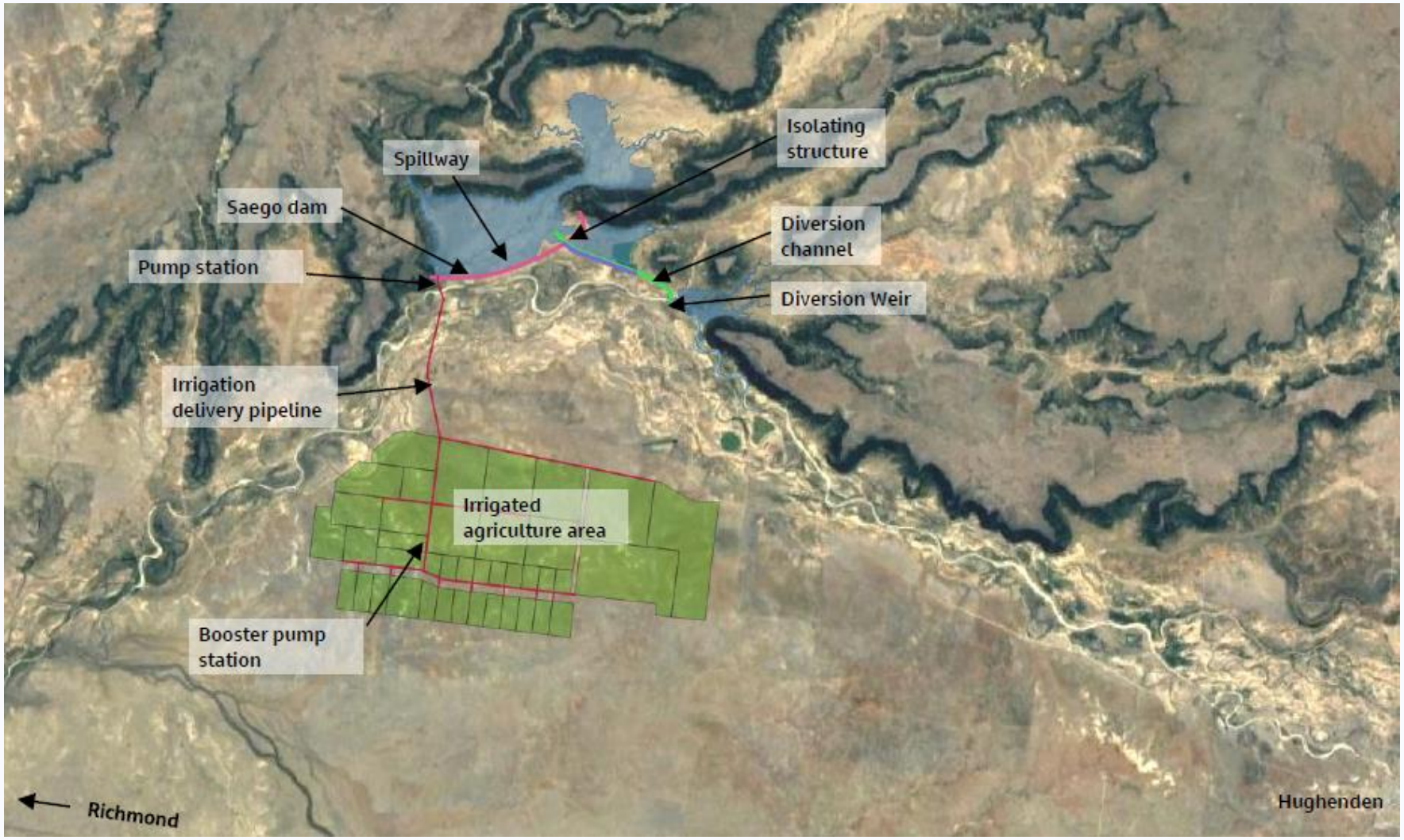


Landholder take-up on new irrigation scheme developments

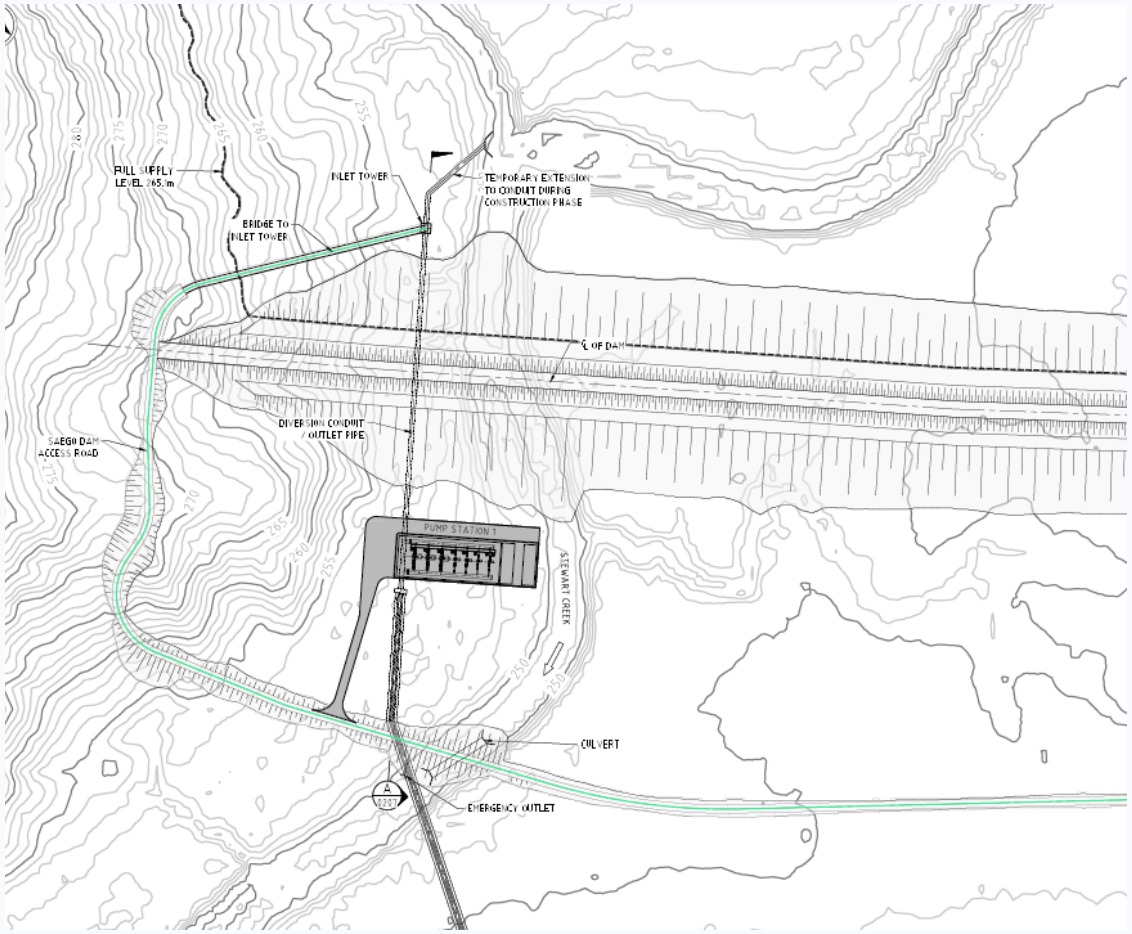
Farm development example (Campbelltown, Tasmania)

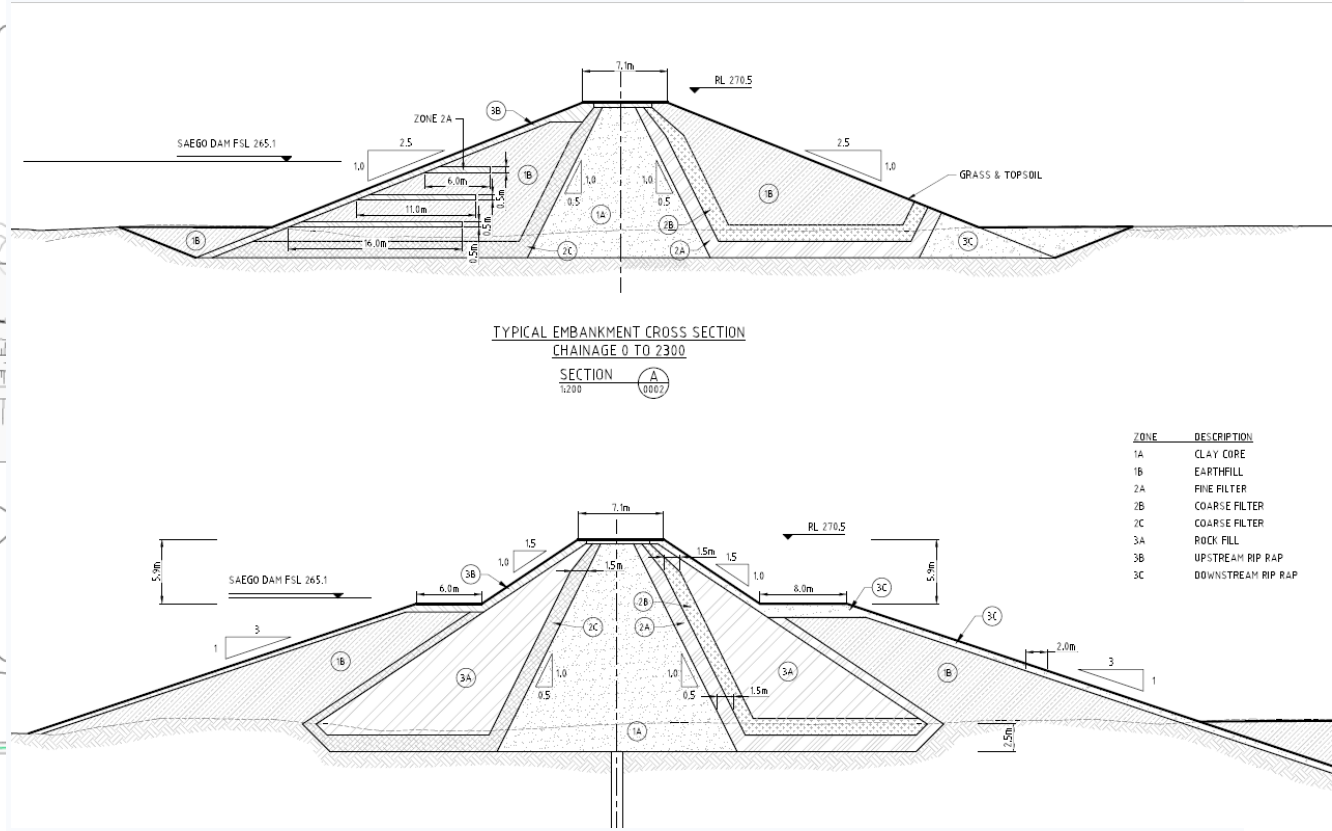


HIPCo scheme attributes (nuts and bolts)

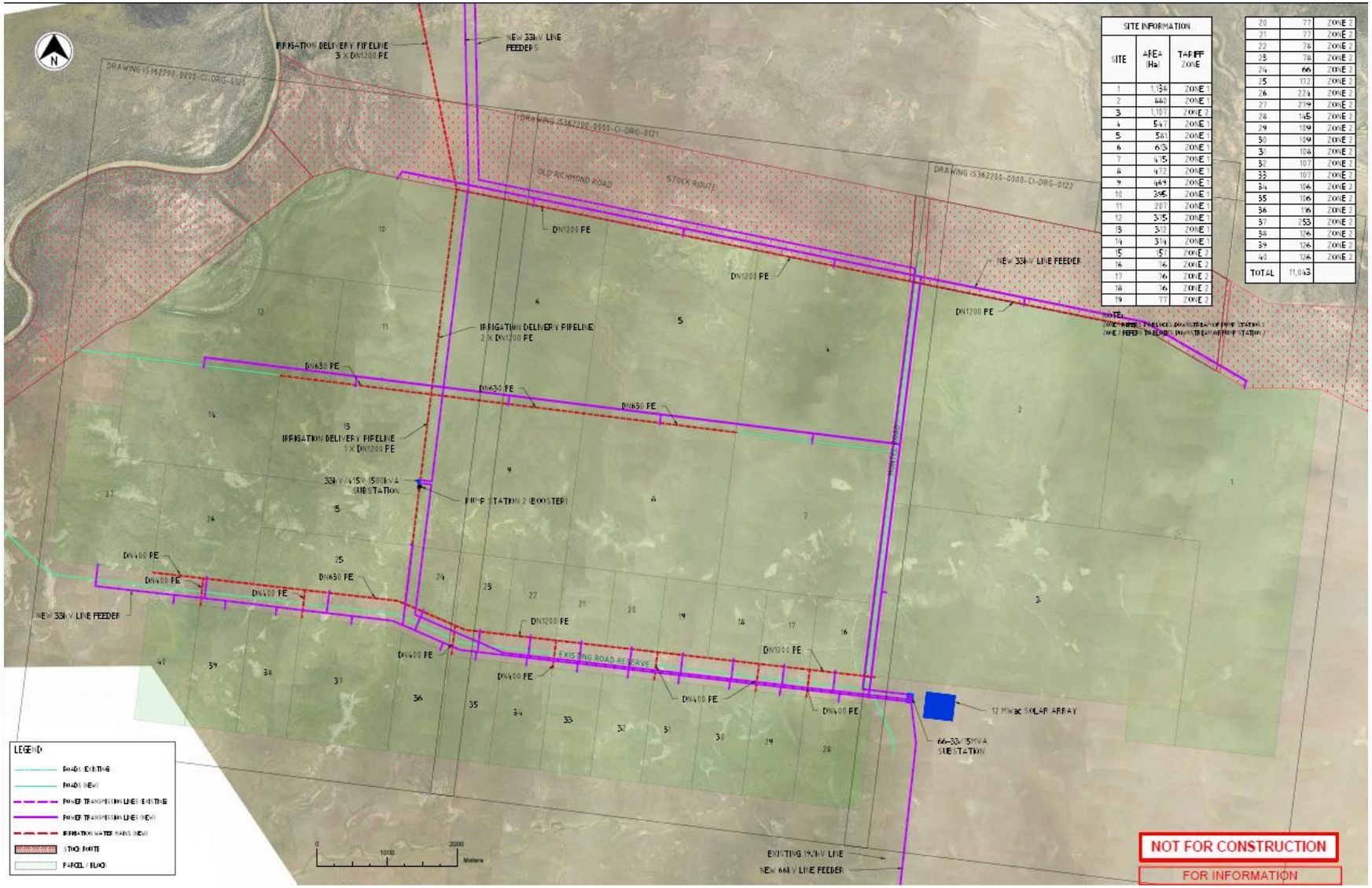


HIPCo scheme attributes (Saego Dam)





HIPCo scheme attributes (Land Parcels)



SITE INFORMATION

SITE	AREA (Ha)	TARIFF ZONE
1	1,136	ZONE 1
2	660	ZONE 1
3	1,101	ZONE 2
4	541	ZONE 1
5	561	ZONE 1
6	615	ZONE 1
7	615	ZONE 1
8	472	ZONE 1
9	469	ZONE 1
10	295	ZONE 1
11	207	ZONE 1
12	515	ZONE 1
13	512	ZONE 1
14	314	ZONE 1
15	151	ZONE 2
16	76	ZONE 2
17	76	ZONE 2
18	76	ZONE 2
19	77	ZONE 2
20	77	ZONE 2
21	77	ZONE 2
22	78	ZONE 2
23	78	ZONE 2
24	66	ZONE 2
25	172	ZONE 2
26	224	ZONE 2
27	219	ZONE 2
28	145	ZONE 2
29	109	ZONE 2
30	109	ZONE 2
31	104	ZONE 2
32	107	ZONE 2
33	107	ZONE 2
34	106	ZONE 2
35	106	ZONE 2
36	106	ZONE 2
37	253	ZONE 2
38	126	ZONE 2
39	126	ZONE 2
40	126	ZONE 2
TOTAL	11,043	

- Fenced land parcel block
- Undeveloped
- Access road past boundary
- Rural fencing
- Power
- Piped property outlet to boundary

HIPCo scheme attributes - flows and pressures

HIPCo: Low pressure delivery scheme

- Minimum pressure: 98kPa (14 PSI) at outlet
- Typical pressure: 147kPa (21 PSI) at outlet

<u>On-farm pumping will be necessary</u>

Typical minimum irrigation system pressures

- Surface: <10kPa (1PSI) at the headditch
- Centre Pivot: 250kPa (35 PSI) at centre
- Drip: 200kPa at blocks

HIPCo scheme attributes - flows and pressures

- Basic principle is water is supplied from a controlled outlet at the property (see similar)

- Scheme will make water available over a 360-day period

- The maximum Allocation flows will be determined on a 180-day basis - 180 ML allocation has a max flow of 1 ML/day

- The minimum flow to receive the full allocation over 360 days is 0.5 ML/day

- What does this mean for you

HIPCo scheme attributes - flows and pressures

Management of flow rates comes from:

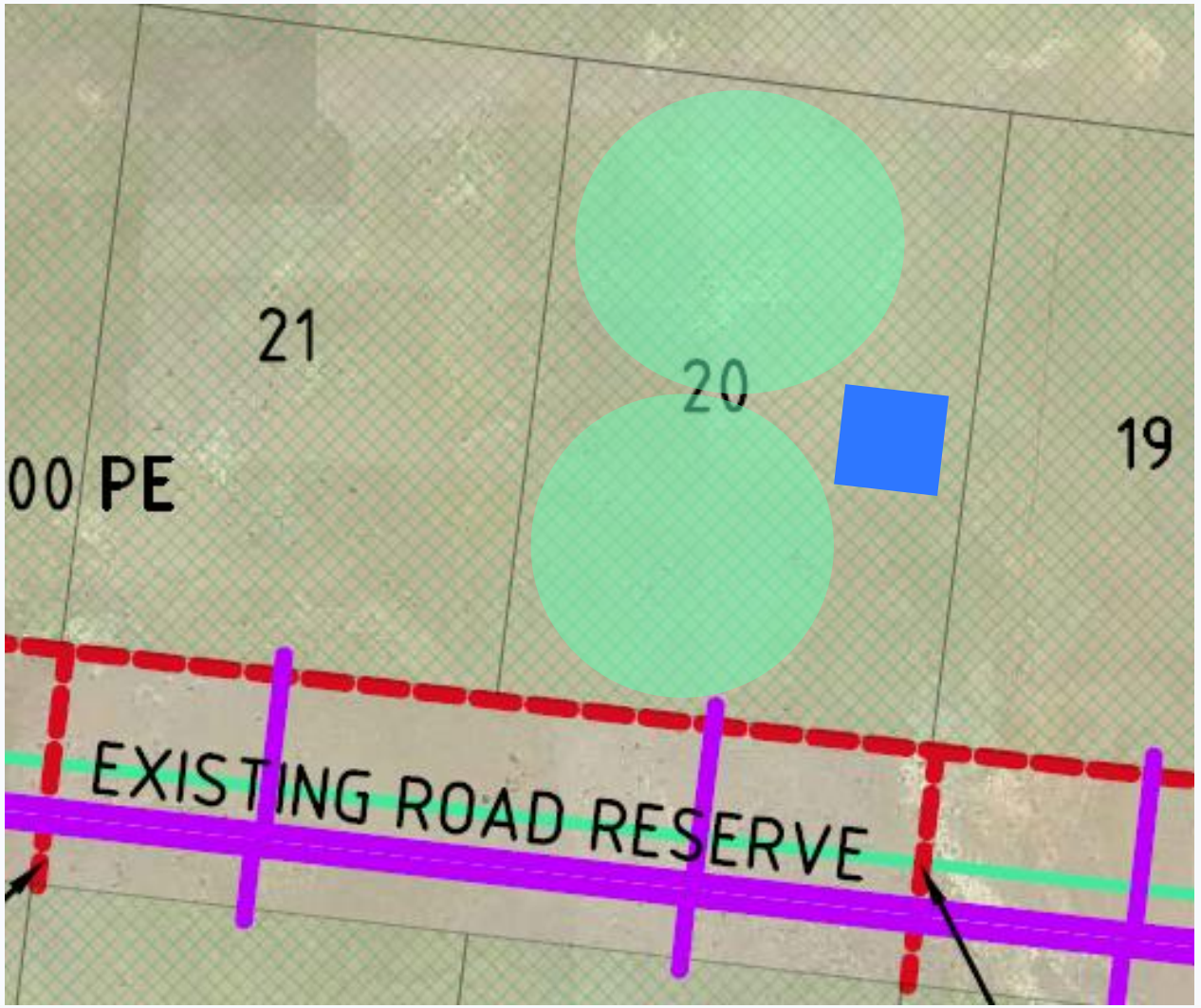
- Use of storage
- Trading of flow rates – usually a “sharing process”
- Purchase of additional allocation – This is often a balance of capital expenditure on storage/ land availability decision
- Planning is key – use science, engineering and good experience not anecdotal info!
  - Centre Pivots – manage pack sizes
  - Horticulture – manage block sizes

Example of how a block could be developed

Block 20 as cropping/forage/grazing

- Total area: 78Ha
- Irrigation area: 50Ha
- 2 centre-pivots and small buffer storage
- Pasture/lucerne production
- Mix of dryland/break out paddocks & irrigation

NB: A Horticultural Block will be generally setout to manage local topography and operational requirements , that is, readily achievable.



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