

# Narrow Water Bridge Project

## ENVIRONMENTAL IMPACT STATEMENT



**Client**  
Louth County Council  
Roads Section,  
County Hall,  
Millenium Centre,  
Dundalk,  
Co. Louth

February 2012

**Consulting Engineer**  
Roughan & O'Donovan  
Arena House,  
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# NARROW WATER BRIDGE

## ENVIRONMENTAL IMPACT STATEMENT\

## ENVIRONMENTAL STATEMENT

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PLAN  
 A1 SCALE 1:2500  
 A3 SCALE 1:5000

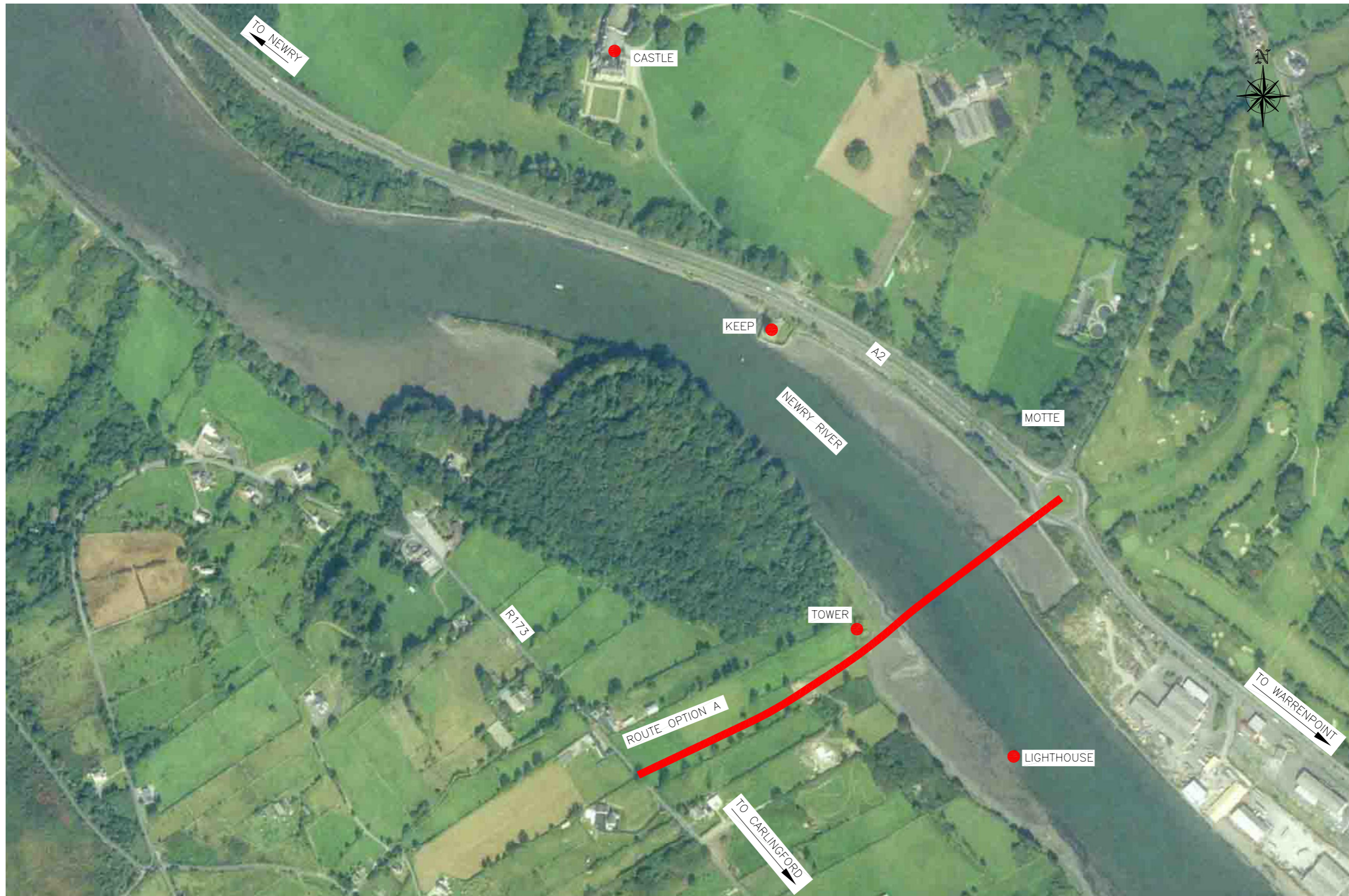


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Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		<b>STUDY AREA</b>	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	CAD File: 08.119 EIS
Drawn: RE	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Status: E.I.S.	Drawing No: FIG 2.1





LEGEND:  
 PREFERRED ROUTE

PLAN  
 A1 SCALE 1:2500  
 A3 SCALE 1:5000

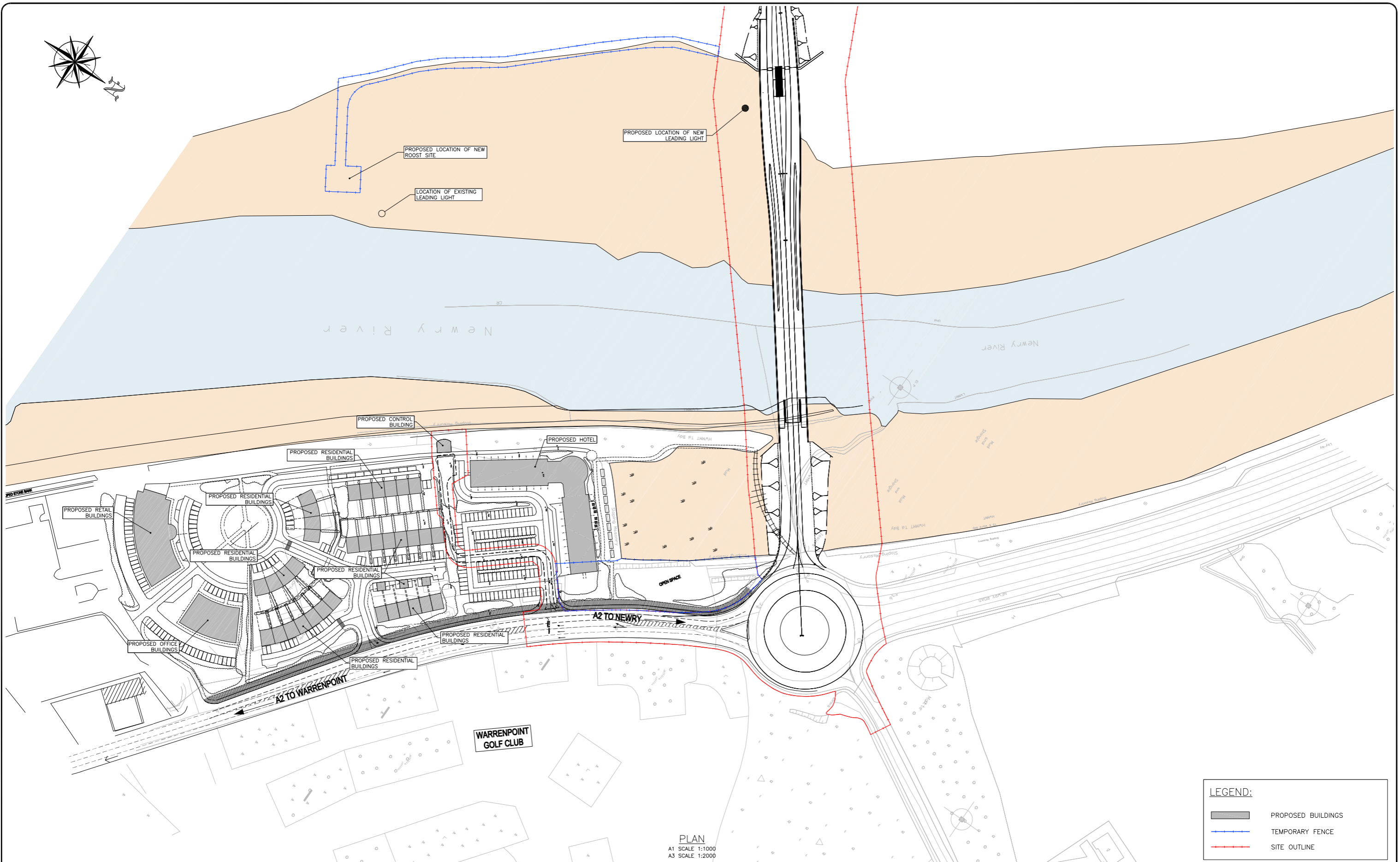
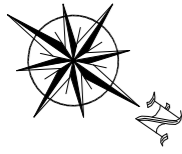


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Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		<b>PREFERRED ROUTE</b>	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	CAD File: 08.119 EIS
Drawn: RE	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Status: E.I.S.	Drawing No: FIG 3.1





PLAN  
 A1 SCALE 1:1000  
 A3 SCALE 1:2000

**LEGEND:**

	PROPOSED BUILDINGS
	TEMPORARY FENCE
	SITE OUTLINE



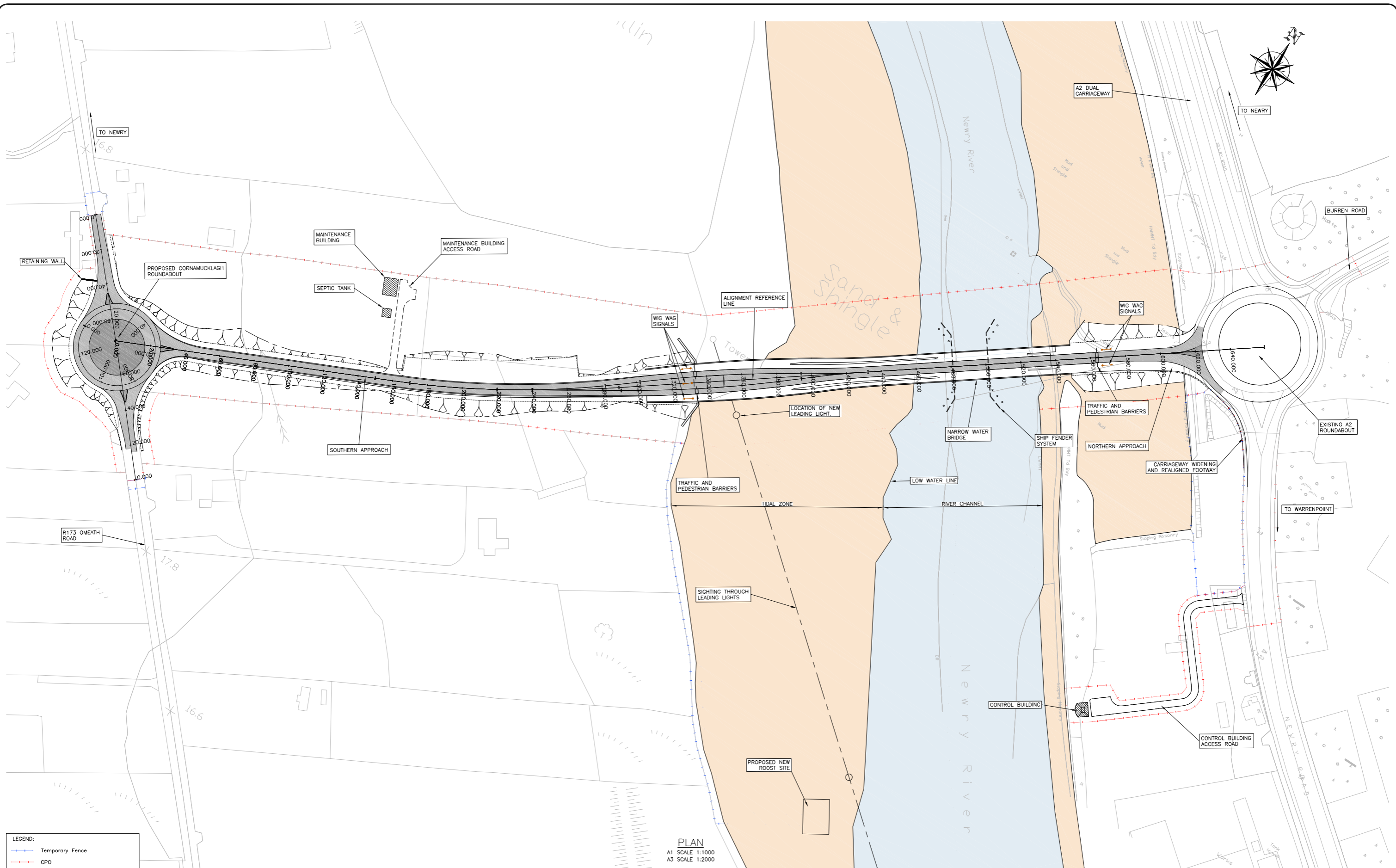
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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title  
**CARNEYHAUGH DEVELOPMENT SITE LAYOUT PLAN WITH CONTROL BUILDING**

Designed: CMC	CAD File: 08.119 EIS	Status: E.I.S.
Drawn: DS	Job No: 08.119	
Checked: CMC	Scale: AS SHOWN	Drawing No: FIG 3.20
Approved: TD	Date: JAN 2012	Rev:





LEGEND:

	Temporary Fence
	CPO

PLAN  
 A1 SCALE 1:1000  
 A3 SCALE 1:2000



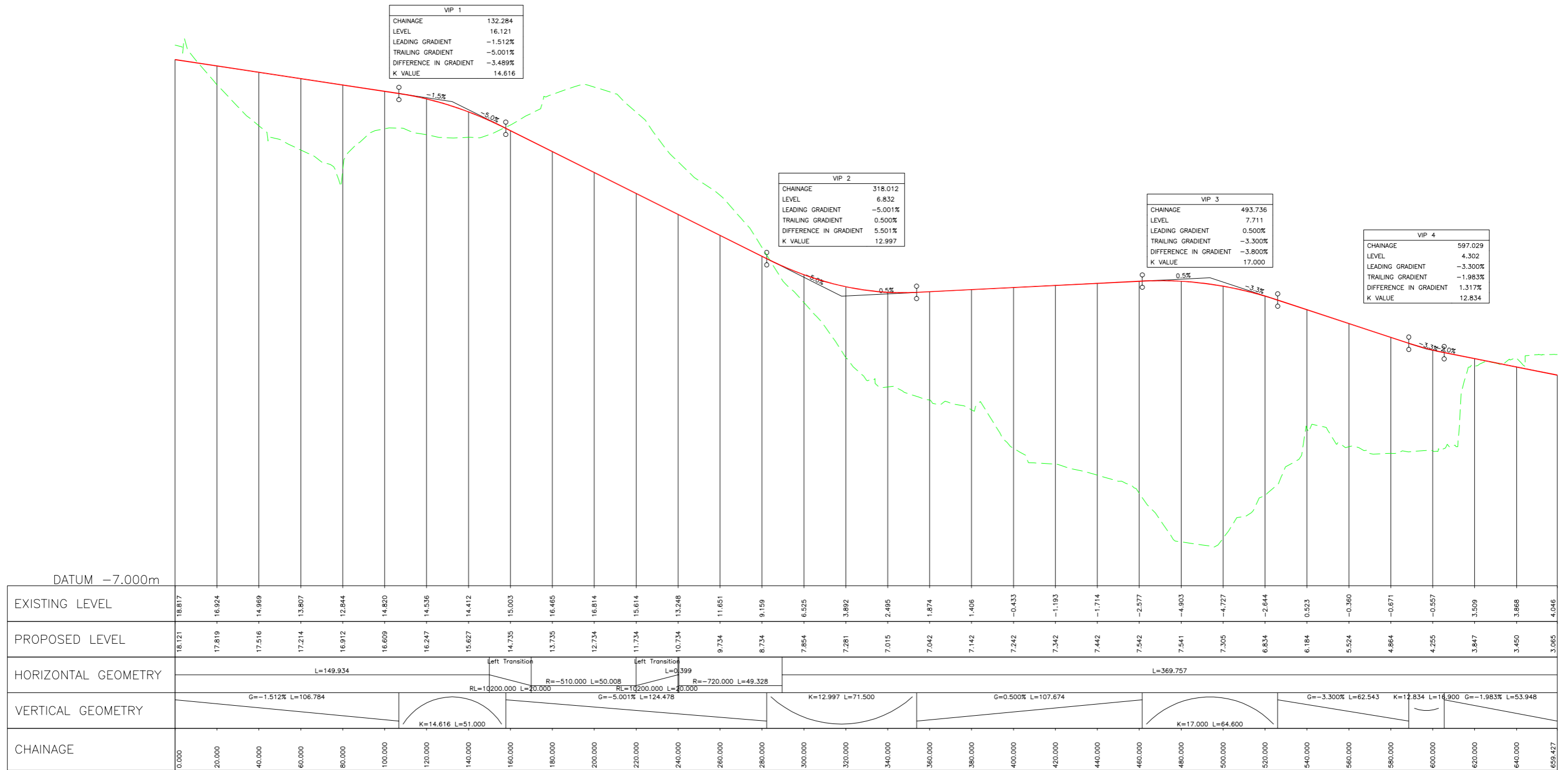
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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title		<b>PROPOSED ALIGNMENT PLAN</b>	
Designed: RMR	CAD File: 08.119 EIS	Status:	E.I.S.
Drawn: RE	Job No: 08.119	Scale:	AS SHOWN
Checked: BC	Date: JAN 2012	Drawing No:	FIG 3.2
Approved: TD		Rev:	





VIP 1	
CHAINAGE	132.284
LEVEL	16.121
LEADING GRADIENT	-1.512%
TRAILING GRADIENT	-5.001%
DIFFERENCE IN GRADIENT	-3.489%
K VALUE	14.616

VIP 2	
CHAINAGE	318.012
LEVEL	6.832
LEADING GRADIENT	-5.001%
TRAILING GRADIENT	0.500%
DIFFERENCE IN GRADIENT	5.501%
K VALUE	12.997

VIP 3	
CHAINAGE	493.736
LEVEL	7.711
LEADING GRADIENT	0.500%
TRAILING GRADIENT	-3.300%
DIFFERENCE IN GRADIENT	-3.800%
K VALUE	17.000

VIP 4	
CHAINAGE	597.029
LEVEL	4.302
LEADING GRADIENT	-3.300%
TRAILING GRADIENT	-1.983%
DIFFERENCE IN GRADIENT	1.317%
K VALUE	12.834

NARROW WATER BRIDGE & APPROACH ROADS PROFILE  
 A1 HORIZ. SCALE 1:1000 VERT. SCALE 1:100  
 A3 HORIZ. SCALE 1:2000 VERT. SCALE 1:200



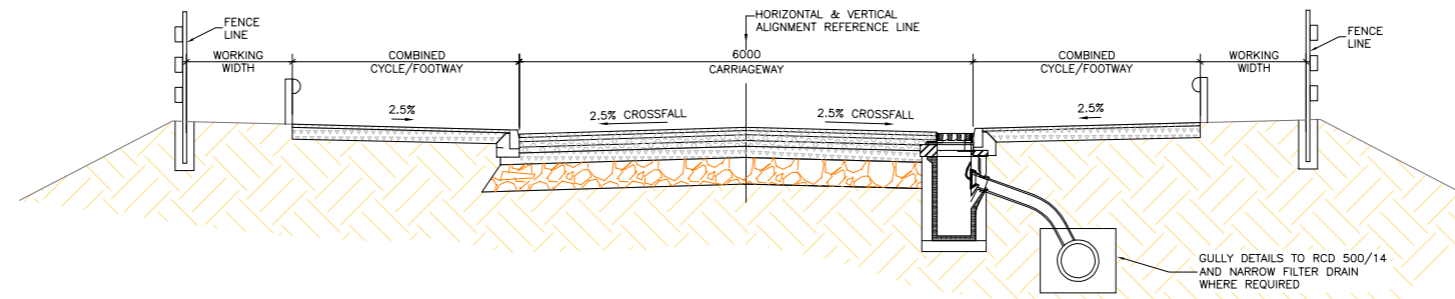
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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

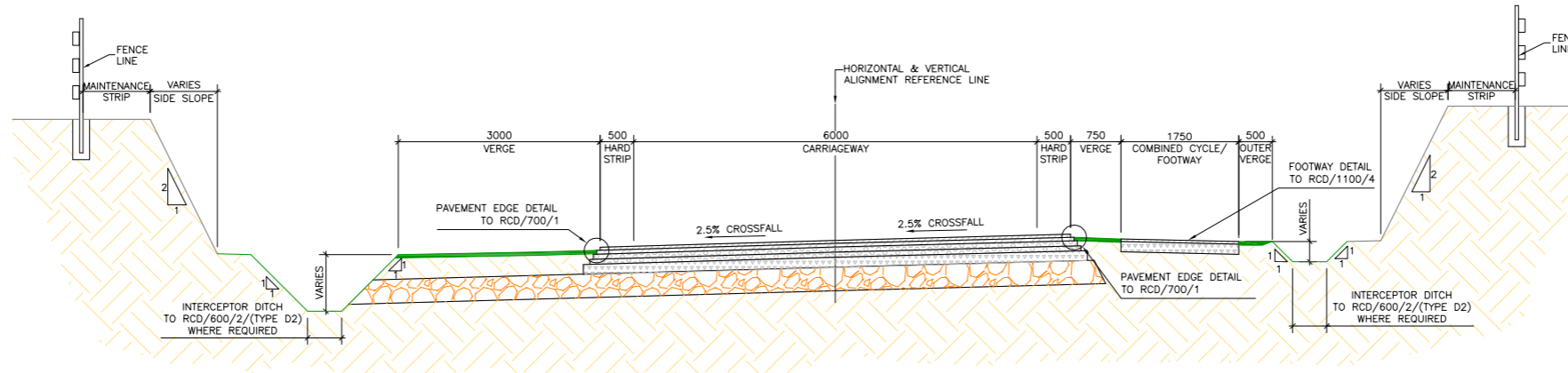
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Designed:	RMR	CAD File:	08.119 EIS
Drawn:	RE	Job No:	08.119
Checked:	BC	Scale:	AS SHOWN
Approved:	TD	Date:	JAN 2012
		Status:	E.I.S.
		Drawing No:	FIG 3.3





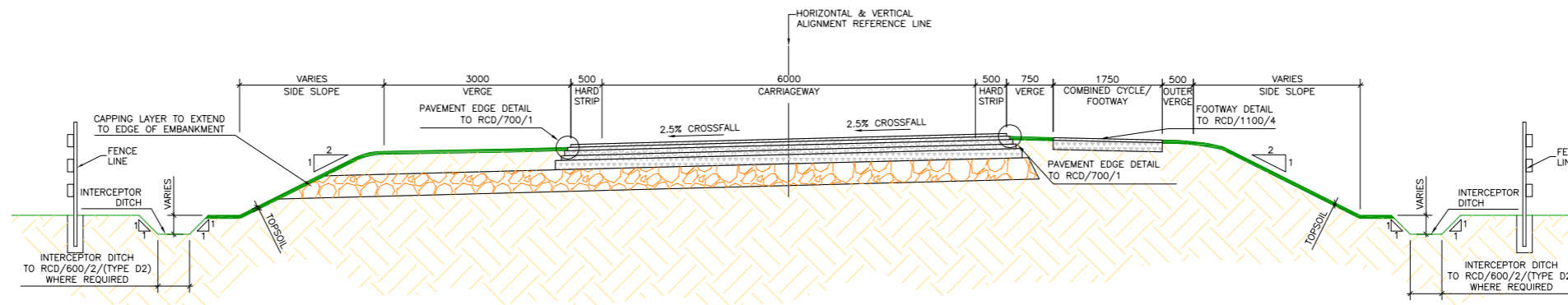
NARROW WATER BRIDGE NORTHERN APPROACH IN CAMBER ON EMBANKMENT DETAIL

A1 SCALE 1:50 A3 SCALE 1:100



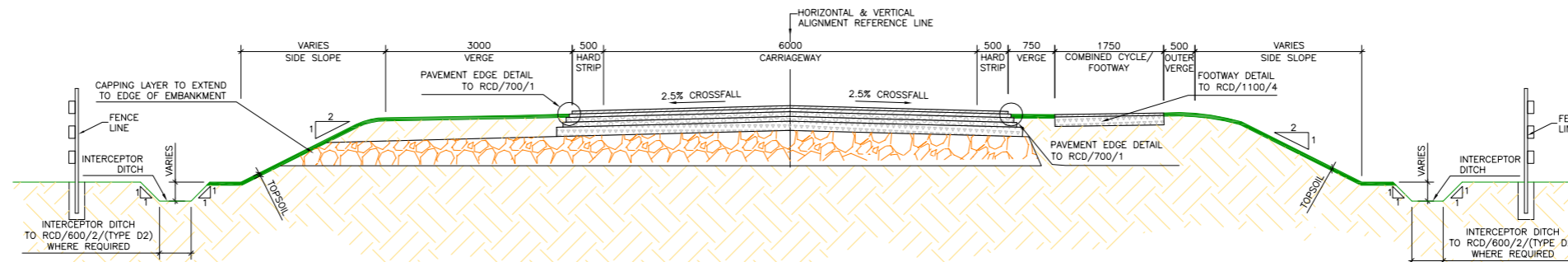
NARROW WATER BRIDGE SOUTHERN APPROACH IN CUTTING DETAIL

A1 SCALE 1:50 A3 SCALE 1:100



NARROW WATER BRIDGE SOUTHERN APPROACH WITH CROSSFALL ON EMBANKMENT DETAIL

A1 SCALE 1:50 A3 SCALE 1:100



NARROW WATER BRIDGE SOUTHERN APPROACH IN CAMBER ON EMBANKMENT DETAIL

A1 SCALE 1:50 A3 SCALE 1:100



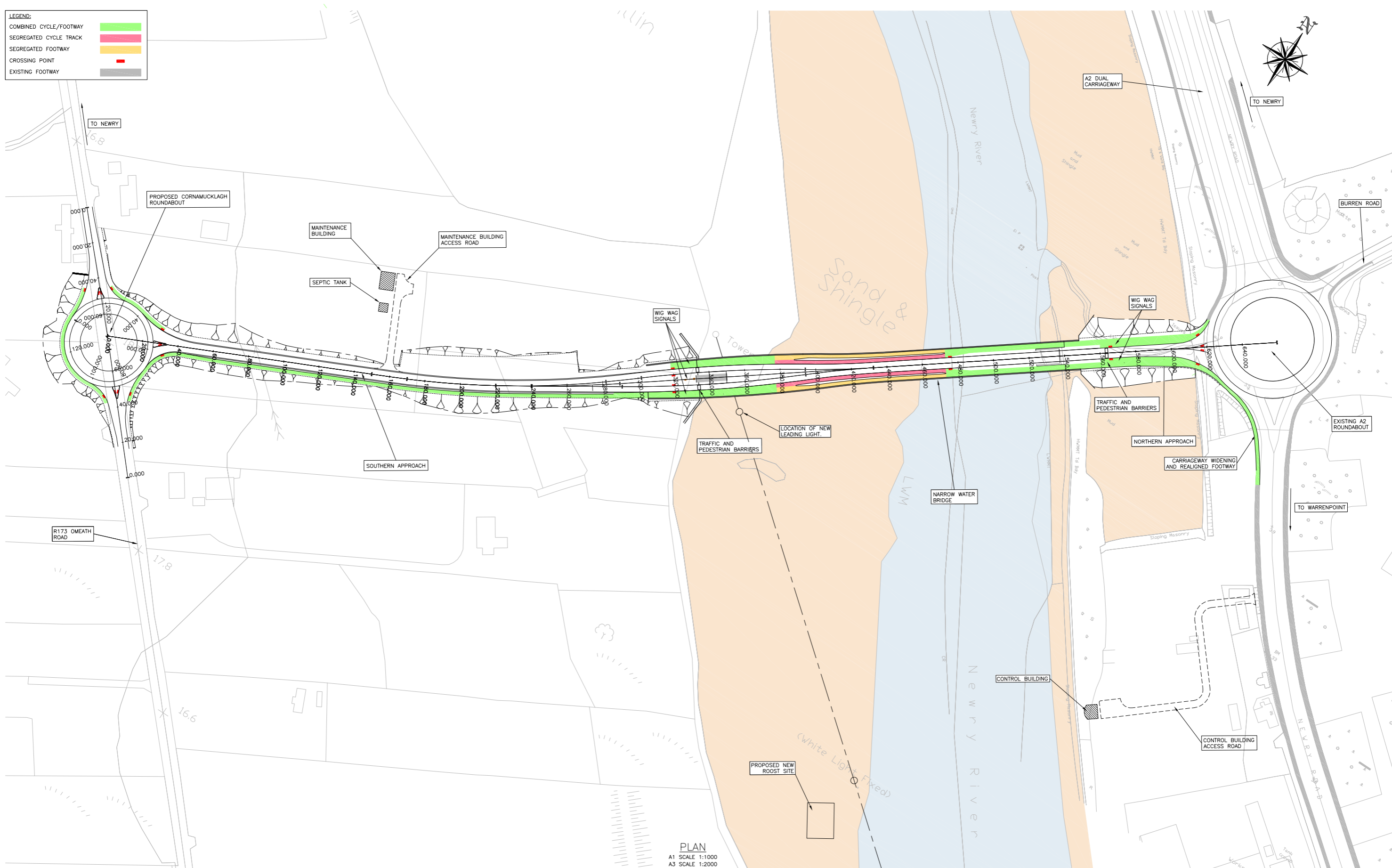
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Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		TYPICAL CROSS SECTION	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	CAD File: 08.119 EIS
Drawn: RE	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Status: E.I.S.	Drawing No: FIG 3.4



**LEGEND:**

COMBINED CYCLE/FOOTWAY	
SEGREGATED CYCLE TRACK	
SEGREGATED FOOTWAY	
CROSSING POINT	
EXISTING FOOTWAY	



PLAN  
 A1 SCALE 1:1000  
 A3 SCALE 1:2000



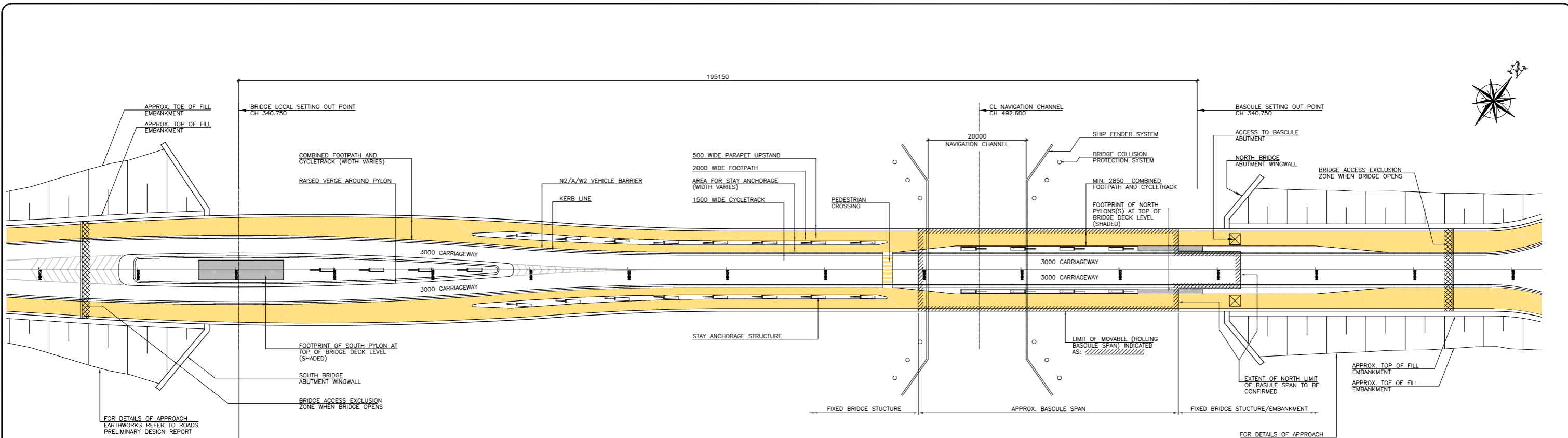
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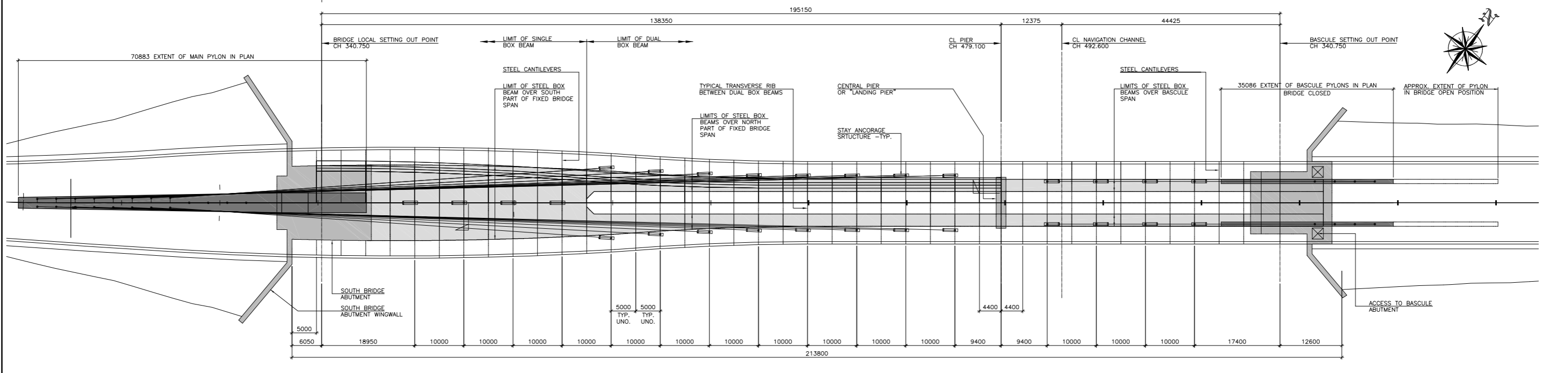
Project **NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title <b>KERBS, FOOTWAYS AND PAVED AREAS</b>		Status: <b>E.I.S.</b>	
Designed: RMR	CAD File: 08.119 EIS	Drawing No: 08.119	
Drawn: RE	Job No: 08.119	Scale: AS SHOWN	Date: JAN 2012
Checked: BC	Scale: AS SHOWN	Date: JAN 2012	FIG 3.5
Approved: TD	Date: JAN 2012	Rev:	





PLAN OF BRIDGE - SHOWING LANE ARRANGEMENT  
SCALE 1:400



PLAN OF BRIDGE - SHOWING BRIDGE MAIN STRUCTURAL LAYOUT  
SCALE 1:400



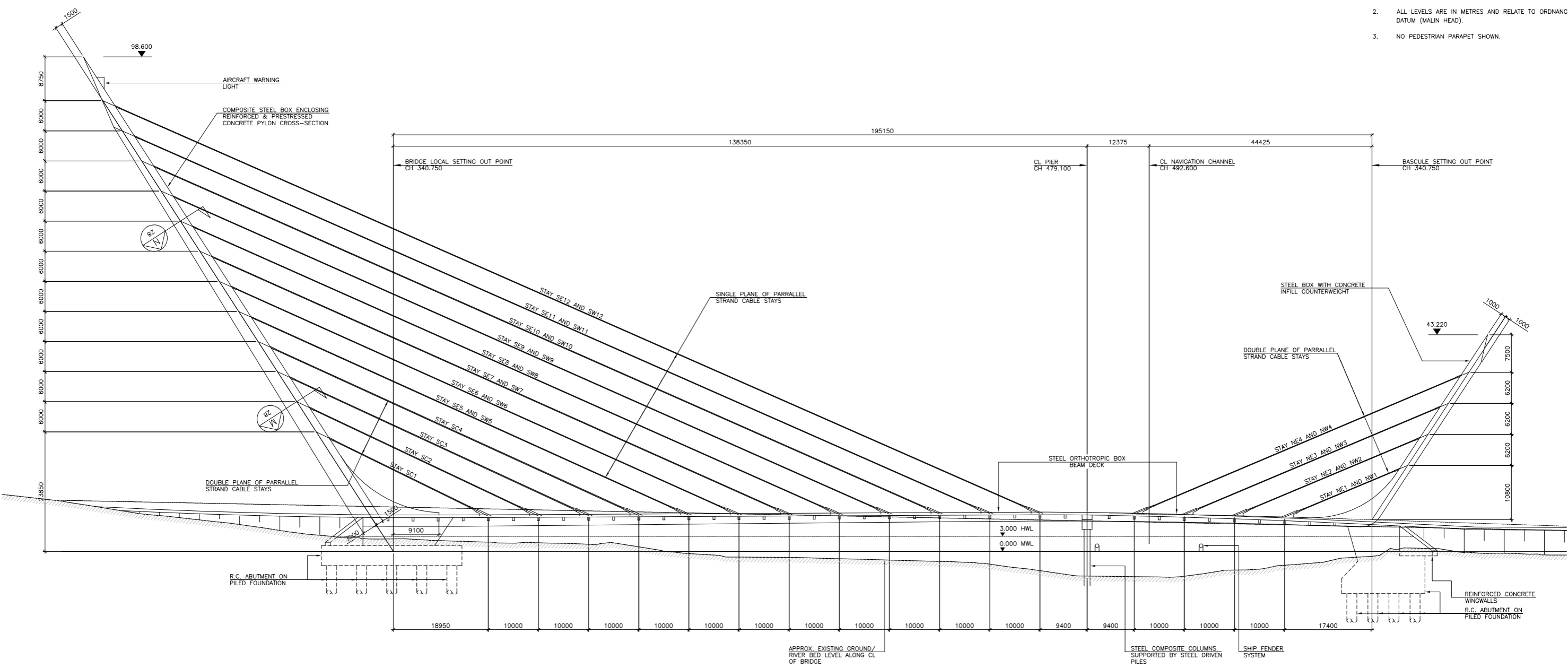
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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title		BRIDGE DECK PLANS	
Designed:	RMR	CAD File:	08.119 EIS
Drawn:	RE	Job No:	08.119
Checked:	BC	Scale:	AS SHOWN
Approved:	TD	Date:	JAN 2012
		Status:	E.I.S.
		Drawing No:	FIG 3.6
		Rev:	



- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  2. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM (MALIN HEAD).
  3. NO PEDESTRIAN PARAPET SHOWN.



ELEVATION OF BRIDGE – OPEN FOR TRAFFIC  
SCALE 1:400

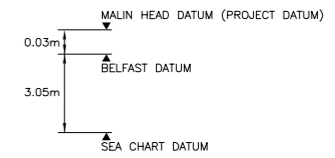


FIGURE 1  
DATUM CONVERSION TABLE  
(NOT TO SCALE)



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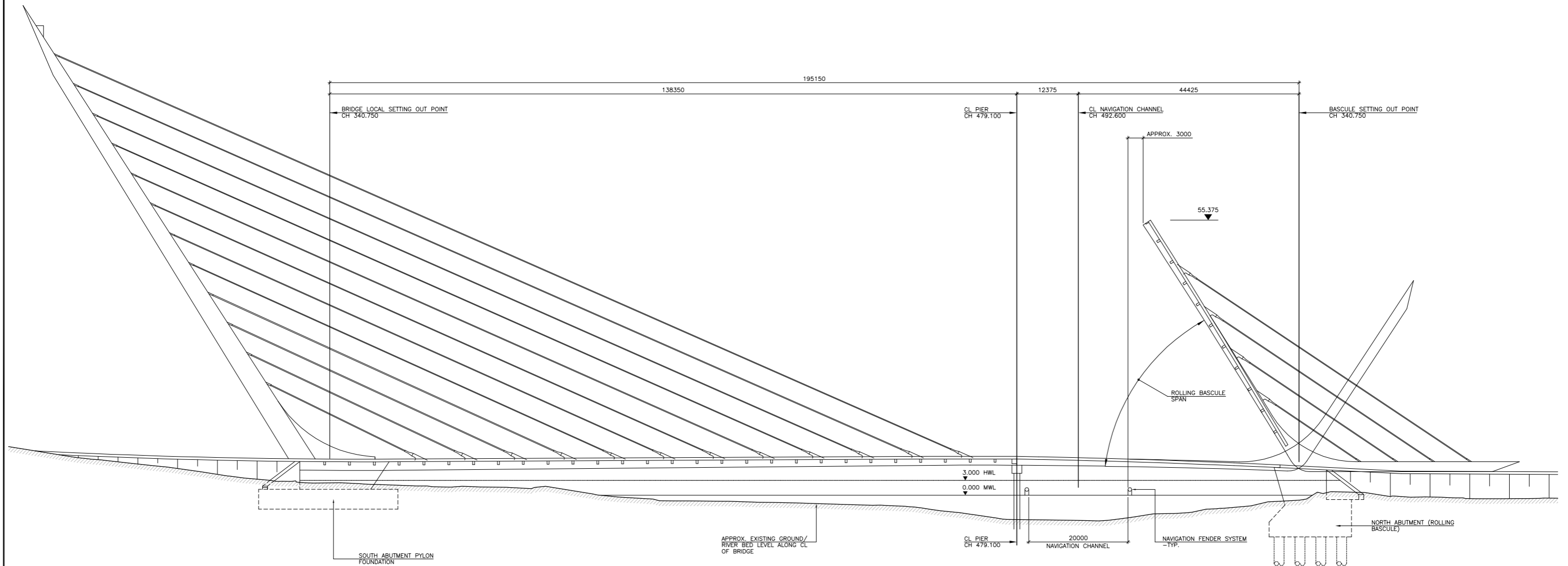
Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title <b>BRIDGE ELEVATION SHEET 1</b>		Status: <b>E.I.S.</b>
Designed: RMR	CAD File: 08.119 EIS	Job No: 08.119
Drawn: RE	Scale: AS SHOWN	Drawing No: FIG 3.7
Checked: BC	Date: JAN 2012	Rev:
Approved: TD		



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM (MALIN HEAD).
3. NO PEDESTRIAN PARAPET SHOWN.



ELEVATION OF BRIDGE – OPEN FOR NAVIGATION  
SCALE 1:400



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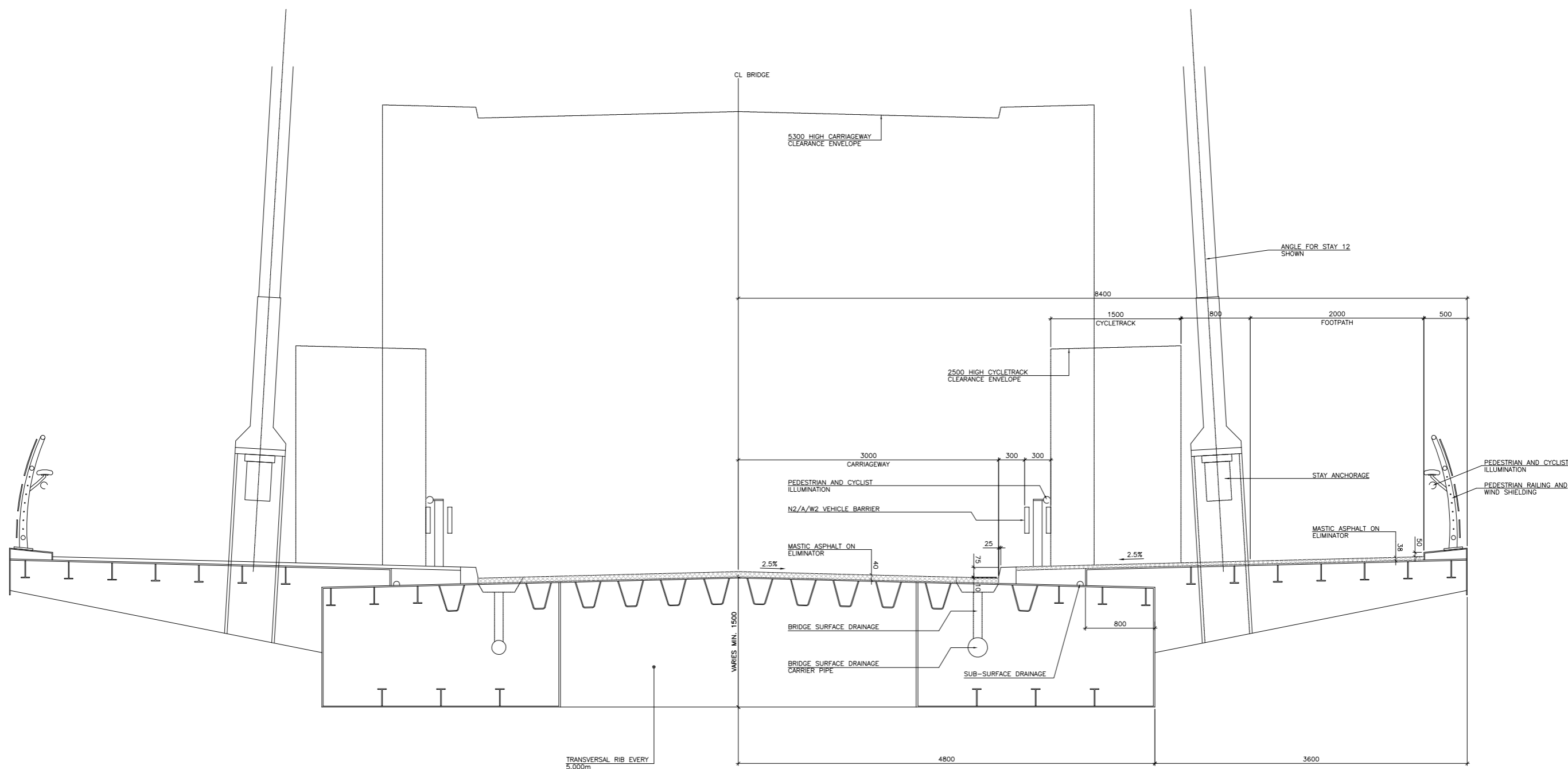
Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title		BRIDGE ELEVATION SHEET 2	
Designed:	RMR	CAD File:	08.119 EIS
Drawn:	RE	Job No:	08.119
Checked:	BC	Scale:	AS SHOWN
Approved:	TD	Date:	JAN 2012
Status:	E.I.S.		Rev:
	FIG 3.8		

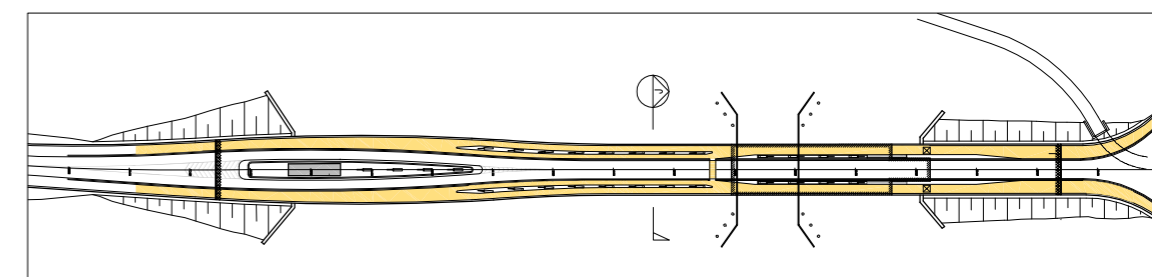


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM (MALIN HEAD).



SECTION J  
SCALE 1:25



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Project **NARROW WATER BRIDGE PROJECT**

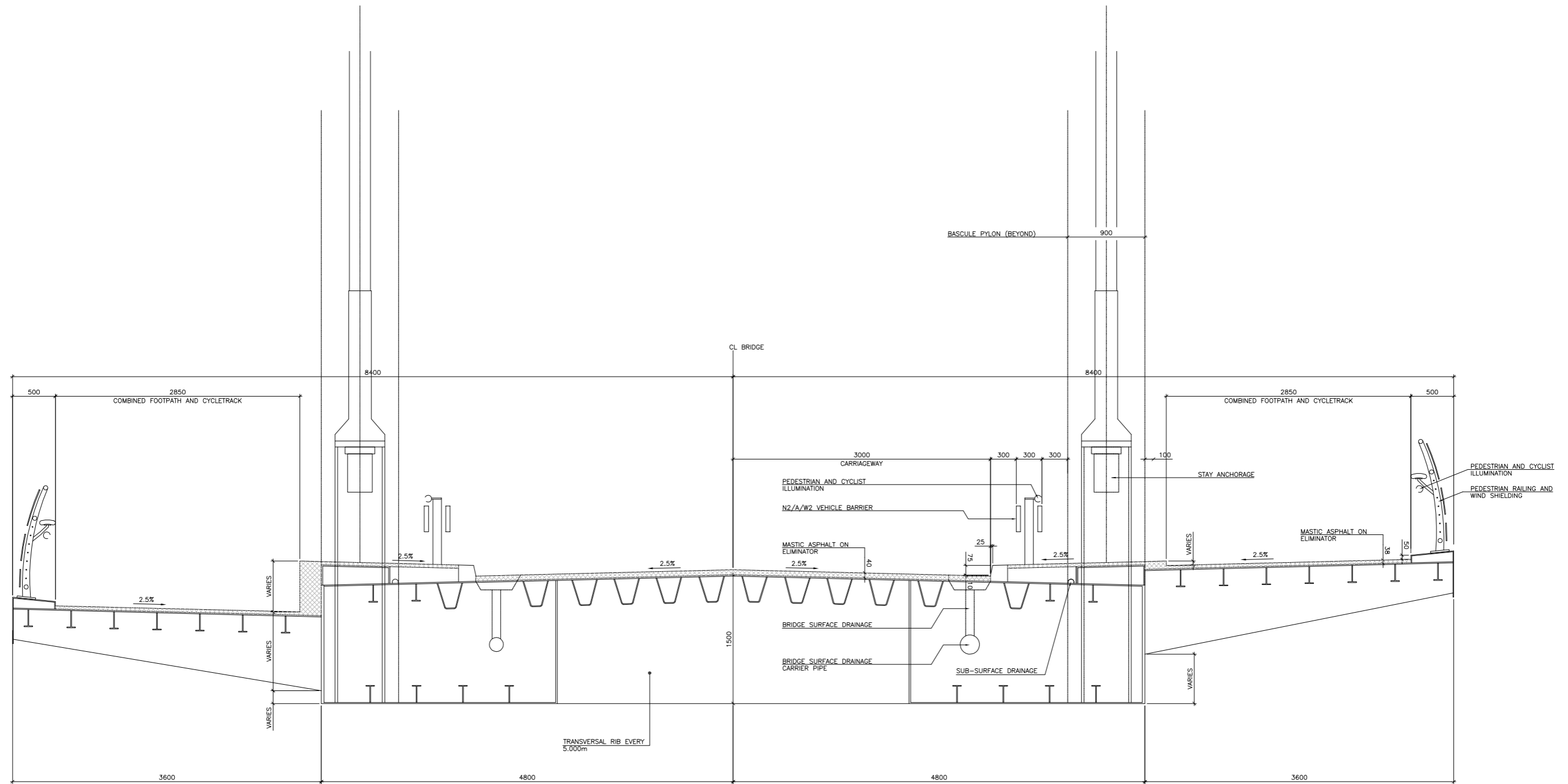
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title		Status	
<b>DECK CROSS SECTION SHEET 1 OF 2</b>		E.I.S.	
Designed: RMR	CAD File: 08.119 EIS	Status: E.I.S.	
Drawn: RE	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Drawing No: FIG 3.9	Rev:



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METRES AND RELATE TO ORDNANCE DATUM (MALIN HEAD).

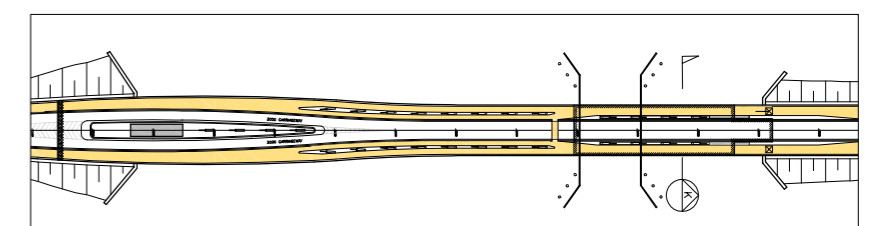


SECTION K  
SCALE 1:25 11

SHOWING NORTH PART OF BASCULE SPAN

SECTION K  
SCALE 1:25 11

SHOWING SOUTH PART OF BASCULE SPAN



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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title		DECK CROSS SECTION SHEET 2 OF 2	
Designed: RMR	CAD File: 08.119 EIS	Status:	E.I.S.
Drawn: RE	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Drawing No:	FIG 3.10





PHOTOMONTAGE – 1



PHOTOMONTAGE – 2



PHOTOMONTAGE – 3



PHOTOMONTAGE – 4

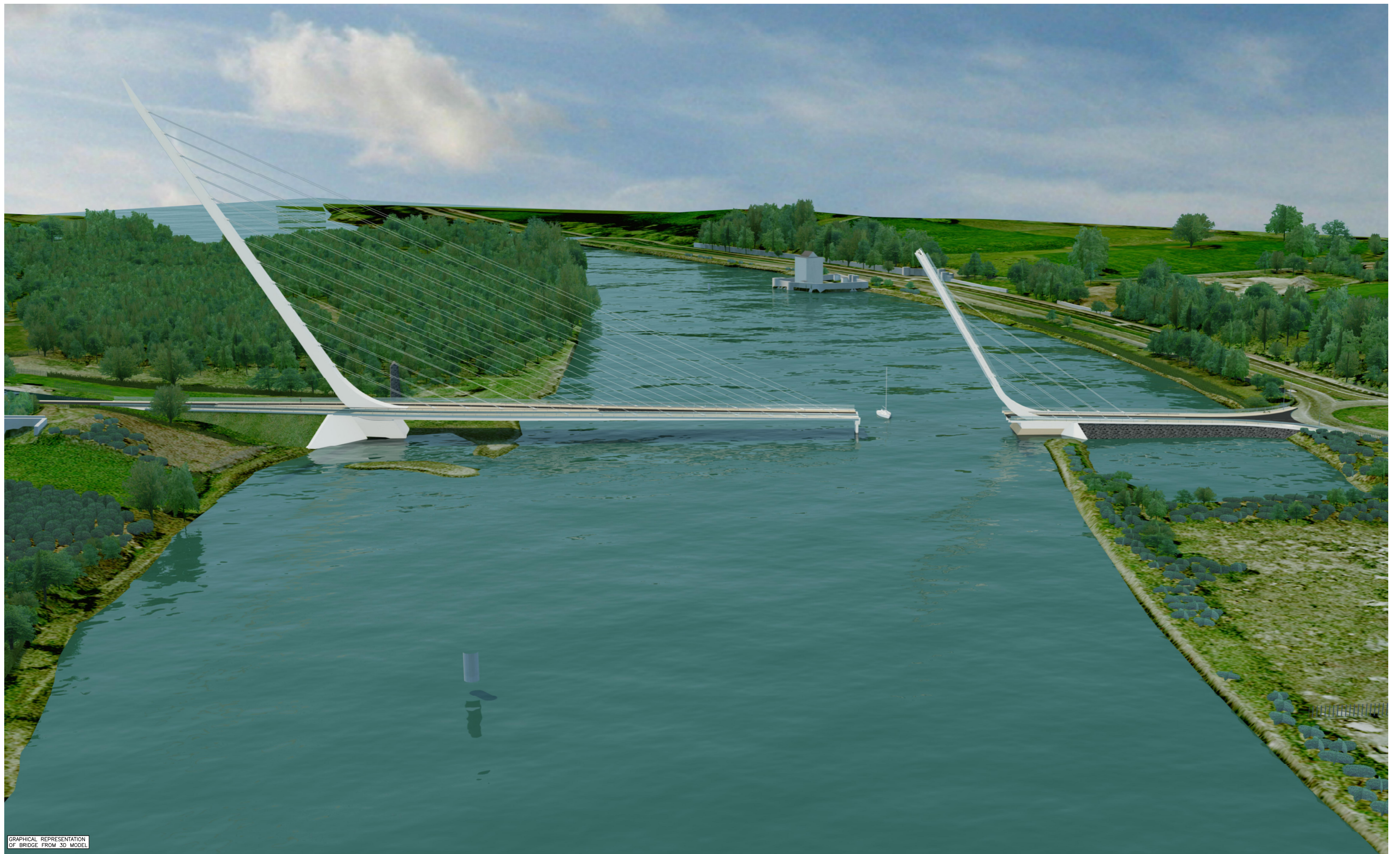


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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT /**  
**ENVIRONMENTAL STATEMENT**

Title		CABLE STAYED BRIDGE WITH ROLLING BASCULE OPENING PHOTOMONTAGES	
Designed:	RMR	CAD File:	08.119 EIS
Drawn:	RE	Job No:	08.119
Checked:	BC	Scale:	N.T.S
Approved:	TD	Date:	JAN 2012
Status:			E.I.S.
Drawing No:			FIG 3.11





GRAPHICAL REPRESENTATION OF BRIDGE FROM 3D MODEL

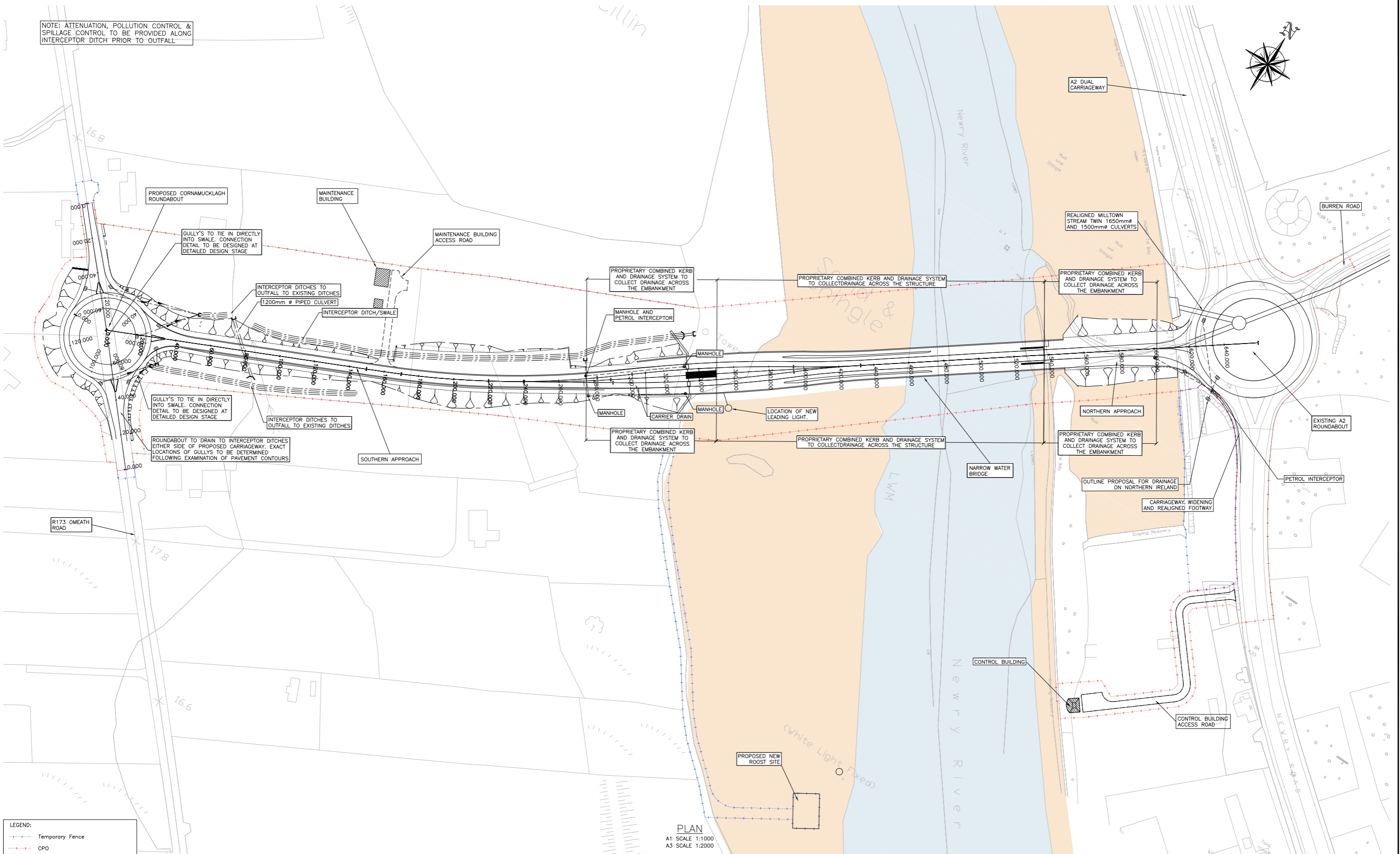


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www.roughanodonovan.com

Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		<b>3D IMAGE OF BRIDGE IN OPEN POSITION</b>	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	CAD File: 08.119 EIS
Drawn: RE	Job No: 08.119	Checked: BC	Scale: N.T.S
Approved: TD	Date: JAN 2012	Status: E.I.S.	Drawing No: FIG 3.12
		Rev:	



NOTE: ATTENUATION, POLLUTION CONTROL & SPILLAGE CONTROL TO BE PROVIDED ALONG INTERCEPTOR DITCH PRIOR TO OUTFALL



LEGEND:  
 - - - - - Temporary Fence  
 - - - - - CPD

PLAN  
 A1 SCALE 1:1000  
 A3 SCALE 1:2000



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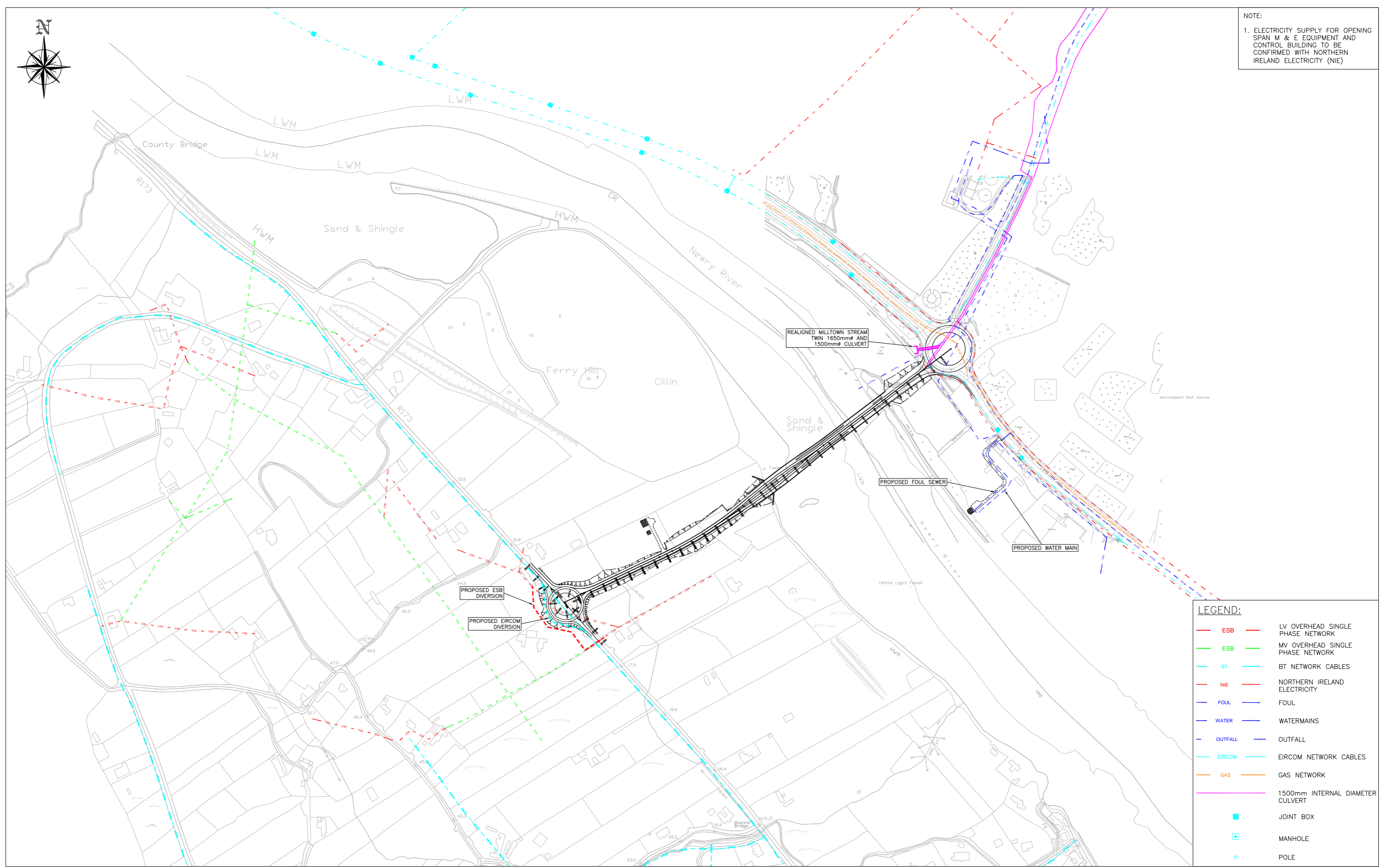
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Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		<b>DRAINAGE LAYOUT</b>	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	
		CAD File: 08.119 EIS	
		Drawn: RE	
		Job No: 08.119	
		Checked: BC	
		Scale: AS SHOWN	
		Approved: TD	
		Date: JAN 2012	
		Status: E.I.S.	
		Drawing No: FIG 3.13	
		Rev:	





NOTE:  
 1. ELECTRICITY SUPPLY FOR OPENING SPAN M & E EQUIPMENT AND CONTROL BUILDING TO BE CONFIRMED WITH NORTHERN IRELAND ELECTRICITY (NIE)



**LEGEND:**

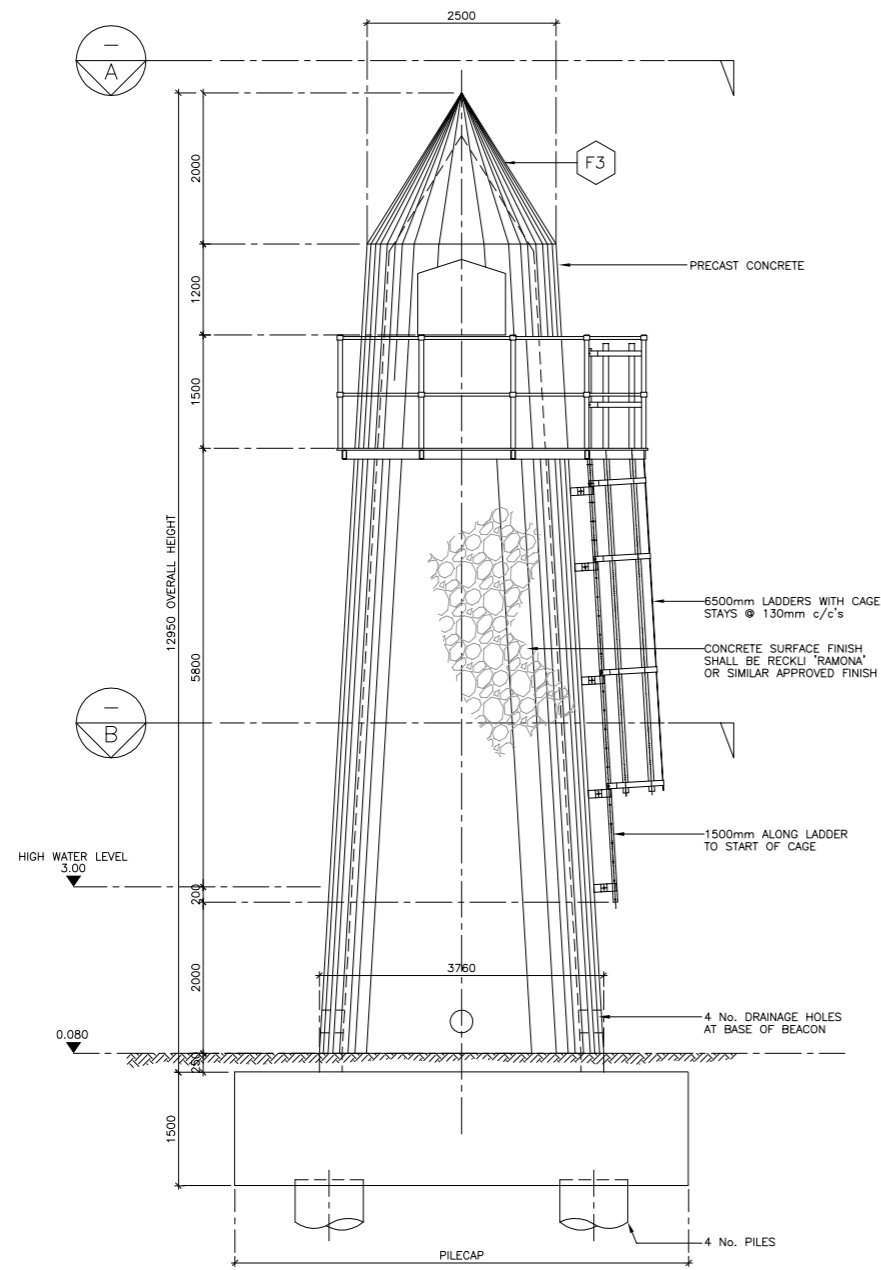
ESB	LV OVERHEAD SINGLE PHASE NETWORK
ESB	MV OVERHEAD SINGLE PHASE NETWORK
BT	BT NETWORK CABLES
NIE	NORTHERN IRELAND ELECTRICITY
FOUL	FOUL
WATER	WATERMANS
OUTFALL	OUTFALL
EIRCOM	EIRCOM NETWORK CABLES
GAS	GAS NETWORK
(Pink line)	1500mm INTERNAL DIAMETER CULVERT
(Blue square)	JOINT BOX
(Blue square)	MANHOLE
(Blue circle)	POLE



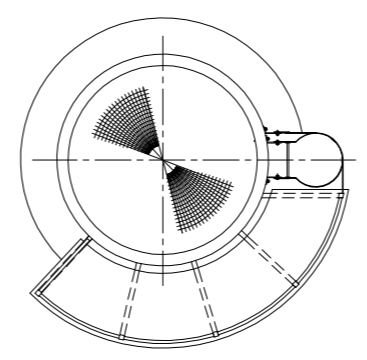
**Roughan & O'Donovan**  
 Consulting Engineers  
 Civil - Structural - Transportation - Environmental

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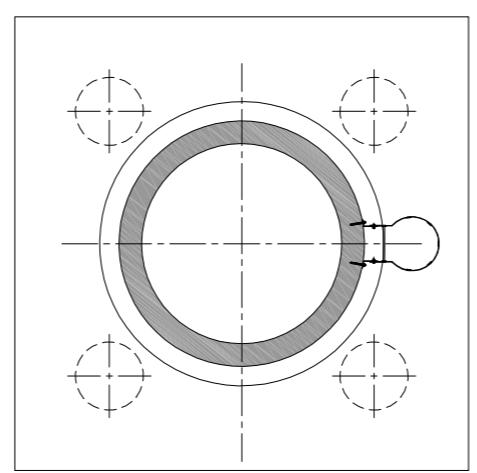
Project	<b>NARROW WATER BRIDGE PROJECT</b>		Title	<b>UTILITIES AND SERVICES</b>	
	<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: RMR	CAD File: 08.119 EIS	Status: E.I.S.
			Drawn: RE	Job No: 08.119	
			Checked: BC	Scale: AS SHOWN	Drawing No: FIG 3.14
			Approved: TD	Date: JAN 2012	Rev:



ELEVATION: NAVIGATION BEACON  
 A1 SCALE 1:50  
 A3 SCALE 1:100



SECTION A  
 A1 SCALE 1:50  
 A3 SCALE 1:100



SECTION B  
 A1 SCALE 1:50  
 A3 SCALE 1:100



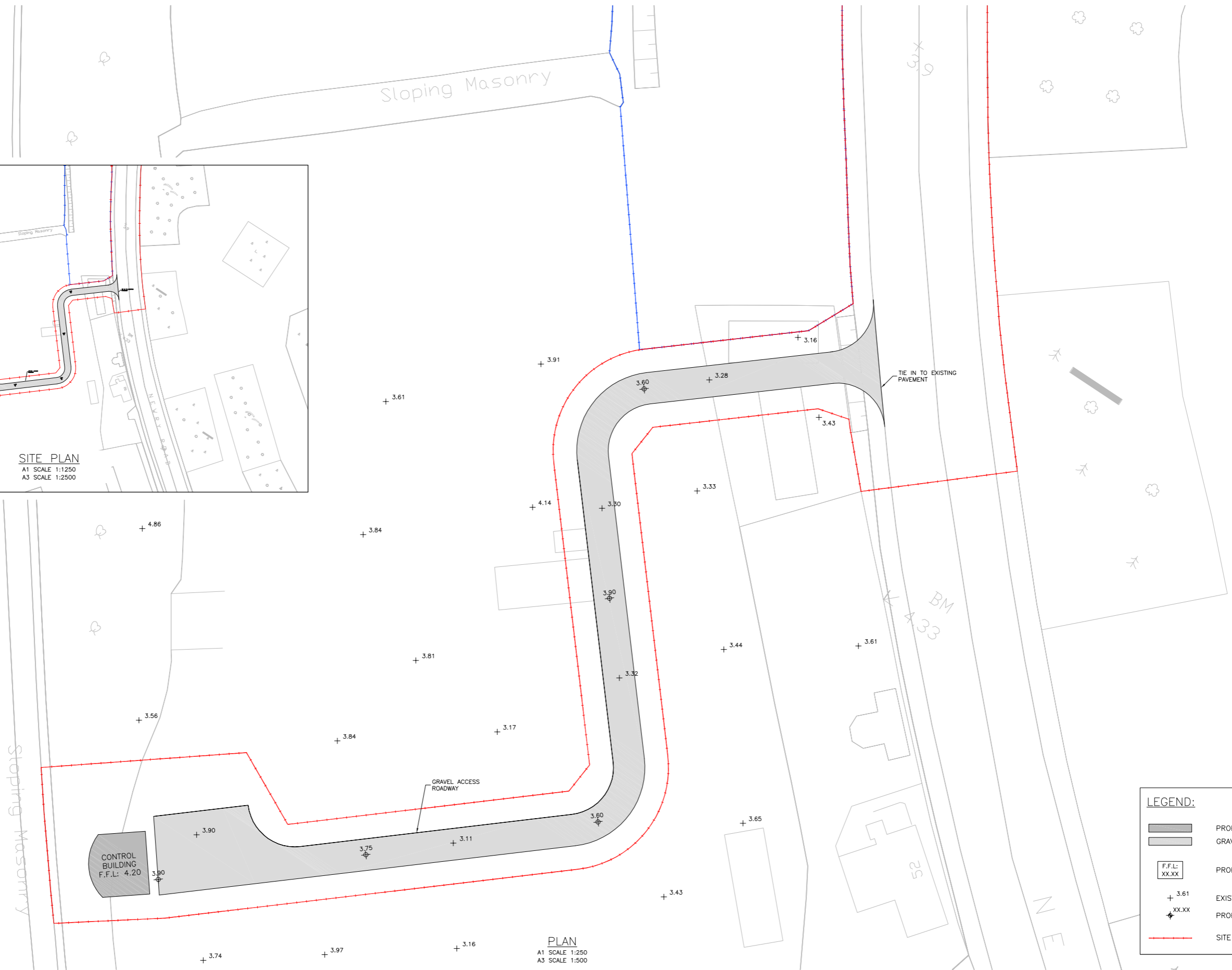
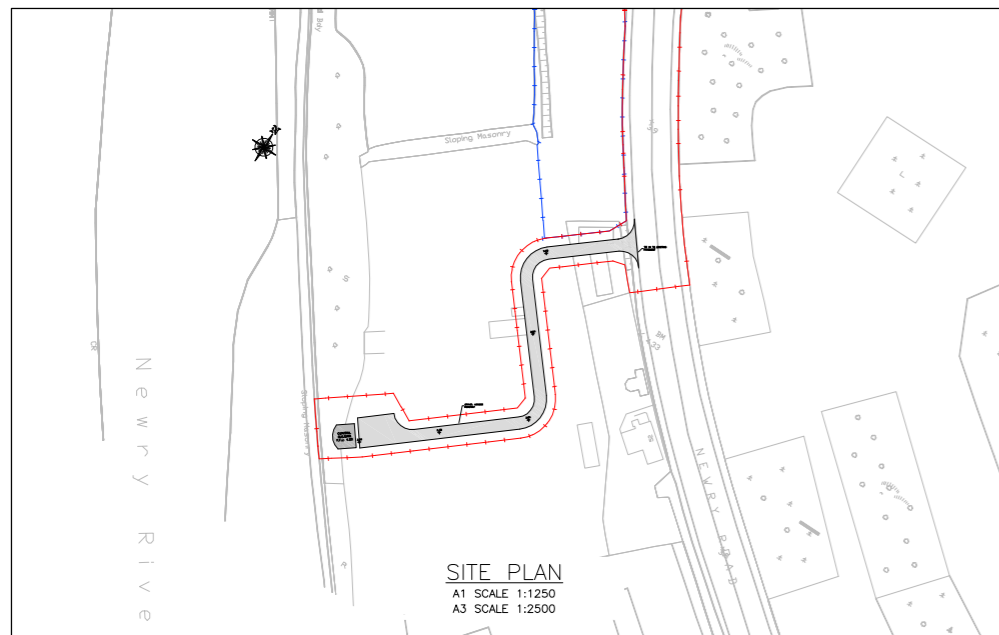
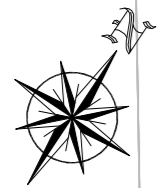
3D VIEW OF PROPOSED NAVIGATION BEACON



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Project		Title	
NARROW WATER BRIDGE PROJECT		PROPOSED NAVIGATION BEACON	
ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT		E.I.S.	
Designed: RMR	CAD File: 08.119 EIS	Status:	E.I.S.
Drawn: AR	Job No: 08.119	Checked: BC	Scale: AS SHOWN
Approved: TD	Date: JAN 2012	Approved: TD	Date: JAN 2012
		Drawing No:	FIG 3.15
		Rev:	





**LEGEND:**

- PROPOSED BUILDINGS
- GRAVEL ACCESS ROADWAY
- PROPOSED FINISH FLOOR LEVEL
- EXISTING SPOT LEVELS
- PROPOSED SPOT LEVELS
- SITE OUTLINE

**PLAN**  
 A1 SCALE 1:250  
 A3 SCALE 1:500



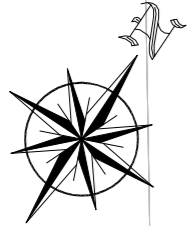
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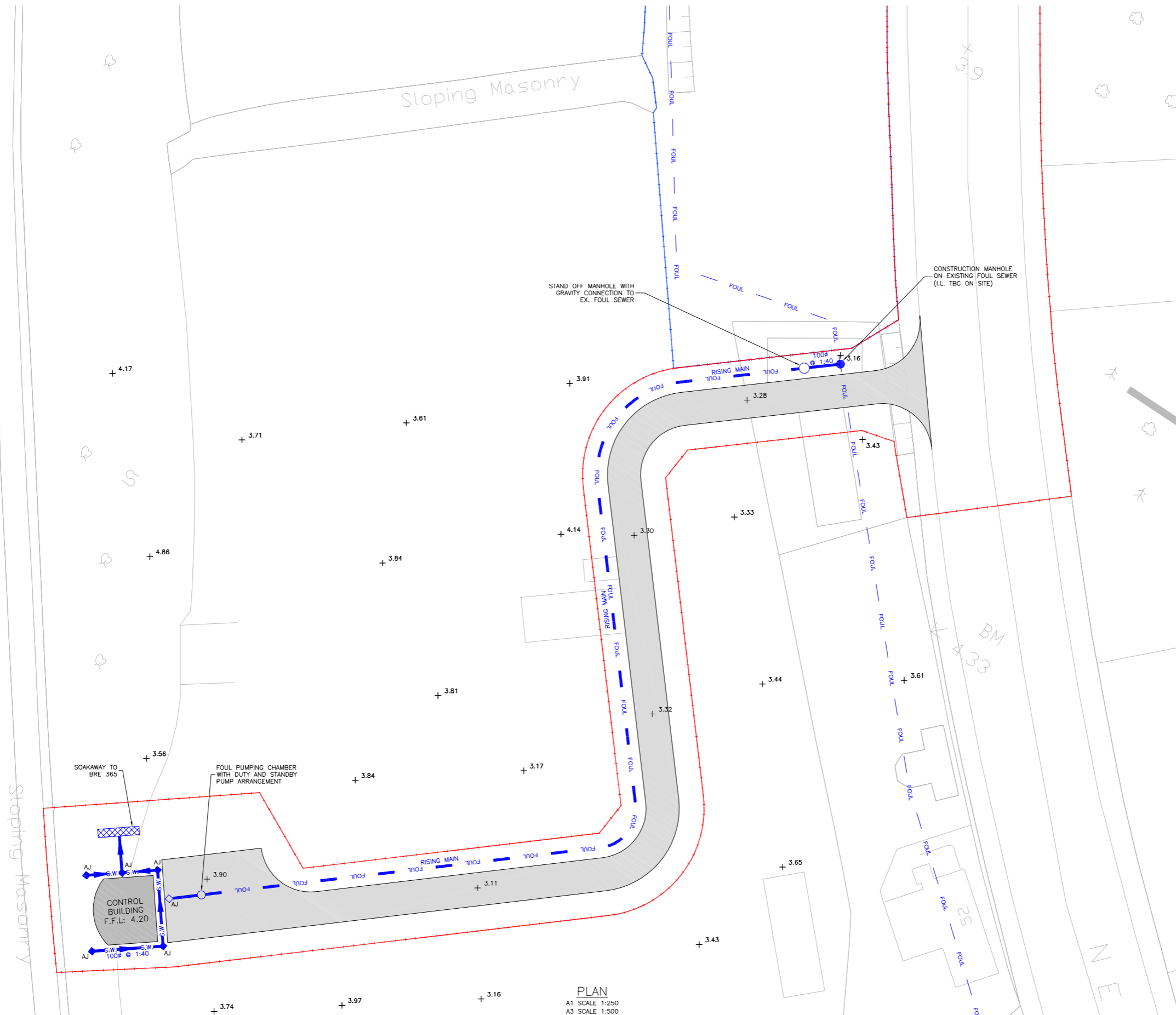
Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

Title  
**CONTROL BUILDING - SITE LAYOUT PLAN**

Designed: CMC	CAD File: 08.119 EIS	Status: E.I.S.
Drawn: DS	Job No: 08.119	
Checked: CMC	Scale: AS SHOWN	Drawing No: FIG 3.16
Approved: TD	Date: JAN 2012	Rev:



NOTES:  
1. ALL DRAINAGE PIPES AND FITTINGS TO COMPLY WITH WATER AUTHORITY REQUIREMENTS.



**LEGEND:**

- PROPOSED BUILDINGS
- GRAVEL ACCESS ROADWAY
- F.F.L:  
XX.XX PROPOSED FINISH FLOOR LEVEL
- + 3.61 EXISTING SPOT LEVELS
- + XX.XX PROPOSED SPOT LEVELS
- S.W. — S.W. PROPOSED SURFACE WATER DRAIN/SEWER
- - - FOUL - - - FOUL EXISTING FOUL DRAIN/SEWER
- - - FOUL - - - FOUL PROPOSED FOUL DRAIN/SEWER
- ◆ AJ PROPOSED SURFACE WATER AJ
- ◇ AJ PROPOSED FOUL AJ
- PROPOSED MANHOLE
- - - - - SITE OUTLINE

PLAN  
A1 SCALE 1:250  
A3 SCALE 1:500



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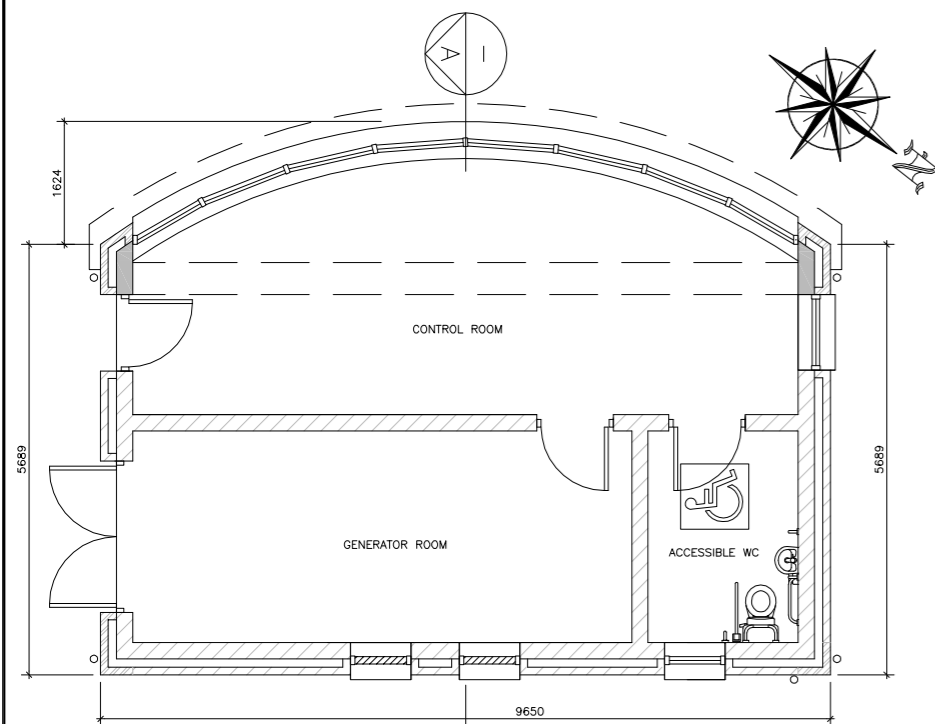
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Project  
**NARROW WATER BRIDGE PROJECT**  
**ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT**

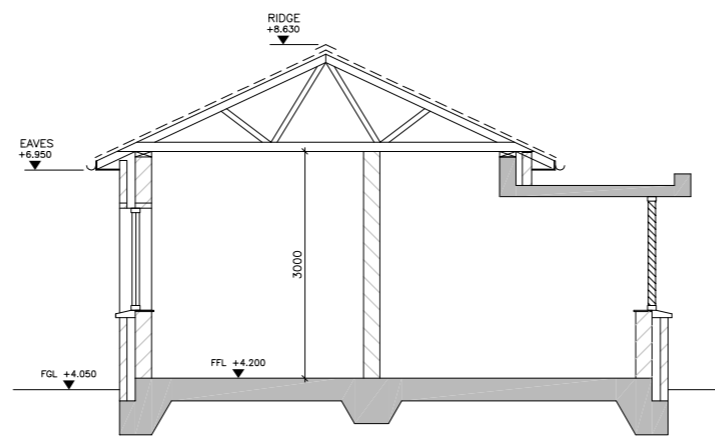
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Designed: CMC	CAD File: 08.119 EIS	Rev:	
Drawn: DS	Job No: 08.119	Drawing No:	FIG 3.17
Checked: CMC	Scale: AS SHOWN	Date:	JAN 2012
Approved: TD	Date: JAN 2012		



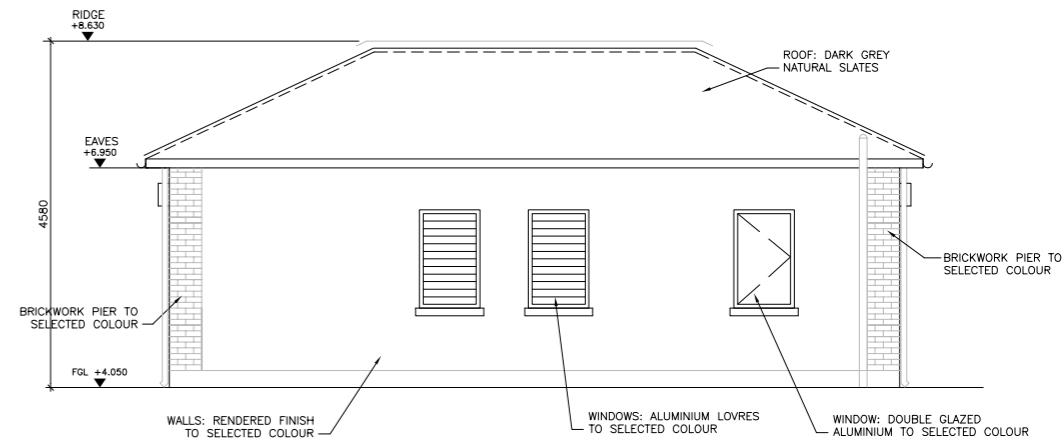




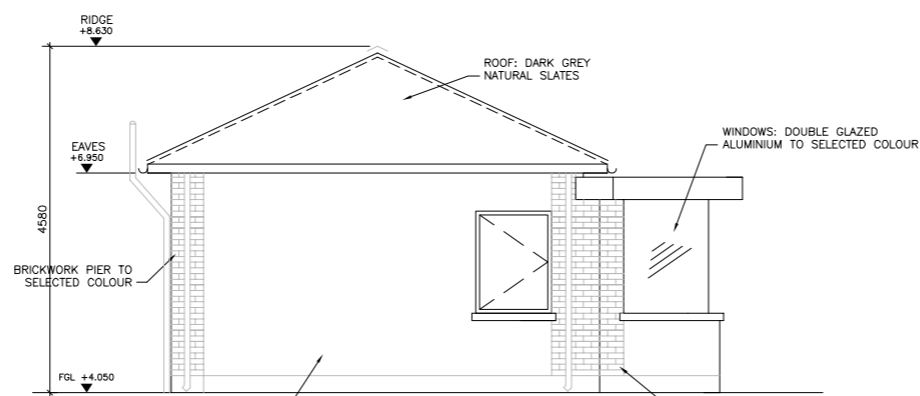
GROUND LEVEL PLAN  
SCALE 1:100 (A3)



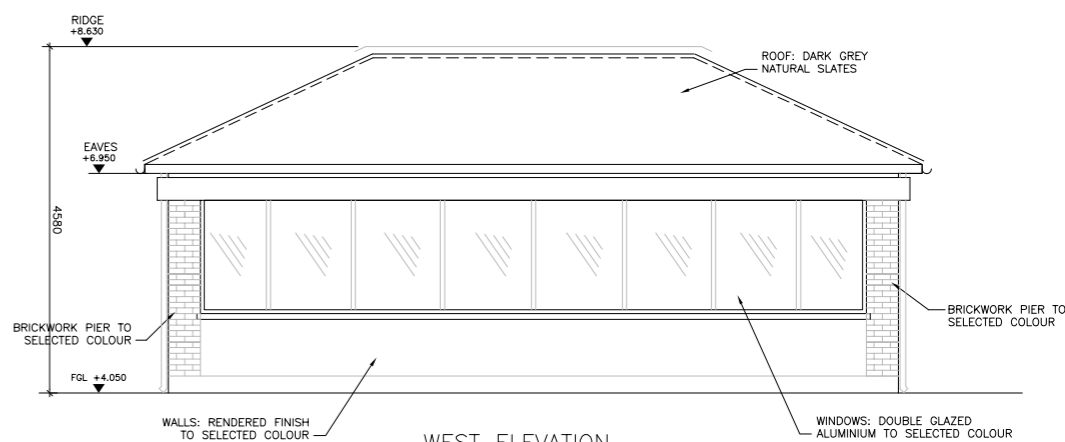
SECTION A-A  
SCALE 1:100 (A3)



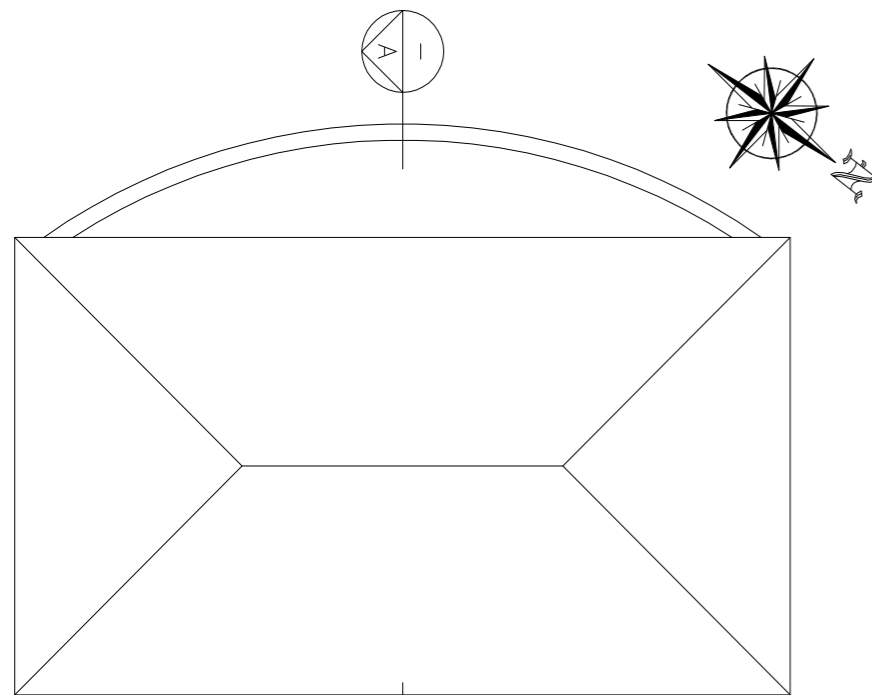
EAST ELEVATION  
SCALE 1:100 (A3)



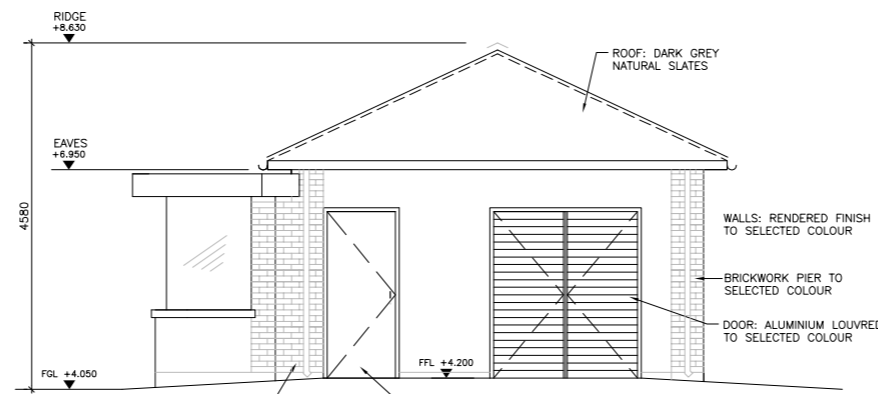
NORTH ELEVATION  
SCALE 1:100 (A3)



WEST ELEVATION  
SCALE 1:100 (A3)



ROOF PLAN  
SCALE 1:100 (A3)



SOUTH ELEVATION  
SCALE 1:100 (A3)



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Project		Title	
<b>NARROW WATER BRIDGE PROJECT</b>		<b>CONTROL BUILDING - PLANS AND ELEVATIONS</b>	
<b>ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL STATEMENT</b>		Designed: CMC	CAD File: 08.119 EIS
		Drawn: GH	Job No: 08.119
		Checked: CMC	Scale: AS SHOWN
		Approved: TD	Date: JAN 2012
		Status: E.I.S.	Drawing No: FIG 3.19
			Rev: