










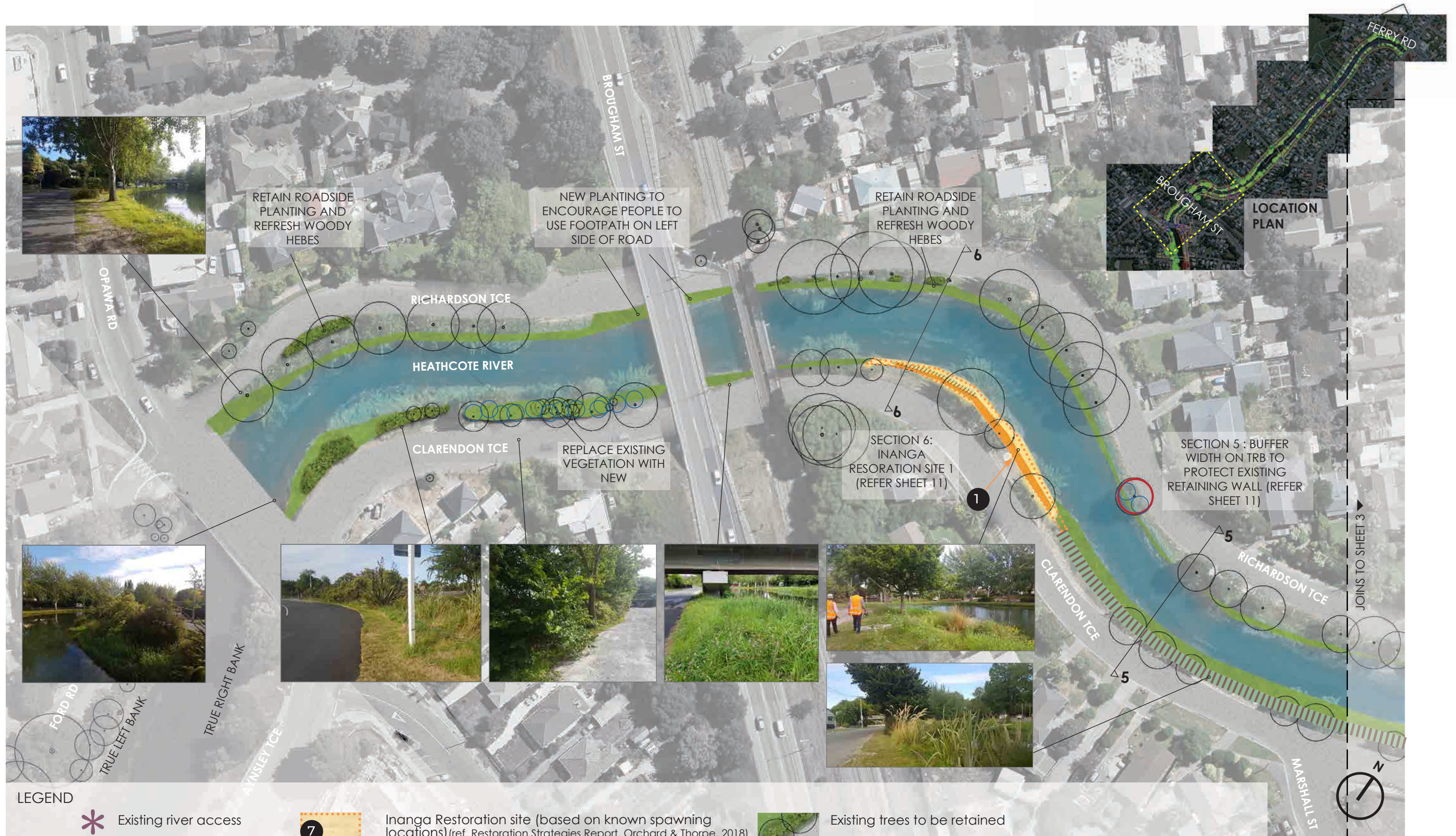




LEGEND

-  Existing river access
-  Proposed grassed river edge
-  Existing timber retaining wall
-  Inanga Restoration site (based on known spawning locations) (ref. Restoration Strategies Report, Orchard & Thorpe, 2018)
-  Regrading area within Inanga enhancement site (refer to regrading area plant list, sheet 8)
-  Upper bank planting area in Inanga enhancement site (refer to upper bank plant list, sheet 8)
-  Mown grass access & maintenance strip maintained as existing or reinstated as required
-  Existing trees to be retained
-  Existing trees to be removed and replaced (weed species or trees in poor health)
Note: replace with new, but maintain views to river from properties (refer tree planting list, sheet 9)
-  Existing vegetation
- to be retained & enhanced as appropriate
-  Proposed riparian planting (refer riparian planting list, sheet 9)
Note: retain existing native species not affected by dredging work





LEGEND

Existing river access

Proposed grassed river edge

Existing timber retaining wall

7

Inanga Restoration site (based on known spawning locations) (ref. Restoration Strategies Report, Orchard & Thorpe, 2018)

Regrading area within Inanga enhancement site (refer to regrading area plant list, sheet 8)

Upper bank planting area in Inanga enhancement site (refer to upper bank plant list, sheet 8)

Mown grass access & maintenance strip maintained as existing or reinstated as required

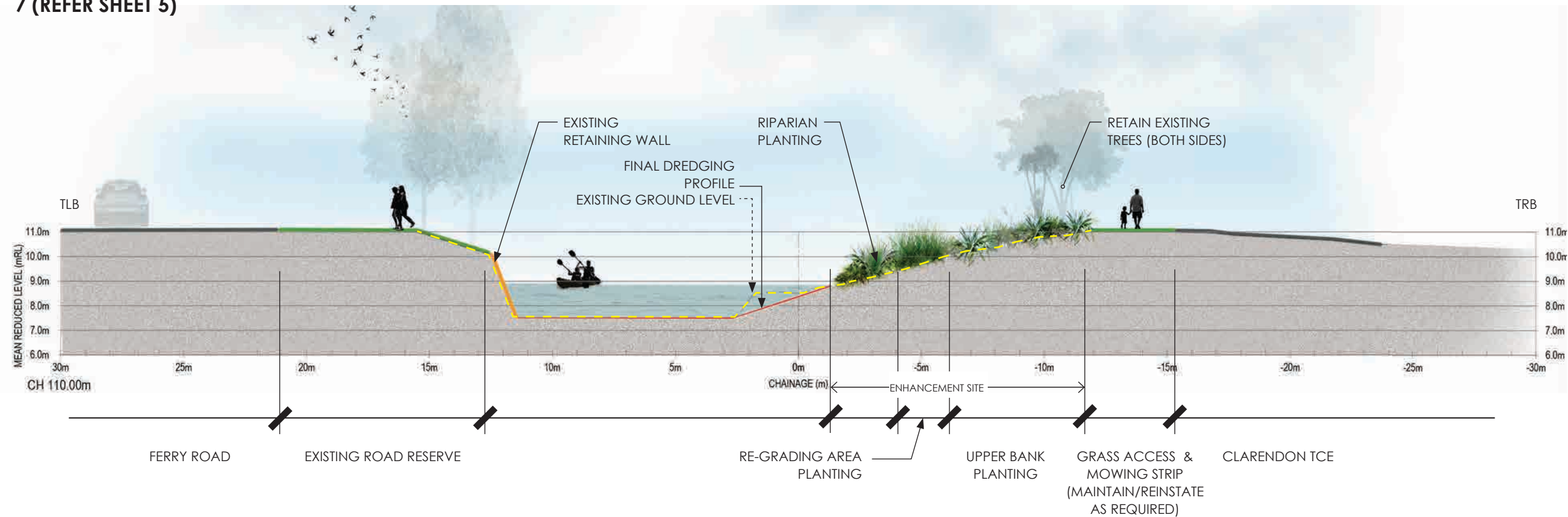
Existing trees to be retained

Existing trees to be removed and replaced (weed species or trees in poor health)
Note: replace with new, but maintain views to river from properties (refer tree planting list, sheet 9)

Existing vegetation
- to be retained & enhanced as appropriate

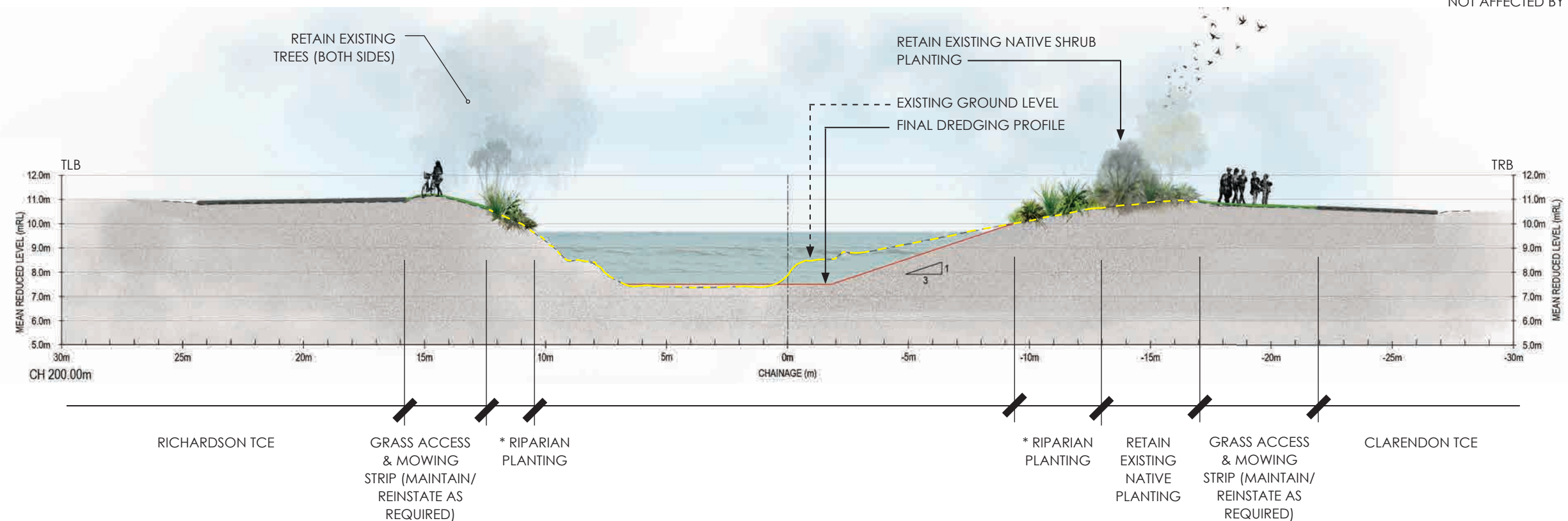
Proposed riparian planting (refer riparian planting list, sheet 9)
Note: retain existing native species not affected by dredging work

**SECTION 1: INANGA RESTORATION SITE (BASED ON KNOWN SPAWNING LOCATIONS)
7 (REFER SHEET 5)**



SECTION 2: 3H:1V CUT FROM TOE OF BANK TO DREDGING LEVEL ON TRUE RIGHT BANK (TRB)(REFER SHEET 5)

*NOTE: RETAIN EXISTING NATIVE SPECIES NOT AFFECTED BY DREDGING WORKS

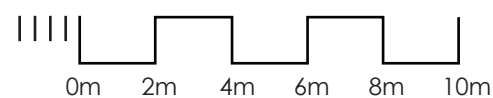


LOWER HEATHCOTE DREDGING S2

X-SECTIONS 1 & 2

SHEET 5 OF 9

1:200 @ A3



DRAWN	MB	CHECKED	Wri	REVIEWED	KT	APPROVED	Wro
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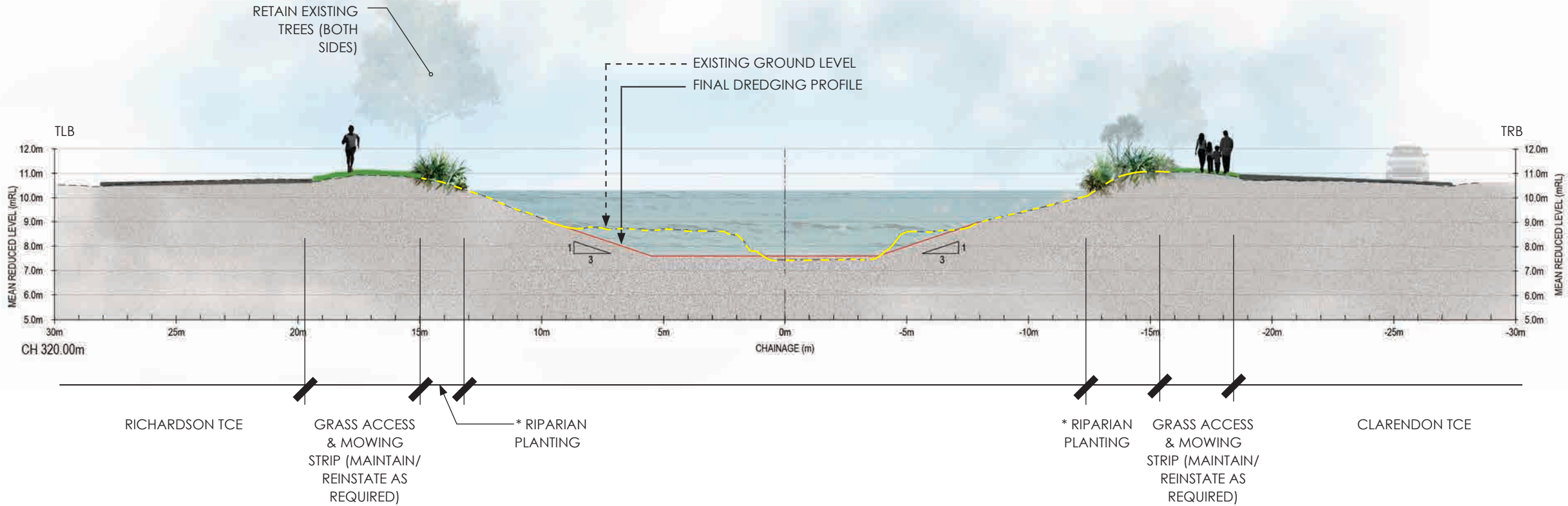
REV A_FOR INFORMATION | 15.FEBRUARY.2019



**ARTIST'S IMPRESSION: ALL
PROPOSED PLANTING IS
SHOWN AT MATURITY**

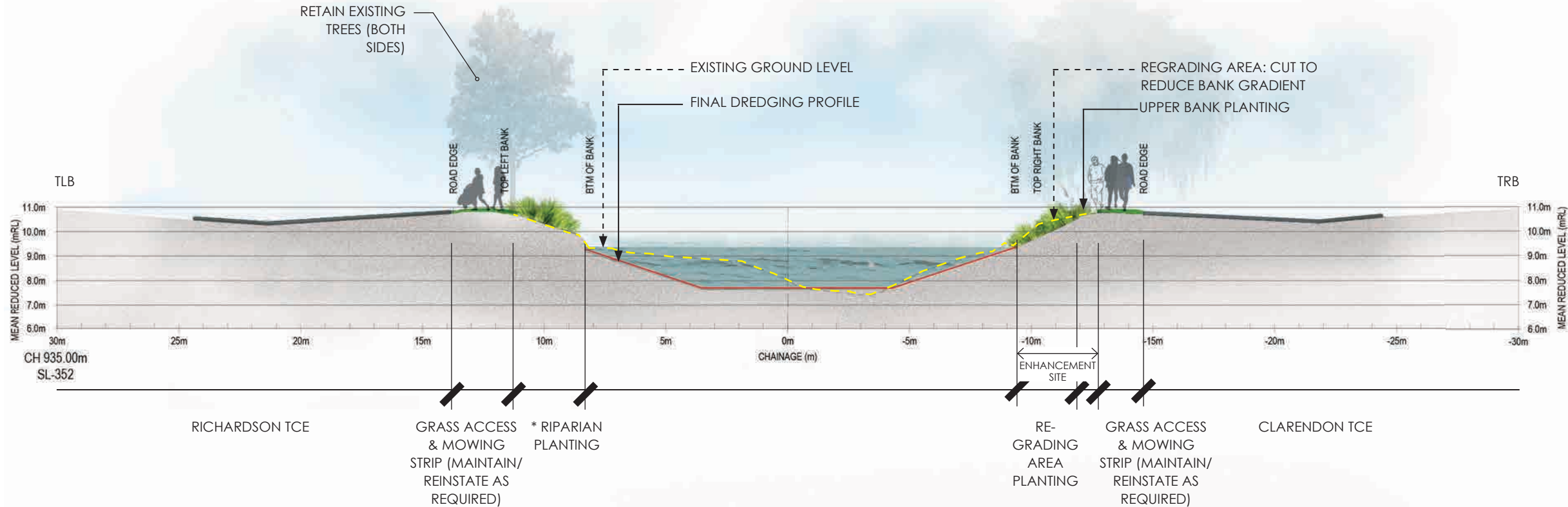
SECTION 3: 3H:1V CUT FROM TOE OF BANK TO DREDGING LEVEL ON BOTH SIDES (REFER SHEET 5)

*NOTE: RETAIN EXISTING NATIVE SPECIES
NOT AFFECTED BY DREDGING WORKS



SECTION 4: INANGA RESTORATION SITE (BASED ON KNOWN SPAWNING LOCATIONS) 2 ON TRUE RIGHT BANK (TRB)(REFER SHEET 7)

*NOTE: RETAIN EXISTING NATIVE SPECIES
NOT AFFECTED BY DREDGING WORKS

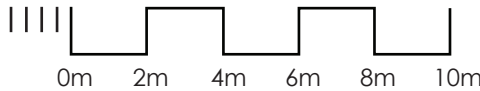


LOWER HEATHCOTE DREDGING S2

X-SECTIONS 3 & 4

SHEET 6 OF 9

1:200 @ A3



DRAWN MB CHECKED Wri REVIEWED KT APPROVED Wro

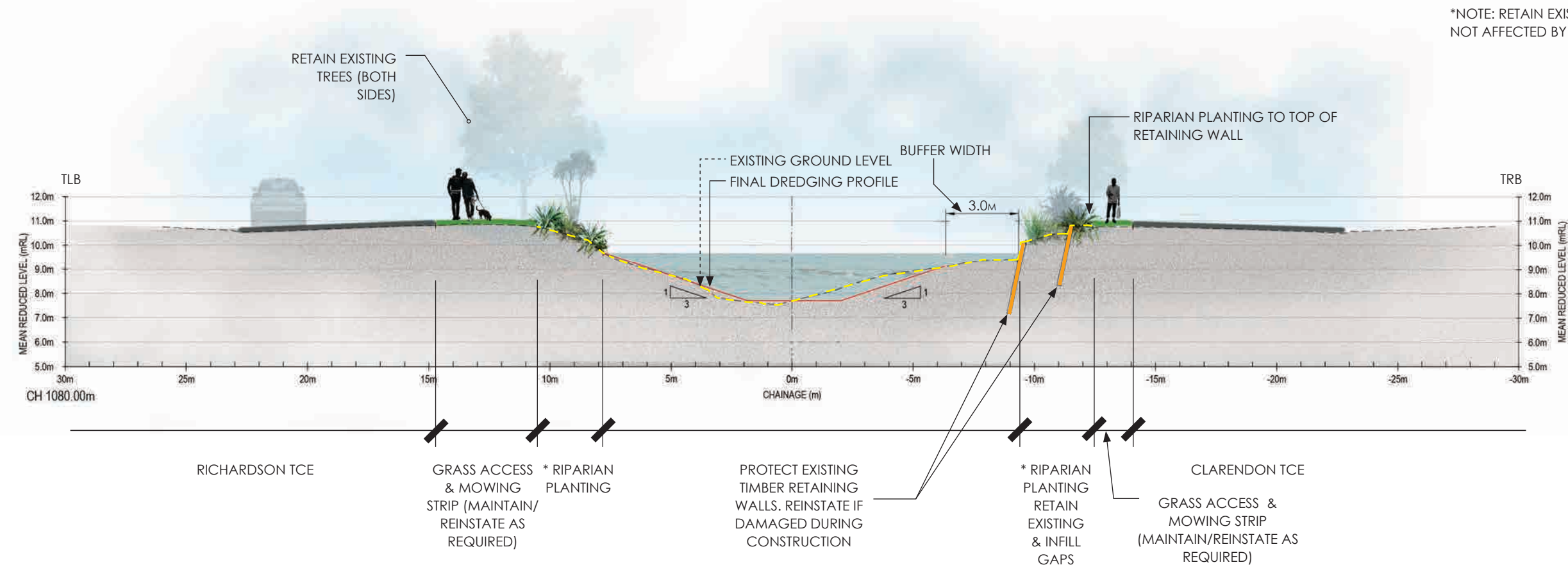
REV A_FOR INFORMATION | 15.FEBRUARY.2019



ARTIST'S IMPRESSION: ALL
PROPOSED PLANTING IS
SHOWN AT MATURITY

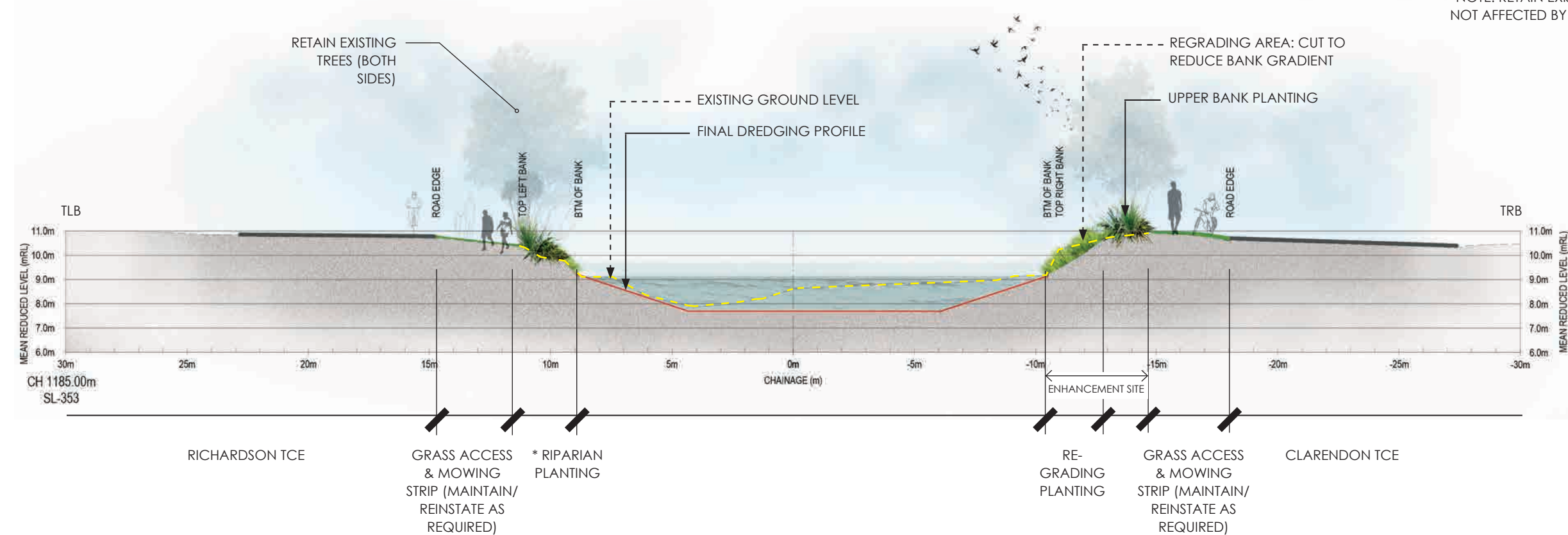
SECTION 5: BUFFER WIDTH ON TRB TO PROTECT EXISTING RETAINING WALL (REFER SHEET 8)

*NOTE: RETAIN EXISTING NATIVE SPECIES
NOT AFFECTED BY DREDGING WORKS



SECTION 6: INANGA RESTORATION SITE (BASED ON KNOWN SPAWNING LOCATIONS) 1 TRB (REFER SHEET 8)

*NOTE: RETAIN EXISTING NATIVE SPECIES
NOT AFFECTED BY DREDGING WORKS

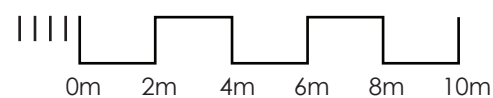


LOWER HEATHCOTE DREDGING S2

X-SECTIONS 5 & 6

SHEET 7 OF 9

1:200 @ A3



DRAWN	MB	CHECKED	Wri	REVIEWED	KT	APPROVED	Wro
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REV A_FOR INFORMATION | 15.FEBRUARY.2019



ARTIST'S IMPRESSION: ALL
PROPOSED PLANTING IS
SHOWN AT MATURITY

UPPER BANK PLANT LIST

Main planting



Carex maorica
- Māori sedge



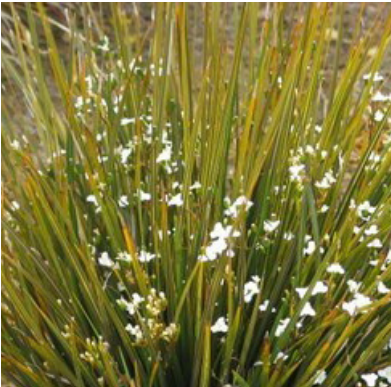
Carex secta
- Pukio



Carex virgata
- Pukio



Dianella nigra
- Wiwi



Libertia ixioides
- Mikoikoi

Use Sparingly



Cordyline australis
- Tī kouka, cabbage tree



Phormium tenax
- Harakeke, flā



Plagianthus divaricatus
- Swamp ribbonwood



Austroderia richardii
- Toetoe

Note: Work around and retain existing native species.
Swamp ribbonwood to only be used where there is sufficient width and where views to the river will not be compromised.

REGRAIDING AREAS PLANT LIST

Main planting



Carex secta
- Pukio



Carex virgata
- Pukio



Juncus edgariae
- Wiwi



Juncus sarophorus
- Giant rush

RIPARIAN PLANTING

Main planting



Carex coriacea
- Rautahi



Carex geminata
- Rautahi



Carex secta
- Pukio



Carex virgata
- Pukio



Dianella nigra
- Wiwi



Veronica salicifolia
- Koromiko, hebe

Use Sparingly



Blechnum penna-marina
- Kiokio



Coprosma propinqua
- Mingimingi



Cordyline australis
- Ti kouka, cabbage tree

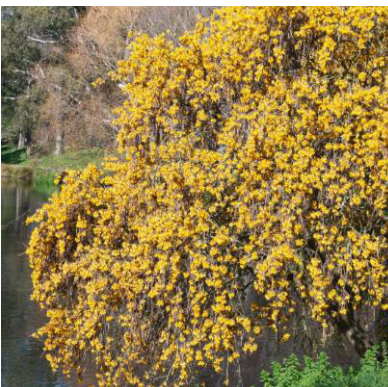


Phormium tenax
- Harakeke, fla

Note: possible include other hard ferns e.g. Microsorium pustulatum / hounds tongue fern.

TREES

To replace any removed



Sophora microphylla
- Kōwhai



Plagianthus regius
- Manatu



Podocarpus totara
- Tōtara



Alnus rubra
- Red Alder

GRASS ACCESS & MOWING STRIP

Grass seed as per CSS Part 7.



On the true right bank (TRB), the mowing strip is linear between existing planting and ecological restoration sites.

On the true left bank (TLB), the mowing strip is to extend beyond the tree trunks to maintain views to the river and enable more successful establishment of plants (the crest of the bank is very dry). In wide areas, the mowing strip could extend up to 3m. In narrow areas the mowing strip is to be to the edge of sprayed radius around trees. Fill hollows in the existing banks formed by earthworks or tree removal.