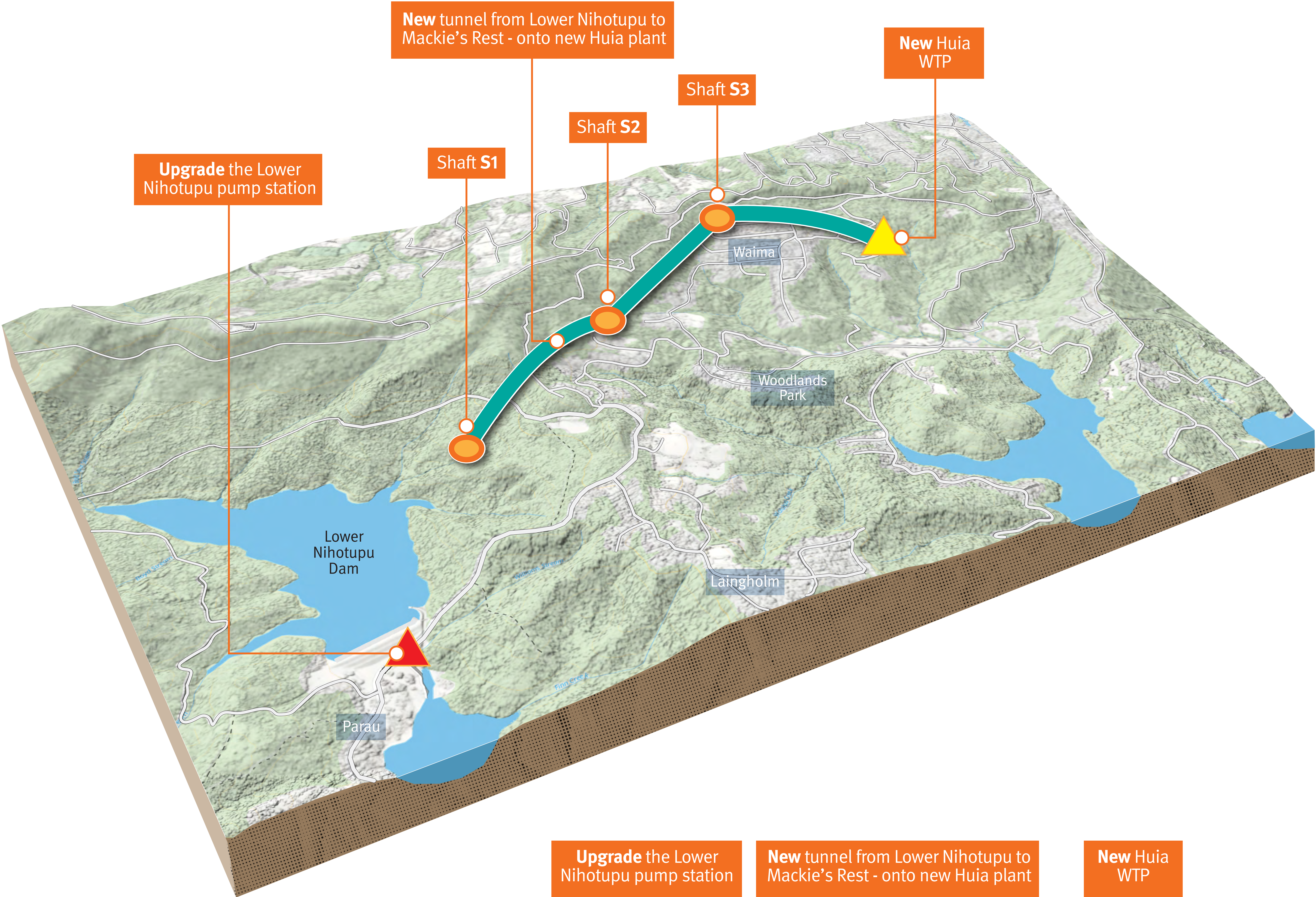


OPTION

A

GRAVITY TUNNEL

A gravity tunnel from Mackies Rest to the new Huia WTP, including a new pump station.



Key Features:

- Adding retaining structures and widening Exhibition Drive to access Shaft 3 from the Nihotupu filter station.
- Replaces current gravity tunnel from Mackies Rest to existing WTP.
- A separate gravity main from Upper Nihotupu will be needed to keep the existing WTP running while the replacement WTP is being prepared for operation.



NOTES:

1. The noted features are indicative only and are subject to further design.

Key:

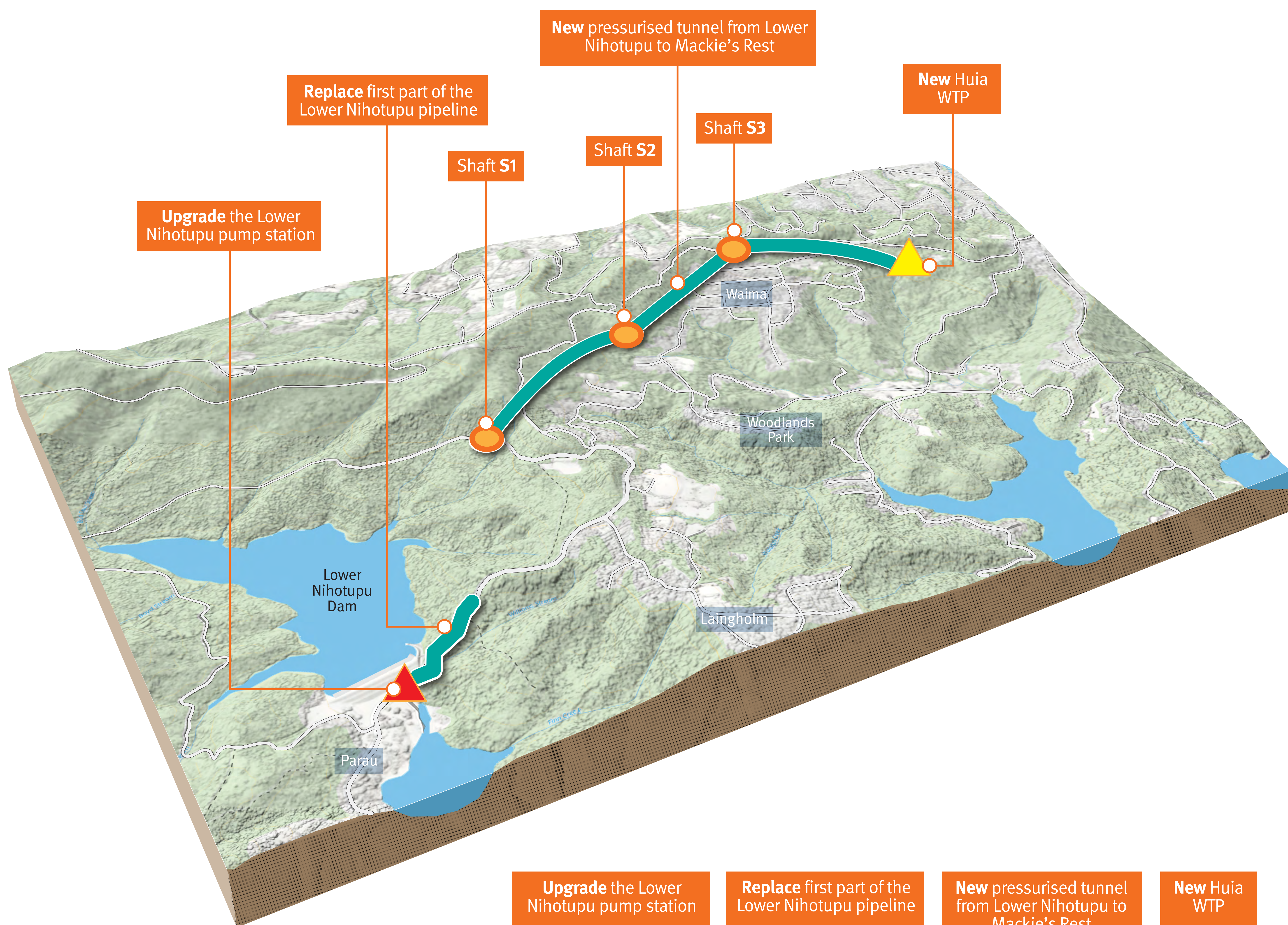
- Proposed route
- Pump station
- New Huia WTP
- Shafts

OPTION

B

PRESSURISED TUNNEL

A pressurised pipeline within a tunnel from Mackies Rest to the new Huia WTP.



Key Features:

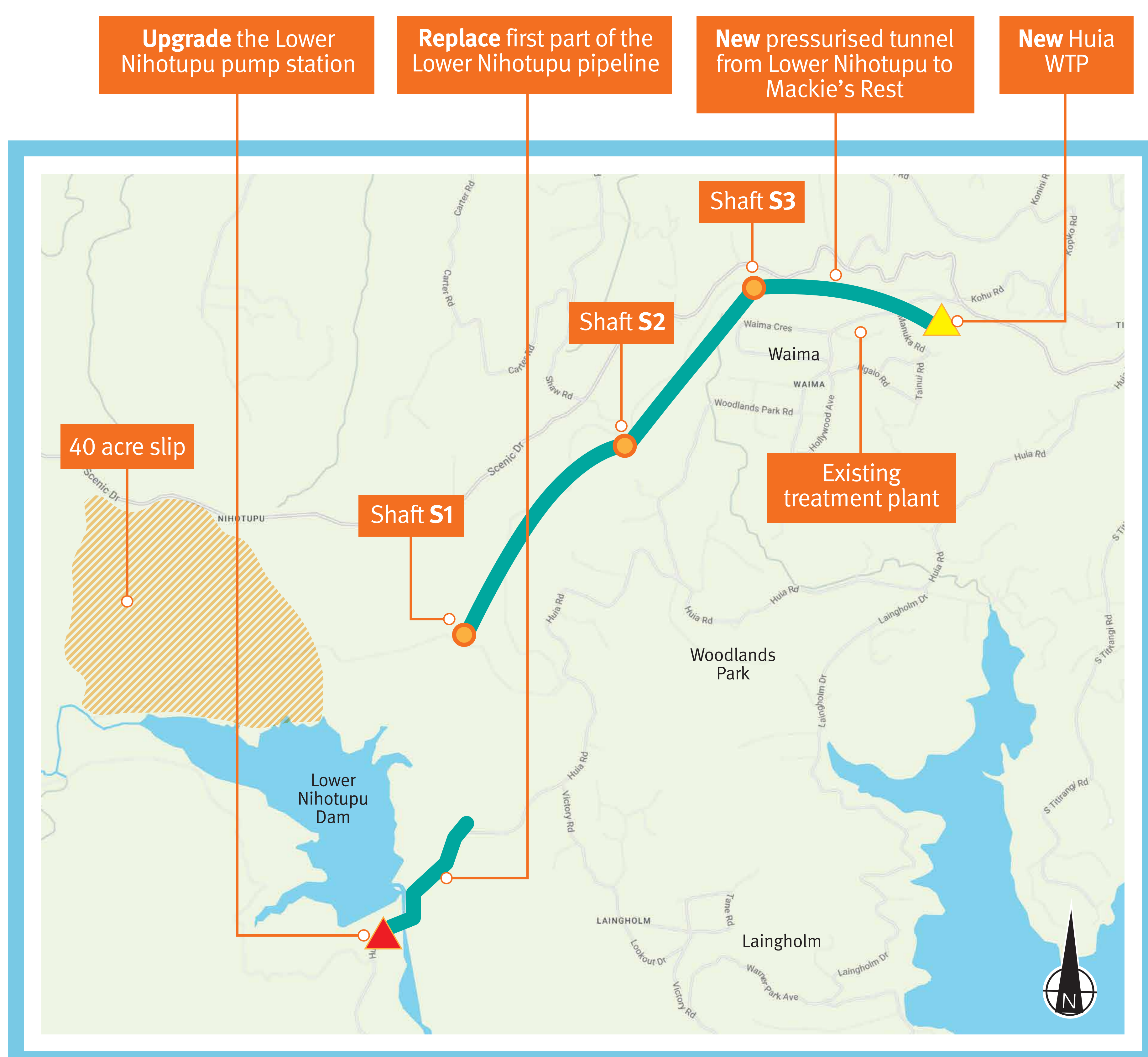
- This option does not require a pump station at the end of the system.
- Adding retaining structures and widening Exhibition Drive to access Shaft 3 from the Nihotupu filter station.
- Replacing the first 500m of the Lower Nihotupu pipeline to allow for increased water flow.
- A separate gravity main from Upper Nihotupu will be needed to keep the existing WTP running while the replacement WTP is being prepared for operation.

NOTES:

1. The noted features are indicative only and are subject to further design.

Key:

- Proposed route
- Pump station
- New Huia WTP
- Shafts

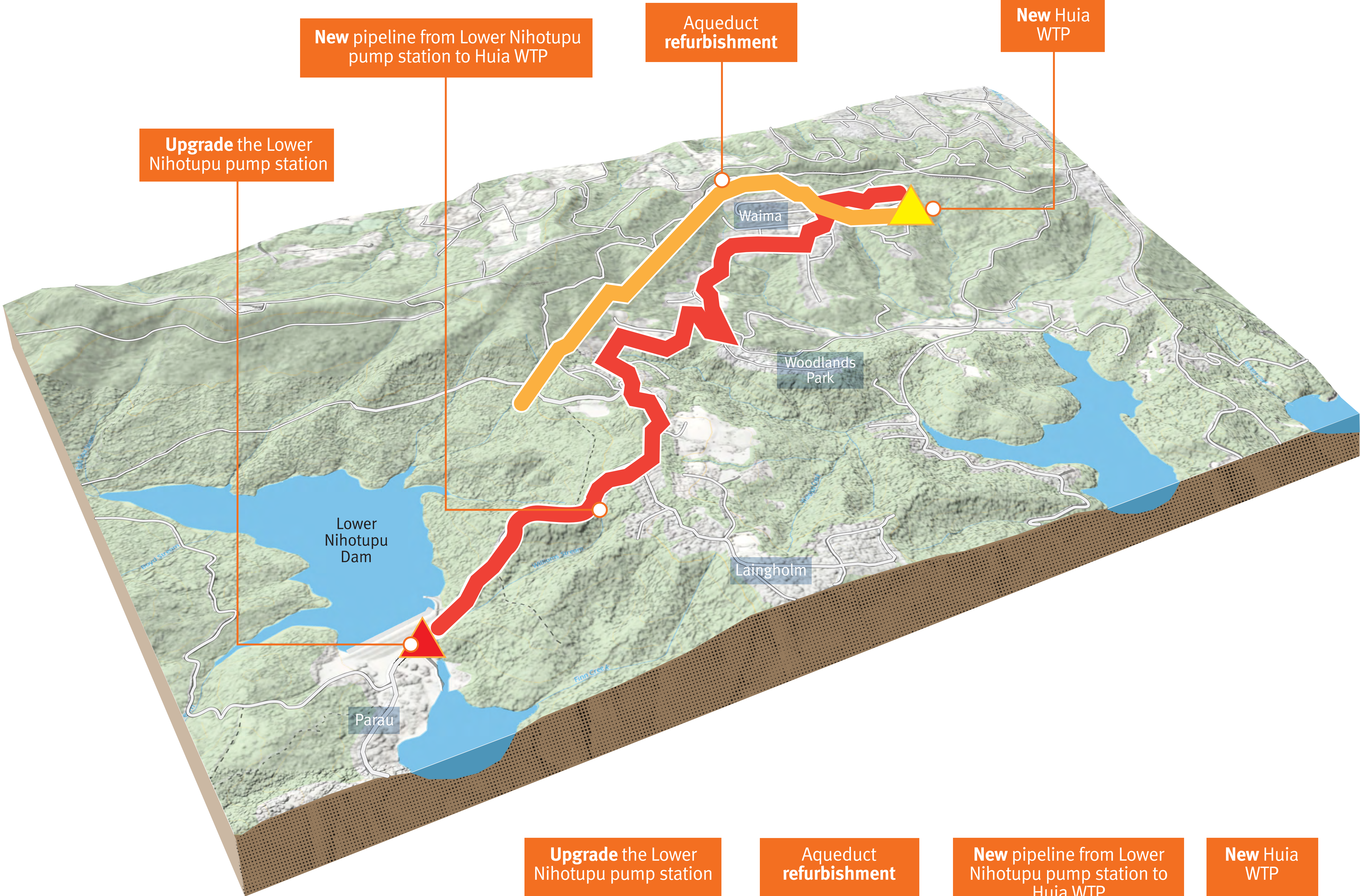


OPTION

C

ROAD

A pipeline along the road from Lower Nihotupu pump station to both Huia Water Treatment Plants.



Key Features:

- Refurbishing aqueduct for increased flow will require minor updates to Exhibition Drive.
- Separate pipeline (of approximately 1m diameter) from Lower Nihotupu supports additional water flow to the existing Huia WTP.
- Aqueduct pump station on the existing Huia WTP site only required for new WTP.

NOTES:
1. The noted features are indicative only and are subject to further design.

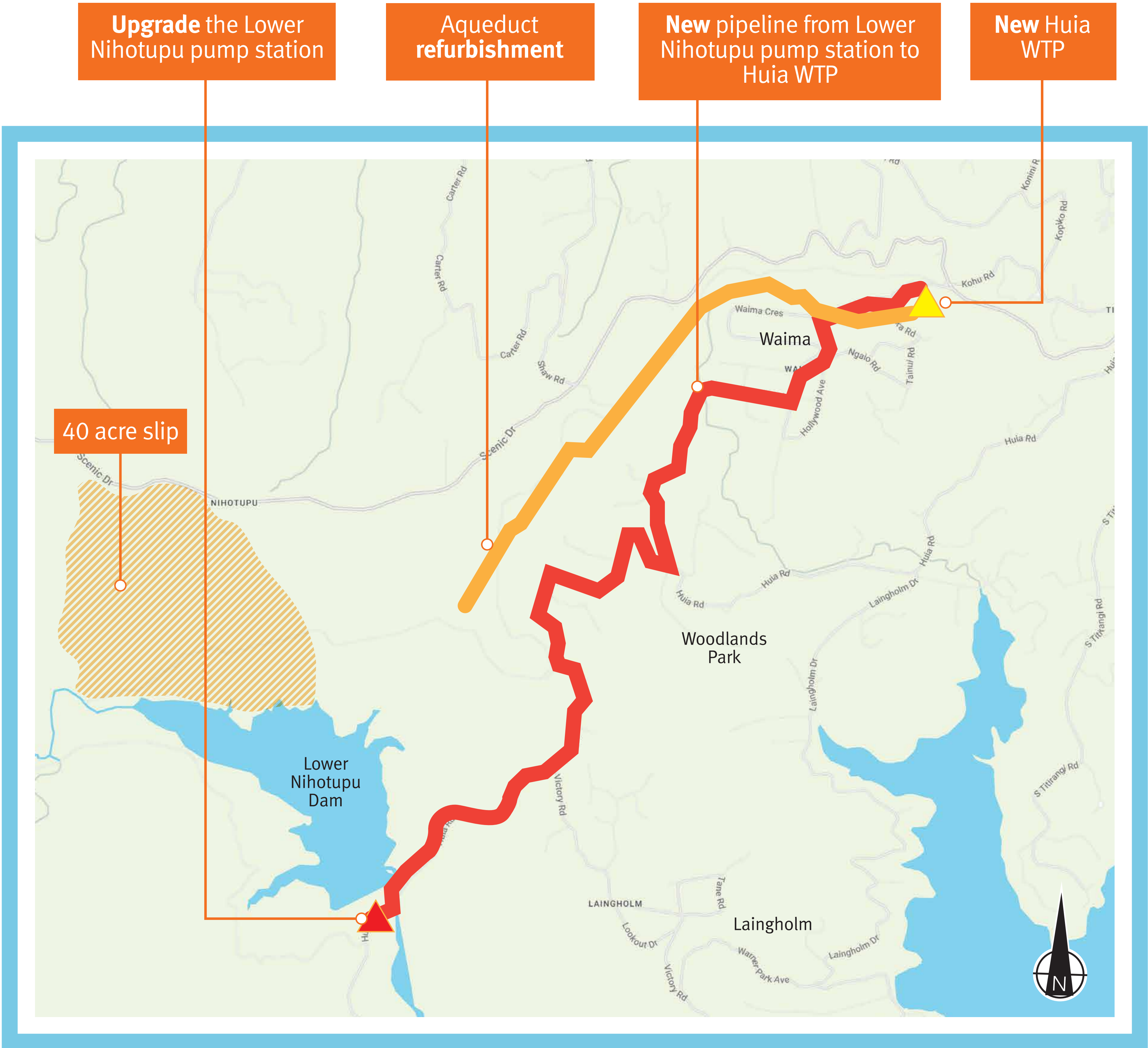
Key:

Aqueduct refurbishment

Proposed route

Pump station

New Huia WTP

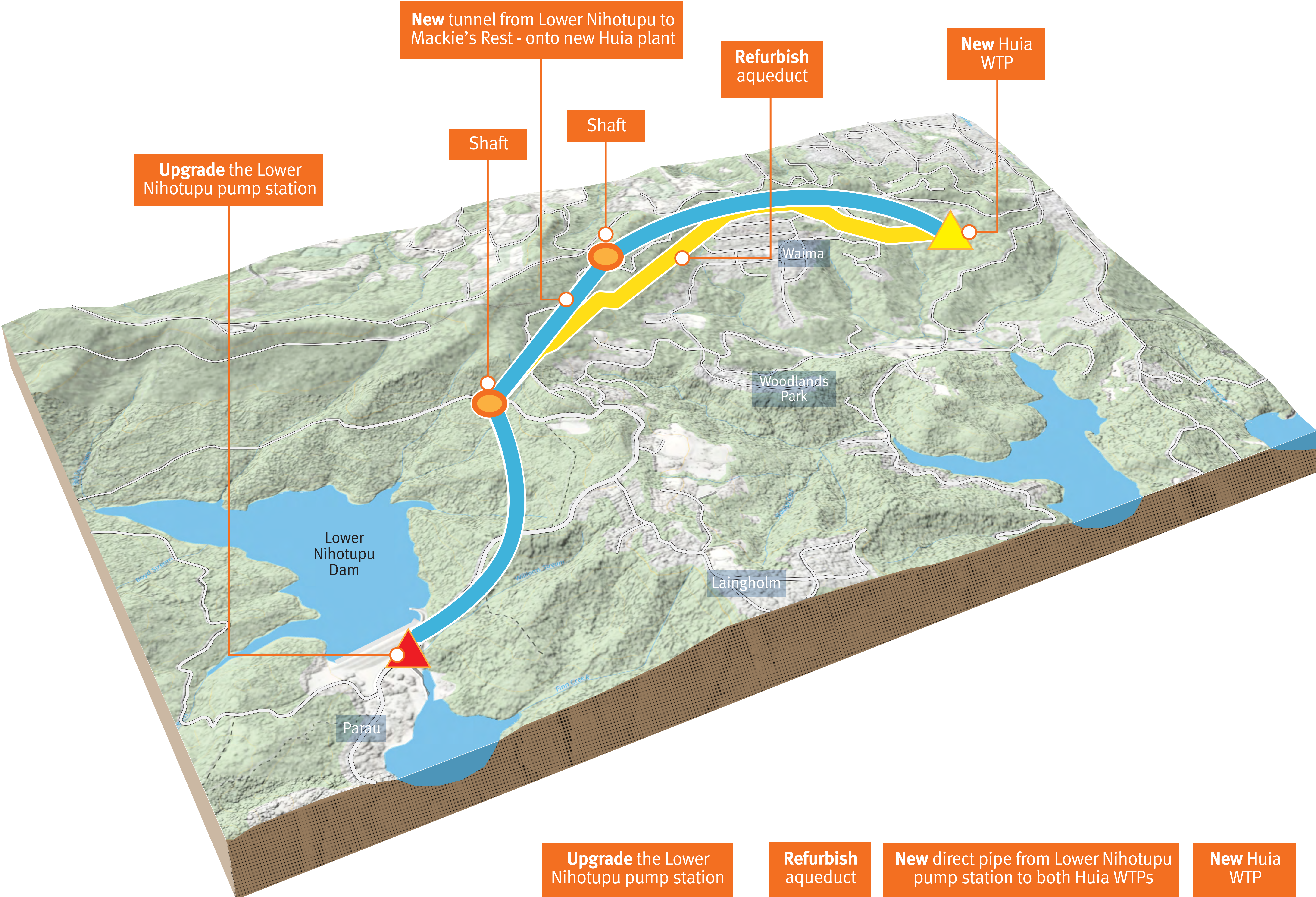


OPTION

D

TUNNELLED PIPELINE

A tunnelled pipeline directly from Lower Nihotupu pump station to both Huia Water Treatment Plants.



Key Features:

- Refurbishing aqueduct for increased flow will require minor updates to Exhibition Drive.
- Refurbishing aqueduct can be completed in phases.
- Aqueduct pump station on existing Huia WTP site only required for new WTP.
- Direct pipe tunnel of 1.5m diameter.



NOTES:
1. The noted features are indicative only and are subject to further design.

Key:

Proposed route

Aqueduct route

Pump station

Shafts

New Huia WTP