

Appendix 3.1

Figures for Chapter 3

List of Figures

| Figure No. | Description |
|------------|---|
| F2 | Upstream storage – single location |
| F4 | Flood storage at Arklow marsh |
| F5a | Flood relief channel/bypass channel through Arklow town – Option a |
| F5b | Flood relief channel/bypass channel through Arklow town – Option b |
| F6a | Flood relief channel/bypass channel upstream of Arklow town – Option a |
| F6b | Flood relief channel/bypass channel upstream of Arklow town – Option b |
| F7 | Channel and bank maintenance |
| F8 | Channel deepening through Arklow (dredging) |
| F9 | Local downstream widening of river at contraction location |
| F10 | Debris trap |
| F13 | Flood containment with flood defence walls and embankments |
| F14a | Tidal barrage – Option a |
| F14b | Tidal barrage – Option b |
| F15 | River barrage |
| F17 | Lowering floor of Arklow Bridge by depth of 0.6m (B1) * |
| F18 | Lowering floor of Arklow Bridge by depth of 1.0m. (B2) * |
| F19 | Lowering floor of Arklow Bridge by depth of 1.5m (B3) * |
| F20 | Local downstream widening of river at contraction location (C) * |
| F21 | Lowering floor of Arklow Bridge by 1m and local upstream dredging (D) * |
| F22 | Lowering floor by 1m, and downstream widening at contraction location (E) * |
| F23 | Lowering floor of Arklow Bridge by 1m, downstream widening and upstream and downstream extensive dredging (F) * |
| F24 | Lowering floor of Arklow Bridge by 1.5m, downstream widening and upstream and downstream extensive dredging (G) * |



Impoundment A

Impoundment B

Impoundment C

Impoundment D

Legend

- ★ Potential Water Extraction Point
- ★ Existing Water Extraction Point

BYRNE LOOBY PHMCCARTHY

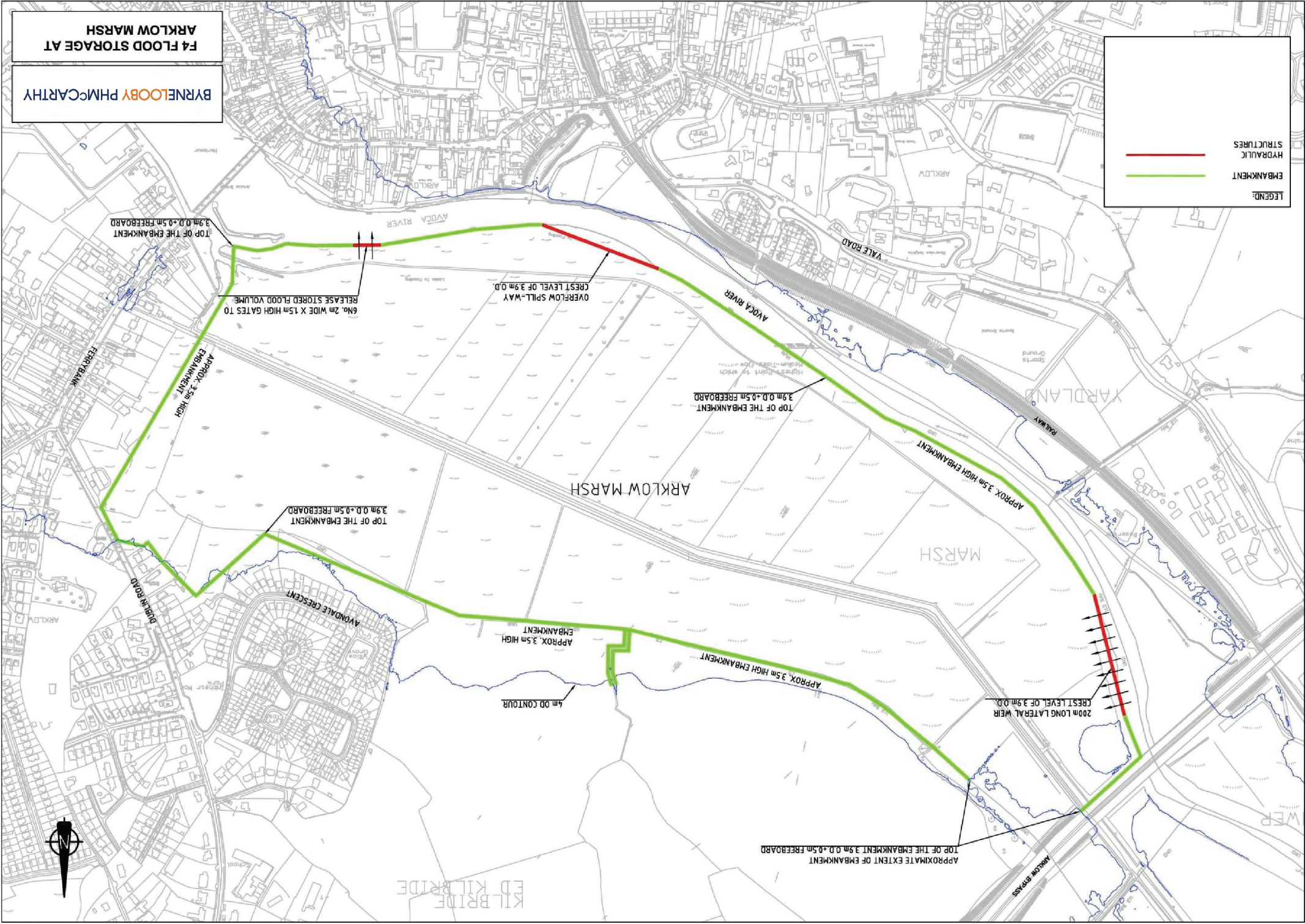
F2 - FLOW REDUCTION - UPSTREAM STORAGE
POTENTIAL SITE LOCATIONS

**F4 FLOOD STORAGE AT
ARKLOW MARSH**

BYRNELOBY PHMCARTHY

LEGEND:

- EMBAKMENT (Green line)
- HYDRAULIC STRUCTURES (Red line)



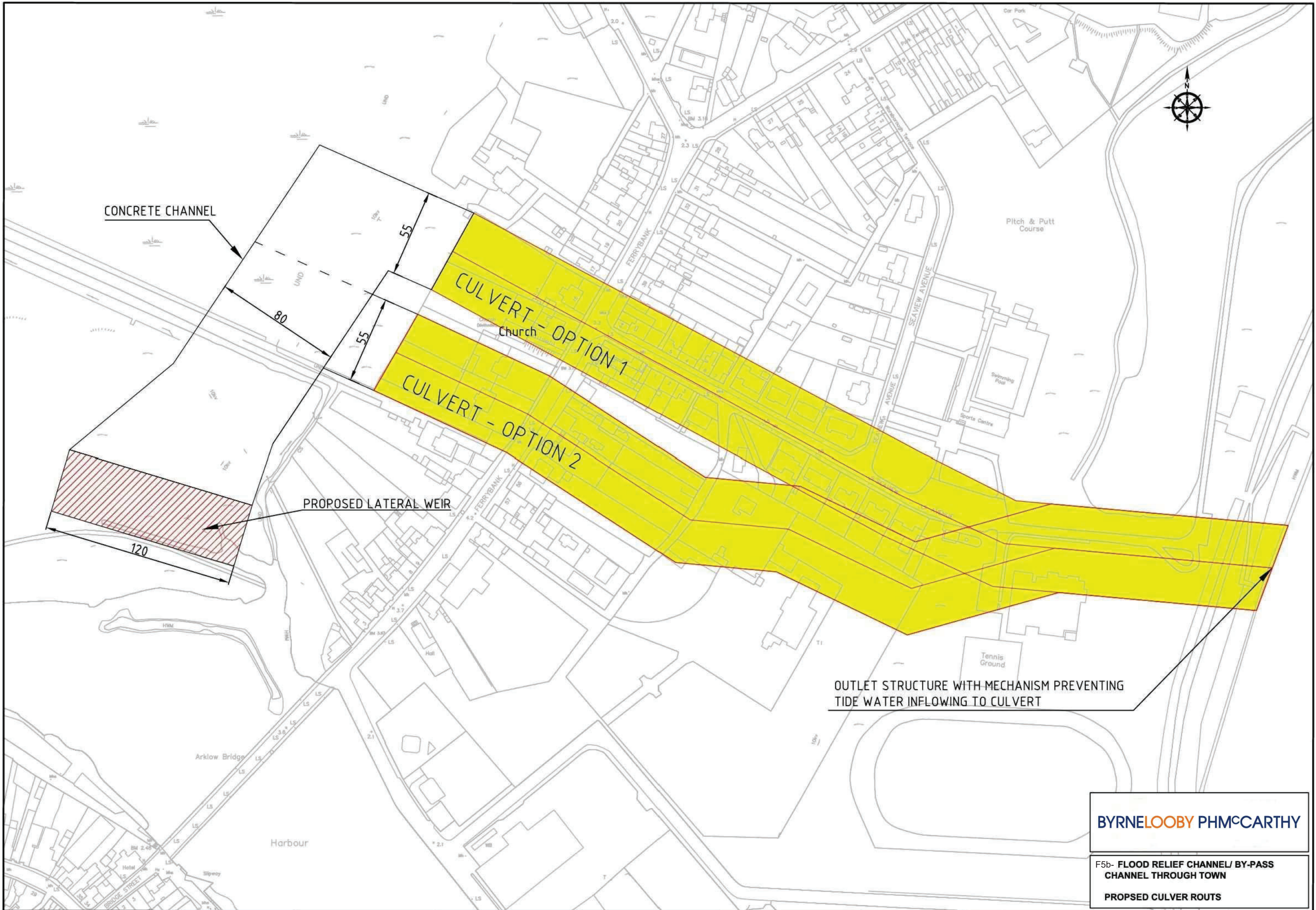


PROPOSED BYPASS CHANNEL ROUTE

PROPOSED BYPASS CULVERT ROUTE No. 1
PROPOSED BYPASS CULVERT ROUTE No. 2

BYRNE LOOBY PHMCCARTHY

F5a- Flood Relief Channel/By-pass Channel
Through Arklow Town
Aerial Mapping



CONCRETE CHANNEL

UND

80

55

55

CULVERT - OPTION 1

CULVERT - OPTION 2

Church

PROPOSED LATERAL WEIR

120

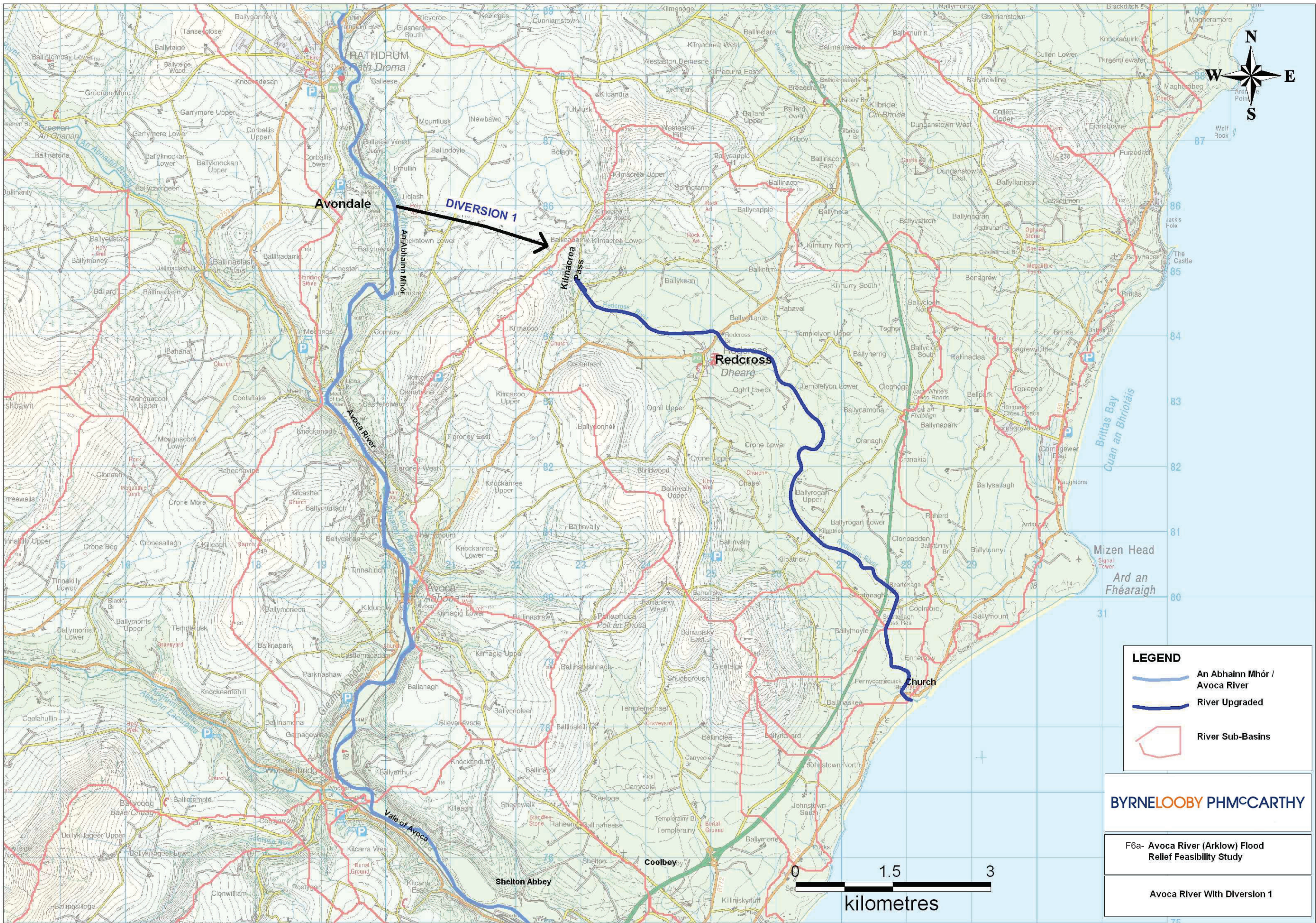
OUTLET STRUCTURE WITH MECHANISM PREVENTING TIDE WATER INFLOWING TO CULVERT



BYRNE LOOBY PHMCCARTHY

F5b- FLOOD RELIEF CHANNEL/ BY-PASS CHANNEL THROUGH TOWN

PROPOSED CULVERT ROUTS



Avondale

DIVERSION 1

Kilmacree Pass

Redcross Dhearg

Avoca

Church

Shelton Abbey

Coolboy

Kilcarra West

Woolerbridge

Gleann Abhaca

Ballynabrack

Ballymorris Upper

Ballymorris Lower

Tinnahinch

Crone More

Crone Beg

Crone Lower

Crone Upper

Crone Middle

Crone East

Crone West

Crone North

Crone South

Crone East

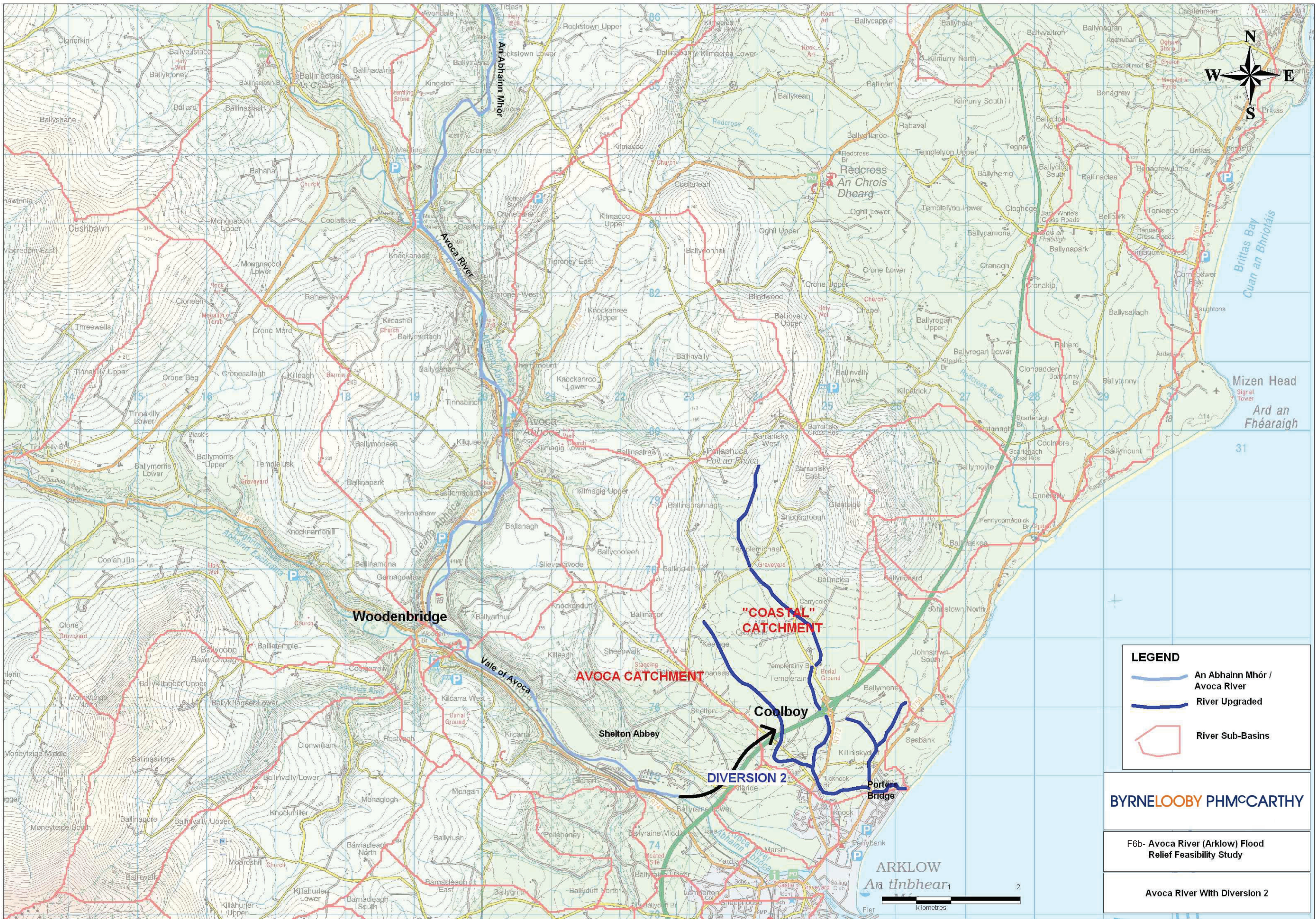
Crone West

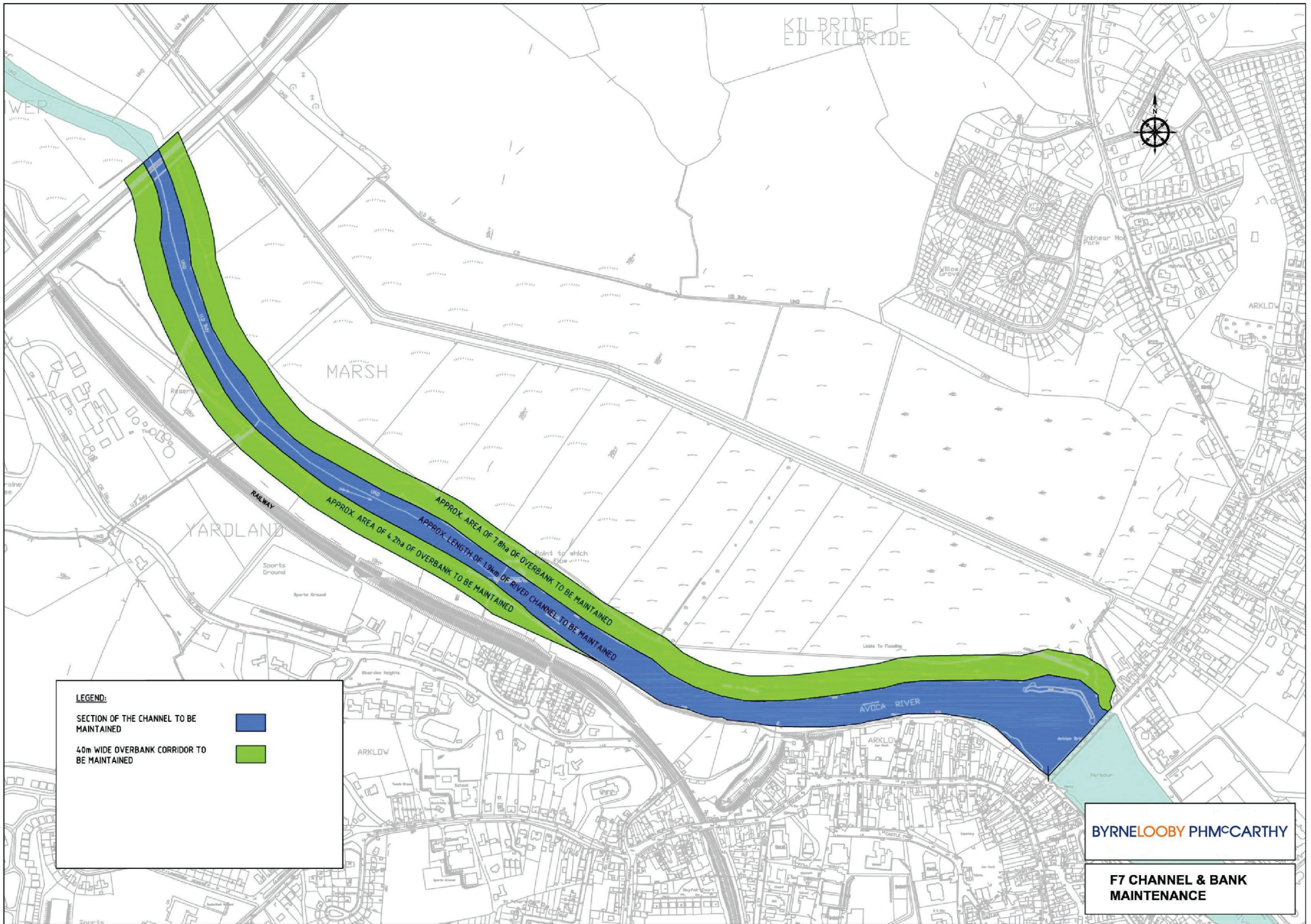
Crone North

Crone South

Crone East

Crone West





LEGEND:

SECTION OF THE CHANNEL TO BE MAINTAINED

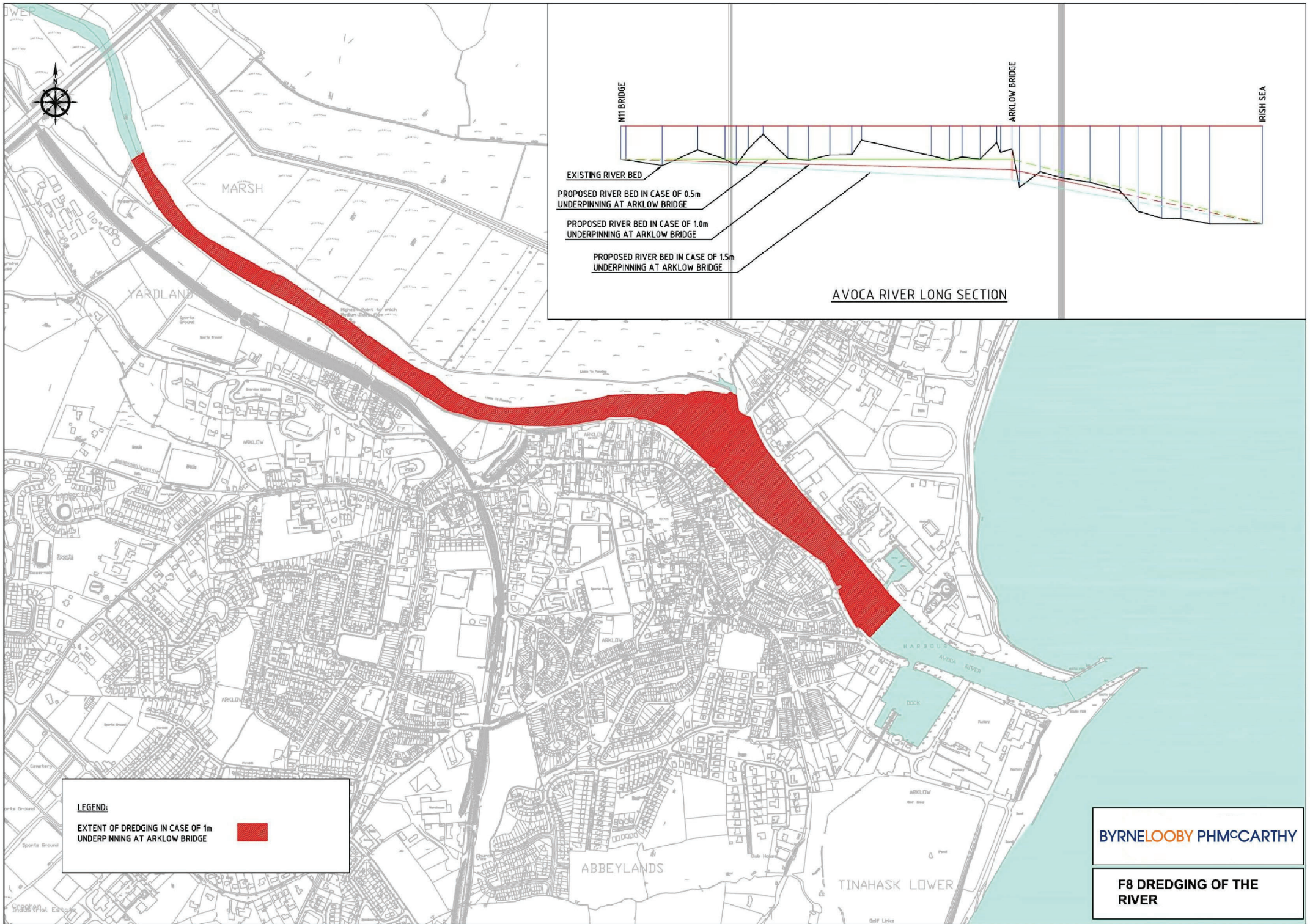


40m WIDE OVERBANK CORRIDOR TO BE MAINTAINED



BYRNE LOOBY PHM CARTHAY

F7 CHANNEL & BANK MAINTENANCE



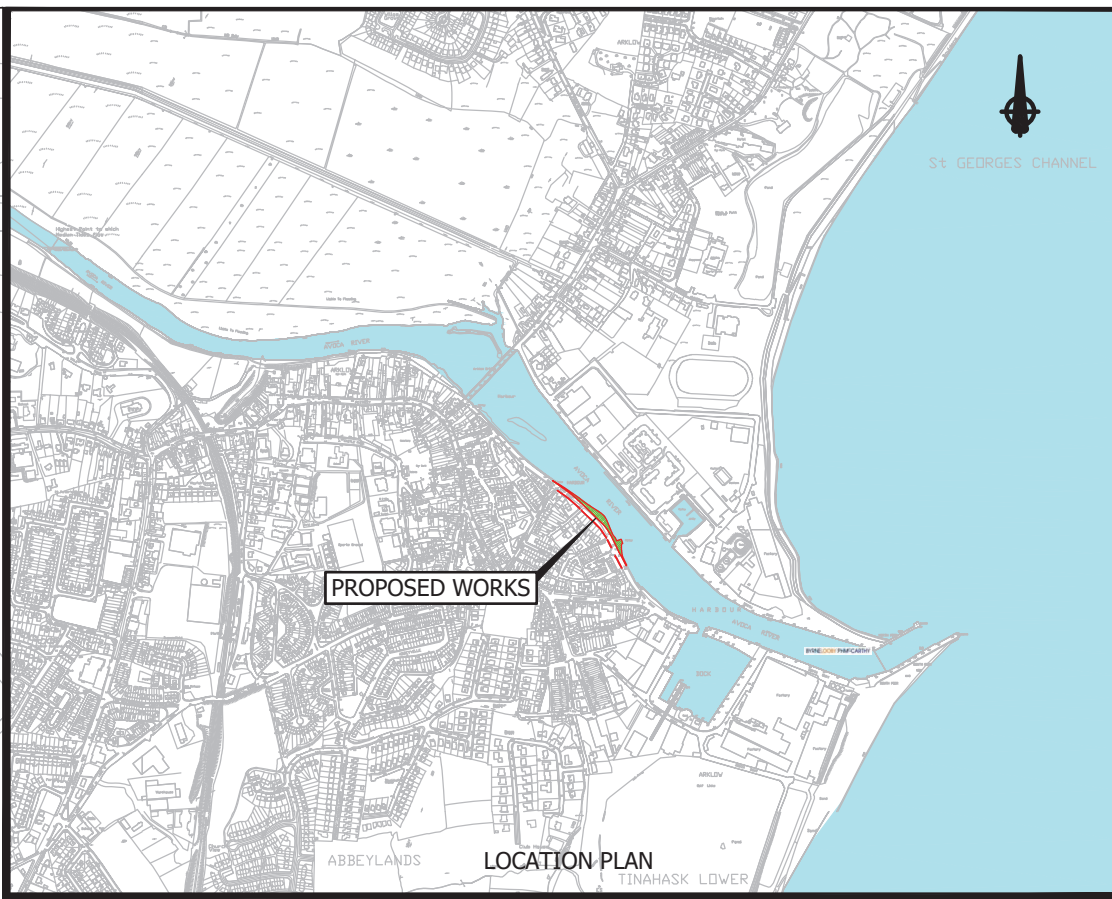
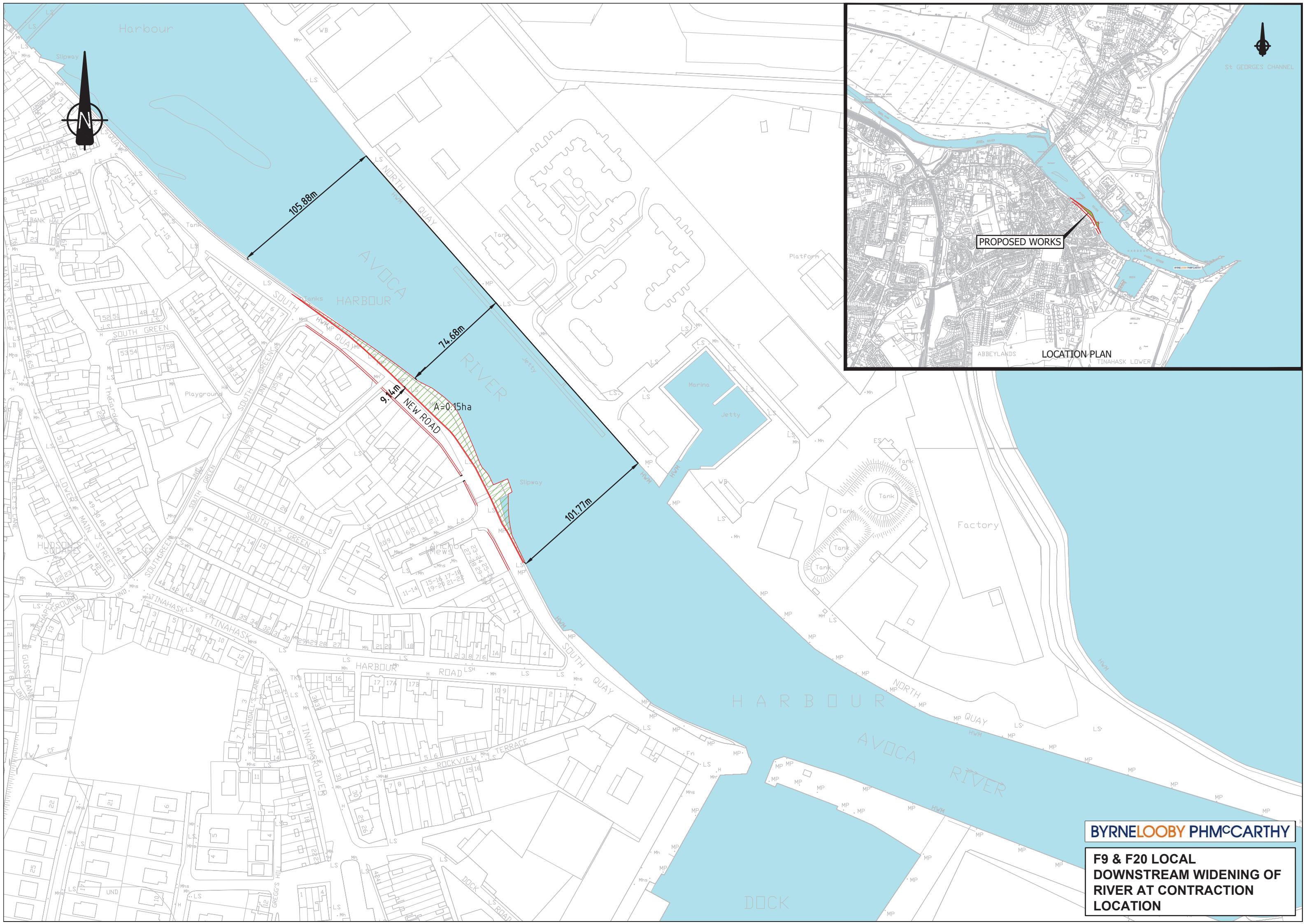
LEGEND:

EXTENT OF DREDGING IN CASE OF 1m UNDERPINNING AT ARKLOW BRIDGE



BYRNE LOOBY PHMCCARTHY

F8 DREDGING OF THE RIVER

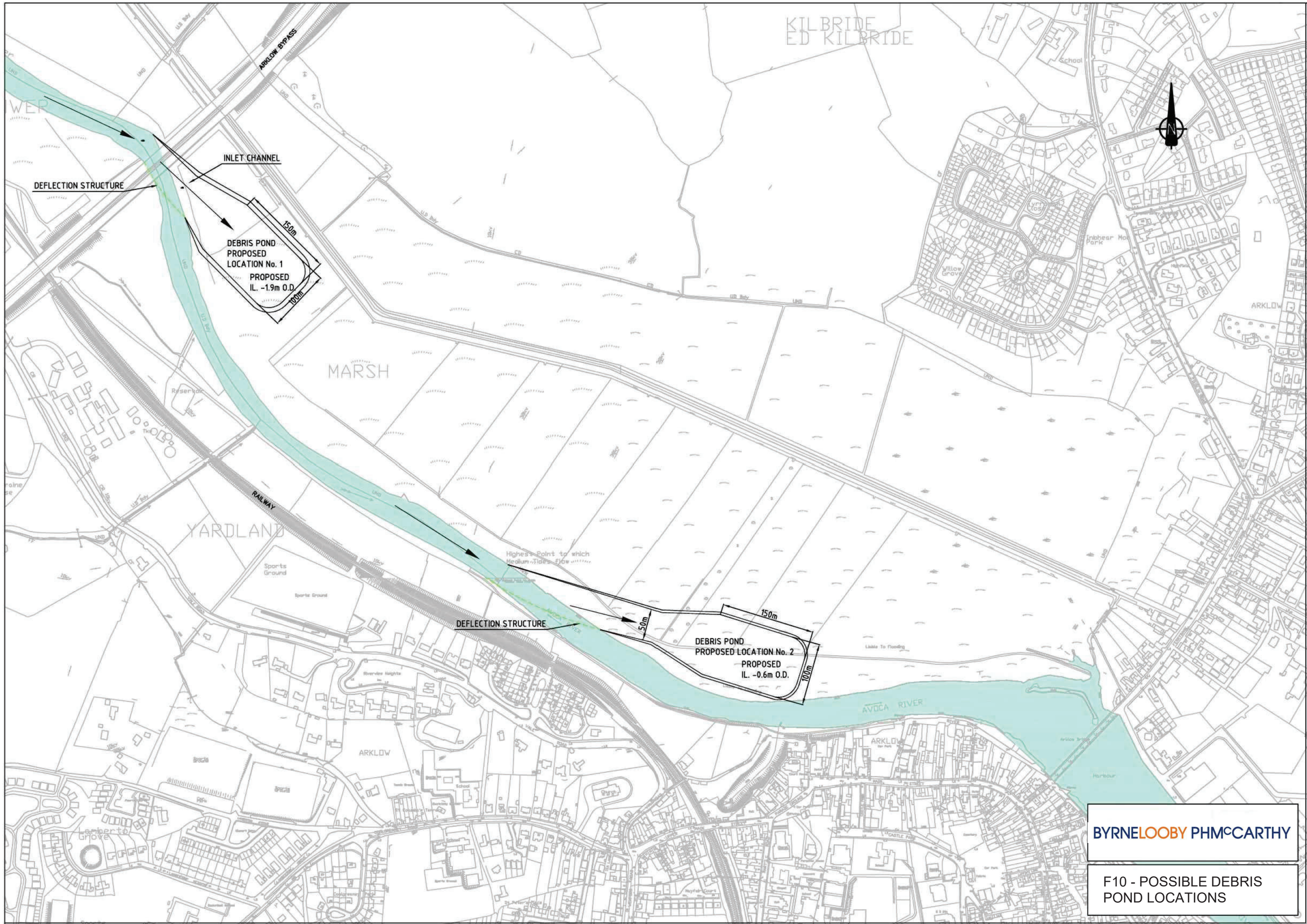


PROPOSED WORKS

LOCATION PLAN

BYRNE LOOBY PHM^CCARTHY

**F9 & F20 LOCAL
DOWNSTREAM WIDENING OF
RIVER AT CONTRACTION
LOCATION**



DEFLECTION STRUCTURE

INLET CHANNEL

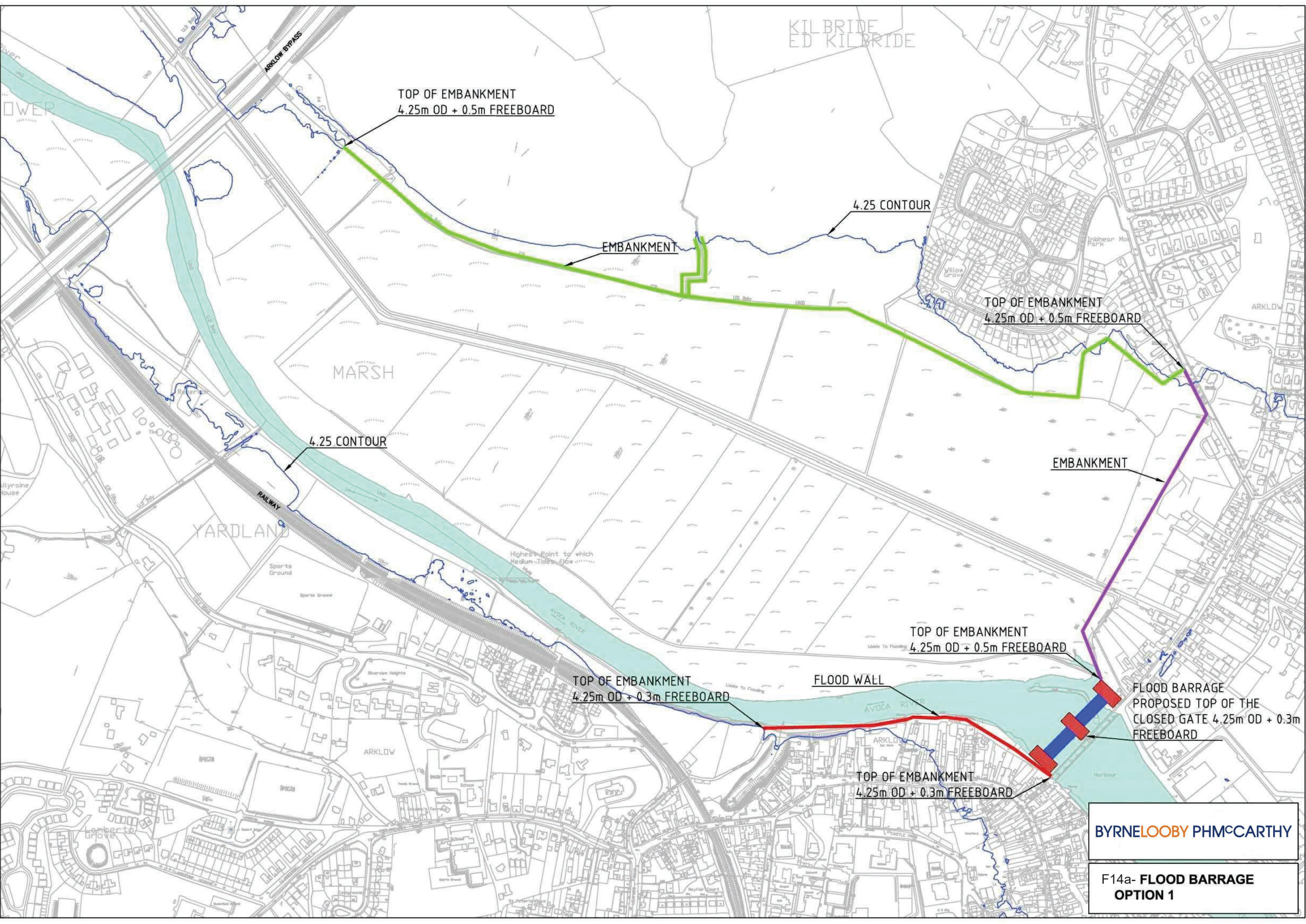
DEBRIS POND
PROPOSED
LOCATION No. 1
PROPOSED
I.L. -1.9m O.D.

DEFLECTION STRUCTURE

DEBRIS POND
PROPOSED LOCATION No. 2
PROPOSED
I.L. -0.6m O.D.

BYRNE LOOBY PHMCCARTHY

F10 - POSSIBLE DEBRIS
POND LOCATIONS



TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

4.25 CONTOUR

EMBANKMENT

TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

4.25 CONTOUR

EMBANKMENT

TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

TOP OF EMBANKMENT
4.25m OD + 0.3m FREEBOARD

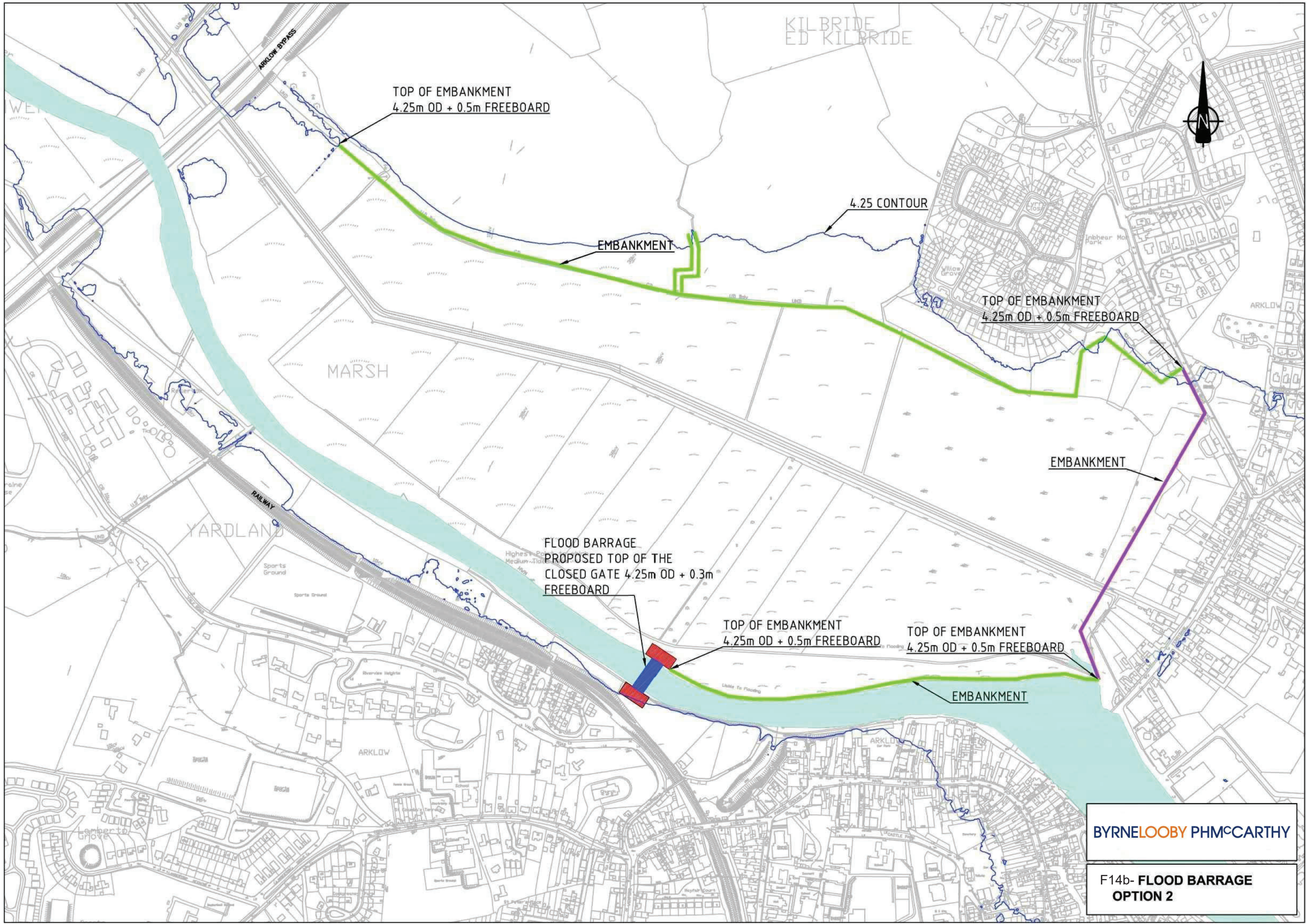
FLOOD WALL

FLOOD BARRAGE
PROPOSED TOP OF THE
CLOSED GATE 4.25m OD + 0.3m
FREEBOARD

TOP OF EMBANKMENT
4.25m OD + 0.3m FREEBOARD

BYRNE LOOBY PHMCCARTHY

F14a- FLOOD BARRAGE
OPTION 1



TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

4.25 CONTOUR

EMBANKMENT

TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

EMBANKMENT

FLOOD BARRAGE
PROPOSED TOP OF THE
CLOSED GATE 4.25m OD + 0.3m
FREEBOARD

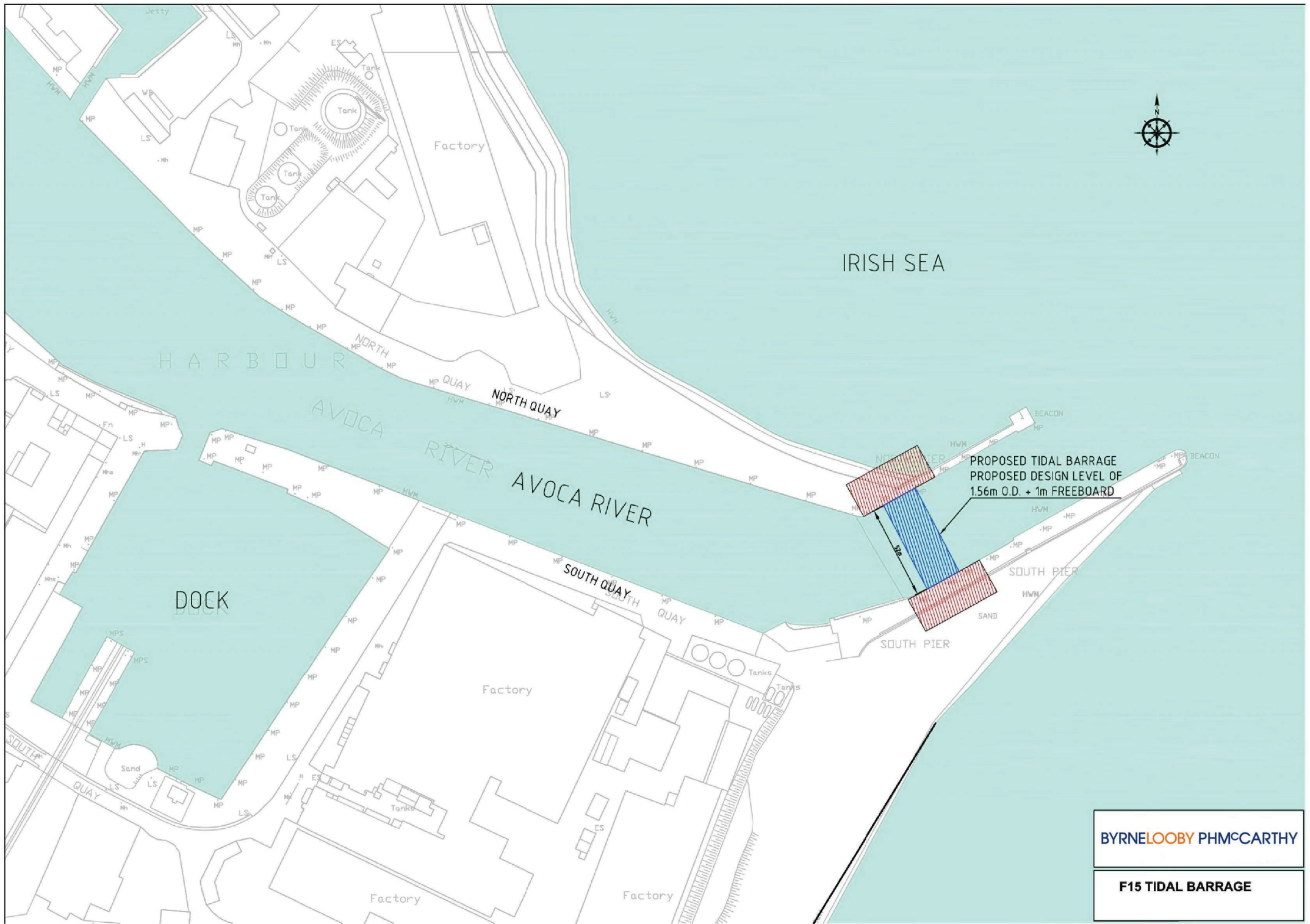
TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

TOP OF EMBANKMENT
4.25m OD + 0.5m FREEBOARD

EMBANKMENT

BYRNE LOOBY PHMCCARTHY

F14b- FLOOD BARRAGE
OPTION 2



IRISH SEA

HARBOUR

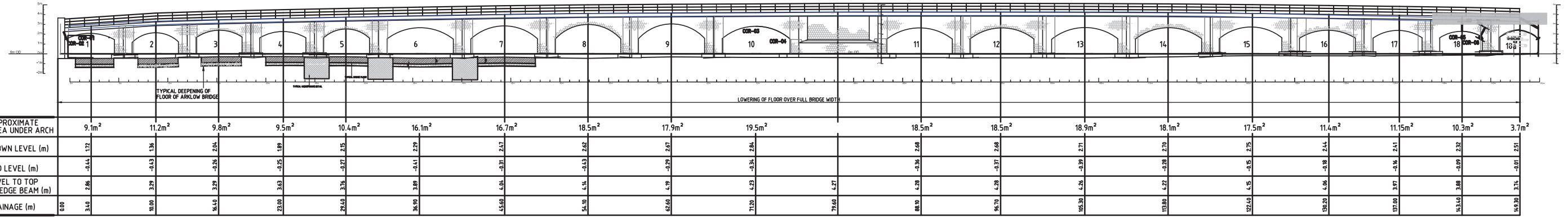
AVOCA RIVER

DOCK

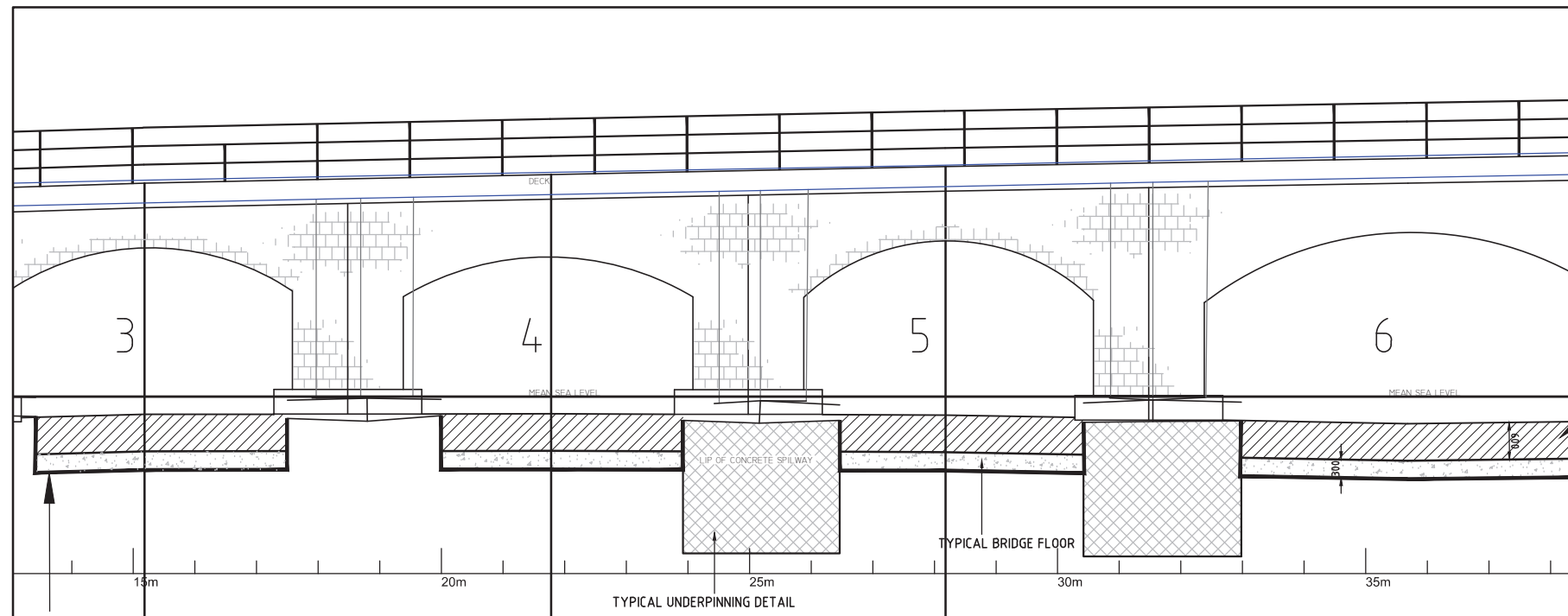
PROPOSED TIDAL BARRAGE
PROPOSED DESIGN LEVEL OF
1.56m O.D. + 1m FREEBOARD

BYRNE LOOBY PHM^CCARTHY

F15 TIDAL BARRAGE



DOWN STREAM FACE OF BRIDGE. SCALE N.T.S.

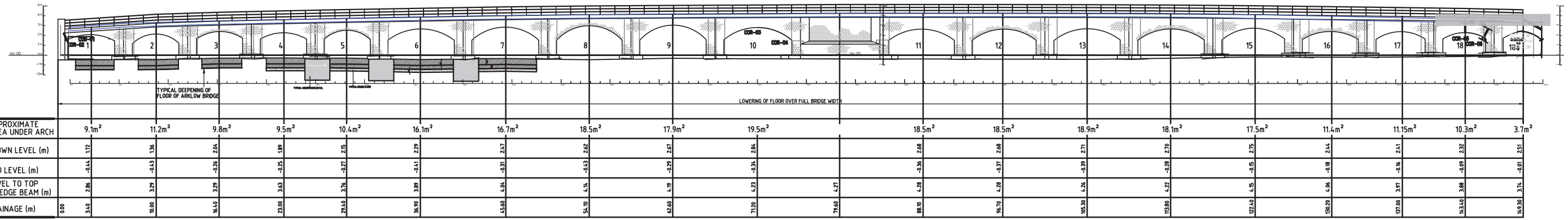


TYPICAL DETAIL OF WORKS AT ALL ARCHES SCALE 1:100

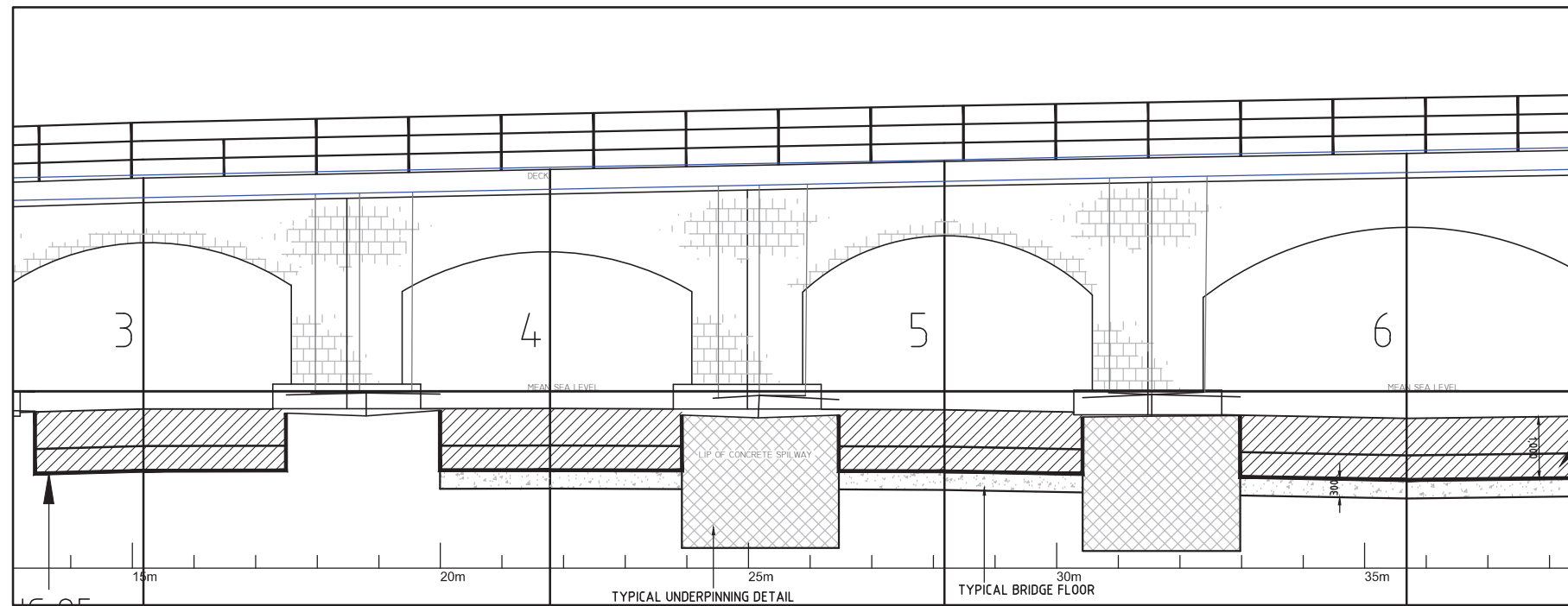
LOWER FLOOR OF BRIDGE BY 0.6m

BYRNE LOOBY PHM^CCARTHY

F17 LOWER FLOOR OF ARKLOW BRIDGE BY DEPTH OF 0.6m



DOWN STREAM FACE OF BRIDGE. SCALE N.T.S.

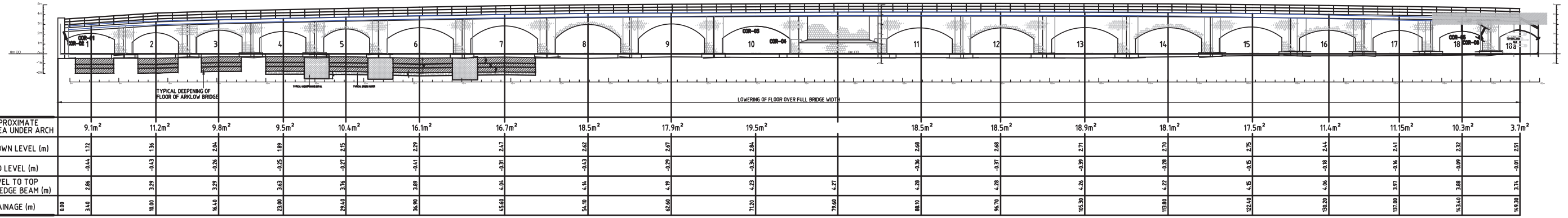


TYPICAL DETAIL OF WORKS AT ALL ARCHES SCALE 1:100

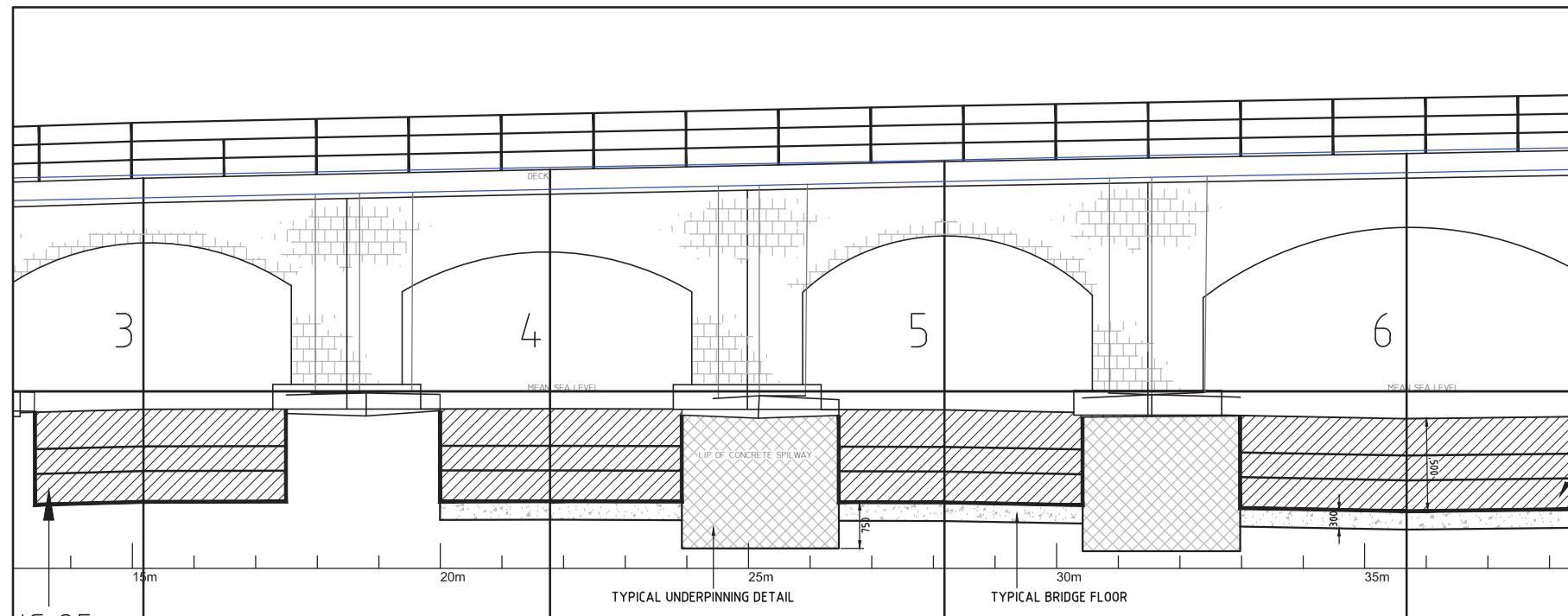
LOWER FLOOR OF BRIDGE BY 1.0m

BYRNE LOOBY PHM^CCARTHY

F18 LOWER FLOOR OF ARKLOW BRIDGE BY DEPTH OF 1.0m



DOWN STREAM FACE OF BRIDGE. SCALE N.T.S.



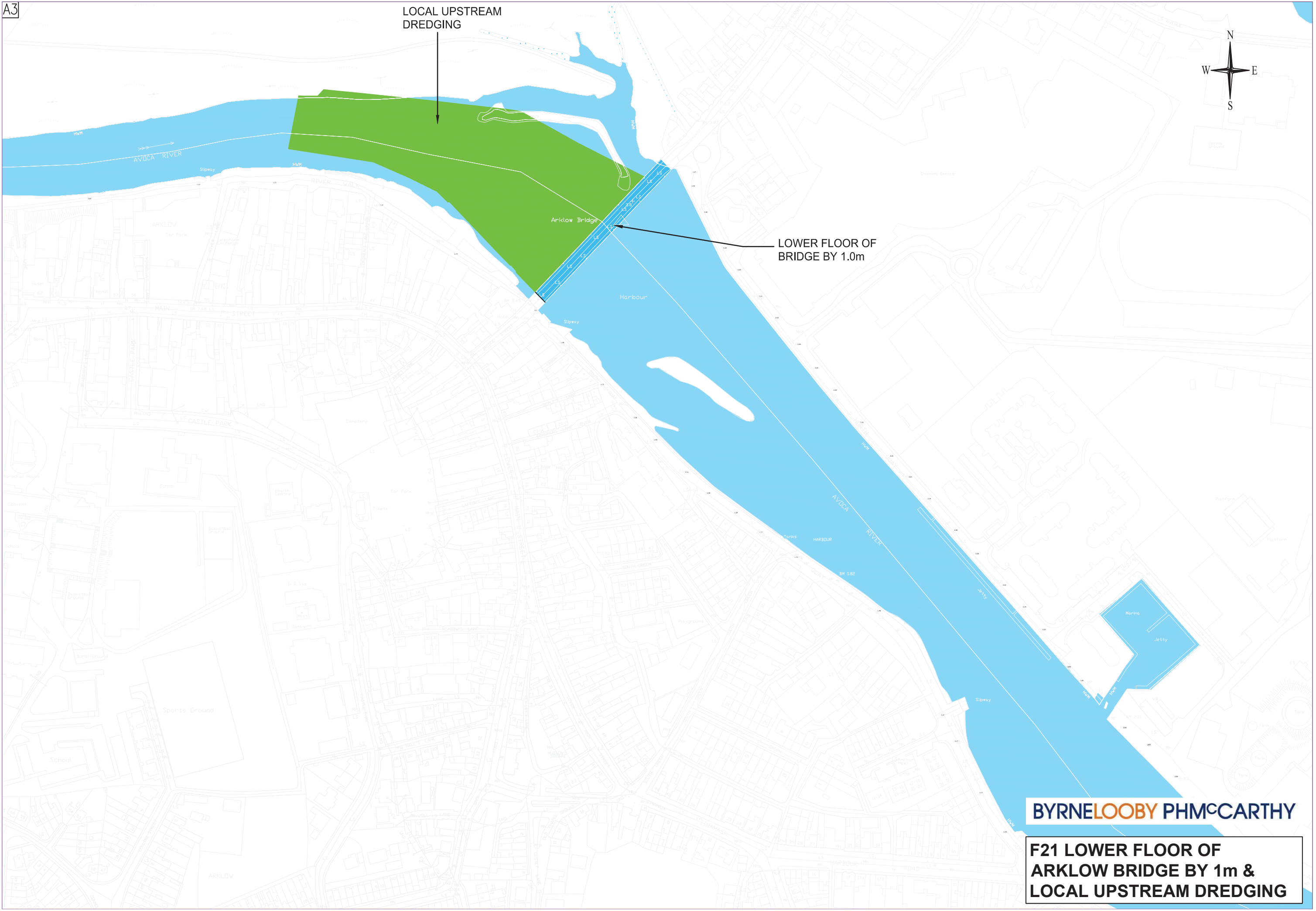
TYPICAL DETAIL OF WORKS AT ALL ARCHES SCALE 1:100

LOWER FLOOR OF BRIDGE BY 1.5m

BYRNE LOOBY PHM^CCARTHY

F19 LOWER FLOOR OF ARKLOW BRIDGE BY DEPTH OF 1.5m

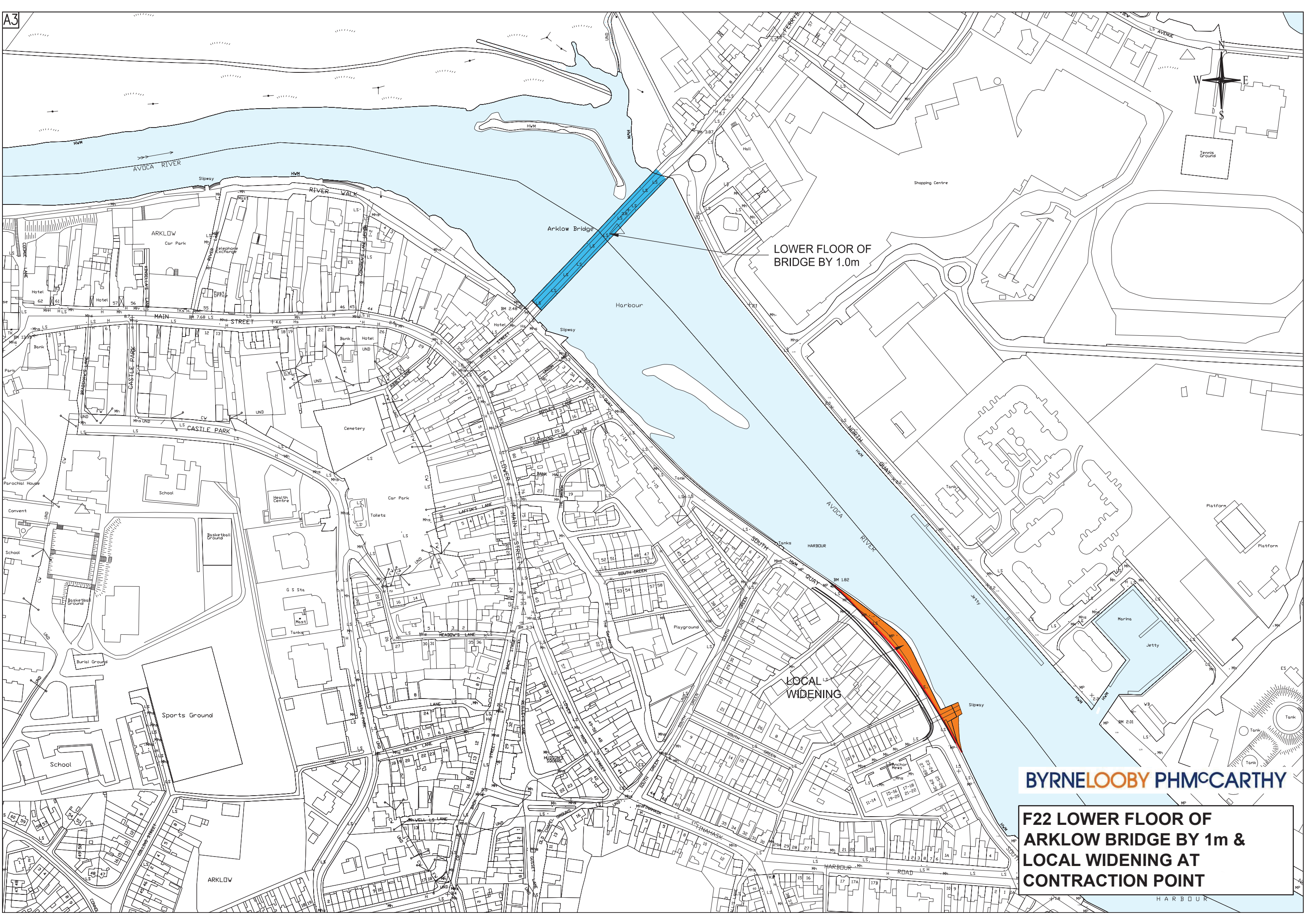
LOCAL UPSTREAM
DREDGING



LOWER FLOOR OF
BRIDGE BY 1.0m

BYRNE LOOBY PHMCCARTHY

**F21 LOWER FLOOR OF
ARKLOW BRIDGE BY 1m &
LOCAL UPSTREAM DREDGING**



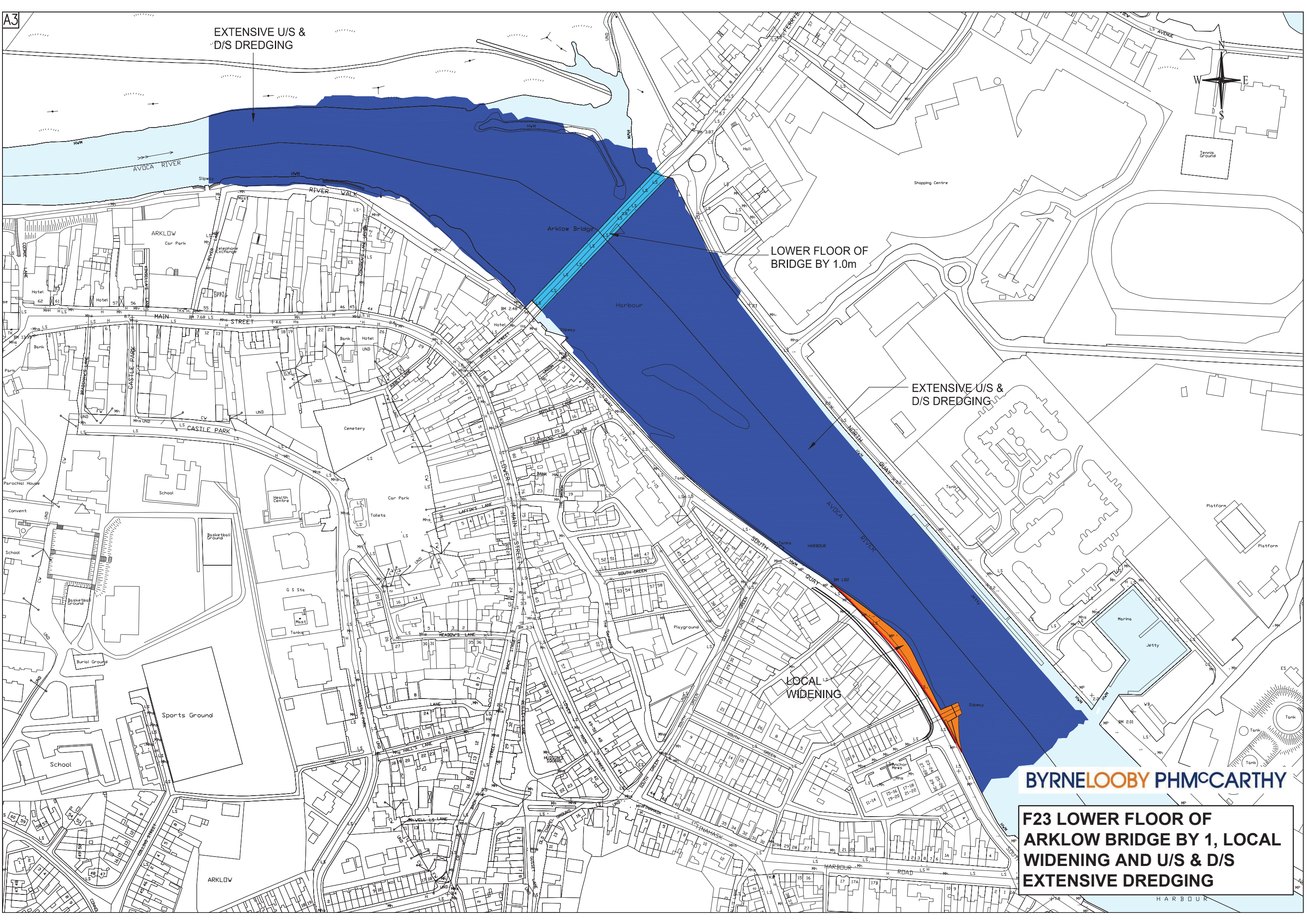
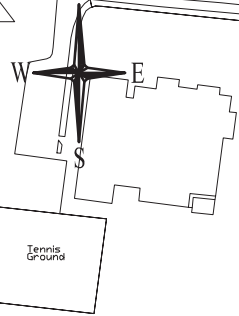
LOWER FLOOR OF
BRIDGE BY 1.0m

LOCAL
WIDENING

BYRNE LOOBY PH MCCARTHY

**F22 LOWER FLOOR OF
ARKLOW BRIDGE BY 1m &
LOCAL WIDENING AT
CONTRACTION POINT**

EXTENSIVE U/S & D/S DREDGING



LOWER FLOOR OF BRIDGE BY 1.0m

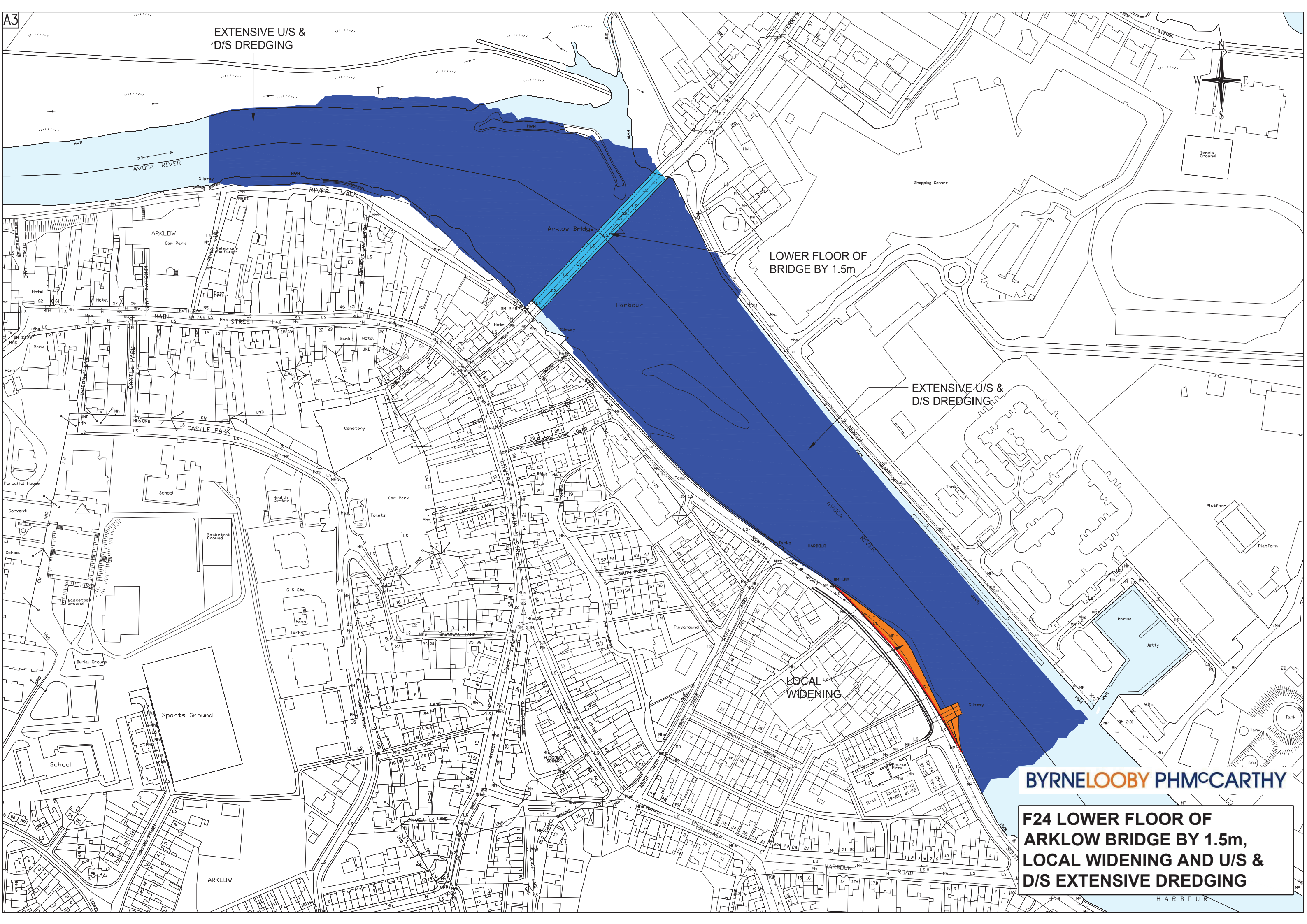
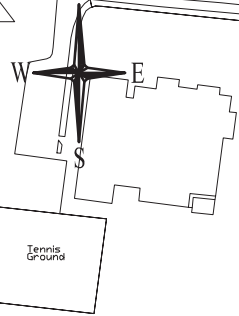
EXTENSIVE U/S & D/S DREDGING

LOCAL WIDENING

BYRNE LOOBY PHMCCARTHY

F23 LOWER FLOOR OF ARKLOW BRIDGE BY 1, LOCAL WIDENING AND U/S & D/S EXTENSIVE DREDGING

EXTENSIVE U/S & D/S DREDGING



LOWER FLOOR OF BRIDGE BY 1.5m

EXTENSIVE U/S & D/S DREDGING

LOCAL WIDENING

BYRNE LOOBY PHMCCARTHY

F24 LOWER FLOOR OF ARKLOW BRIDGE BY 1.5m, LOCAL WIDENING AND U/S & D/S EXTENSIVE DREDGING