



**Appendix B11**  
Proposed Surface Water  
Drainage Works



# BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

## KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME

### PROPOSED SURFACE WATER DRAINAGE WORKS

DRAWING SERIES NUMBER(S)	DRAWING SERIES DESCRIPTION
BDIDD-ROT-DNG_IX-0011_XX_00-DR-CU-0001	KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS. COVER SHEET
BCIDD-ROT-DNG_KP-0011_XX_00-DR-CD-0001	KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS. KEY PLAN
BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0001 to 0014	KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS. DRAWINGS
BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-1001 to 1002	KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME. OVERALL CATCHMENT AREAS

\\vodubp1\1\2019\1917\1917-02\_WIP\08 MODELS\01 CAD\01 PLANNING\11 KIMMAGE\COVER SHEETS\BCIDD-ROT-DNG\_IX-0011\_XX\_00-DR-CU-0001.dwg

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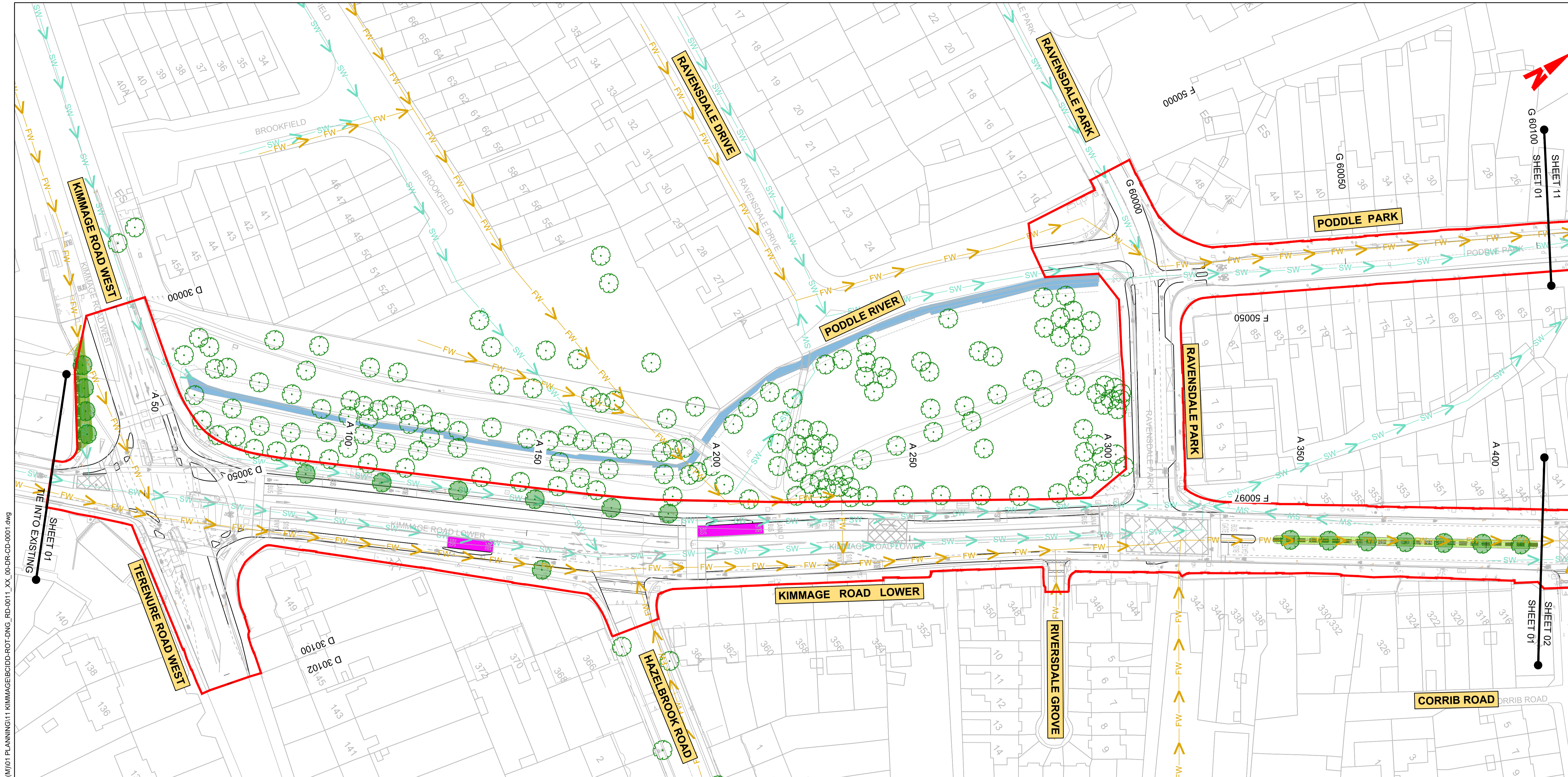
Rev	Date	Drn	Chk'd	App'd	Description
M01	FEB 2023	CG	SMG	SMG	ISSUE FOR PHASE 4: PLANNING

Client <b>NTA</b> Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer <b>ROD</b> ROUGHAN & O'DONOVAN TYP SA		
Date FEB 2023	Scale NTS @ A1 NTS @ A3	Drawn CG	Checked SMG	Approved SMG
Programme Code BCIDD	Originator Code ROT	QMS Code		

Programme Title <b>BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>				
Drawing Title KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS COVER SHEET				
Drawing File Name BCIDD-ROT-DNG_IX-0011_XX_00-DR-CU-0001	Sheet Number 01 of 01	Status A	Rev M01	

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**LEGEND:**

	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED DRAINAGE NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	SURFACE WATER PIPE - UNDER CONSTRUCTION		PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
	PROPOSED STORM WATER PIPE		EXISTING GULLY
	PROPOSED OVERSIZED PIPE		SITE BOUNDARY LINE
	PROPOSED FILTER DRAIN/PERFORATED PIPE		TEMPORARY LAND ACQUISITION
	PROPOSED PERMEABLE PAVING		

NOTE: PIPE SHAPE CODING DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

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- STORMWATER DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE DRAINAGE DESIGN BASIS REPORT FOR CBC BUSCONNECTS.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRANSVERSE MERCATOR.
- EXISTING DRAINAGE NETWORK BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS MIGHT BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE ALONG THE ROUTE, THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE INFRASTRUCTURE ELEMENT PRESENT ALONG THE ROUTE.
- EXISTING MANHOLE COVERS TO BE ADJUSTED TO MATCH FINISHED SURFACE.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED ROAD WILL BE DEMOLISHED, REPLACED BY SPLIT GULLIES AND RELOCATED AT THE PROPOSED ROAD KERBLINE.
- ALL THE EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE.
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- 2NO. OF GULLIES TO BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES WILL PROVIDE ATTENUATION AND SURFACE WATER QUALITY TREATMENT 12 'NET IMPERMEABLE AREA TO BE ATTENUATED' HAS PERMEABILITY FACTORS APPLIED.

**ABBREVIATIONS:**  
 ADR: ALLOWABLE DISCHARGE RATE  
 Vol<sub>att</sub>: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
Údaráis Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **CIROD**  
TYPSA

Date	Scale	Drawn	Checked	Approved
FEB 2023	1:500 @ A1 1:1000 @ A3	DS	LS	SMG

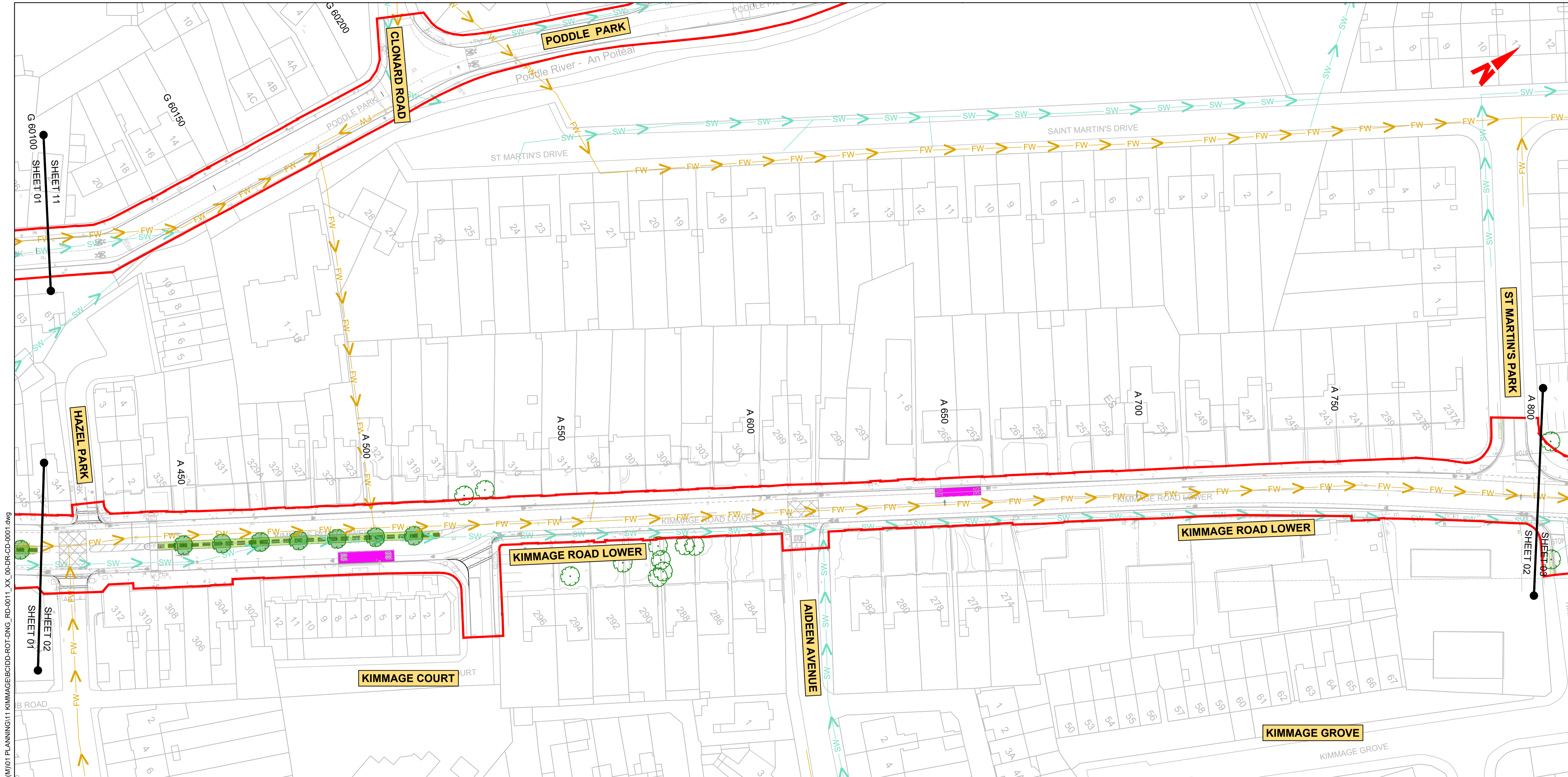
Programme Code: BCIDD  
Originator Code: ROT

Programme Title: **BUSCONNECTS DUBLIN**  
**CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME  
PROPOSED SURFACE WATER DRAINAGE WORKS

Drawing File Name	Sheet Number	Status	Rev
BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0001	01 of 14	A	M01

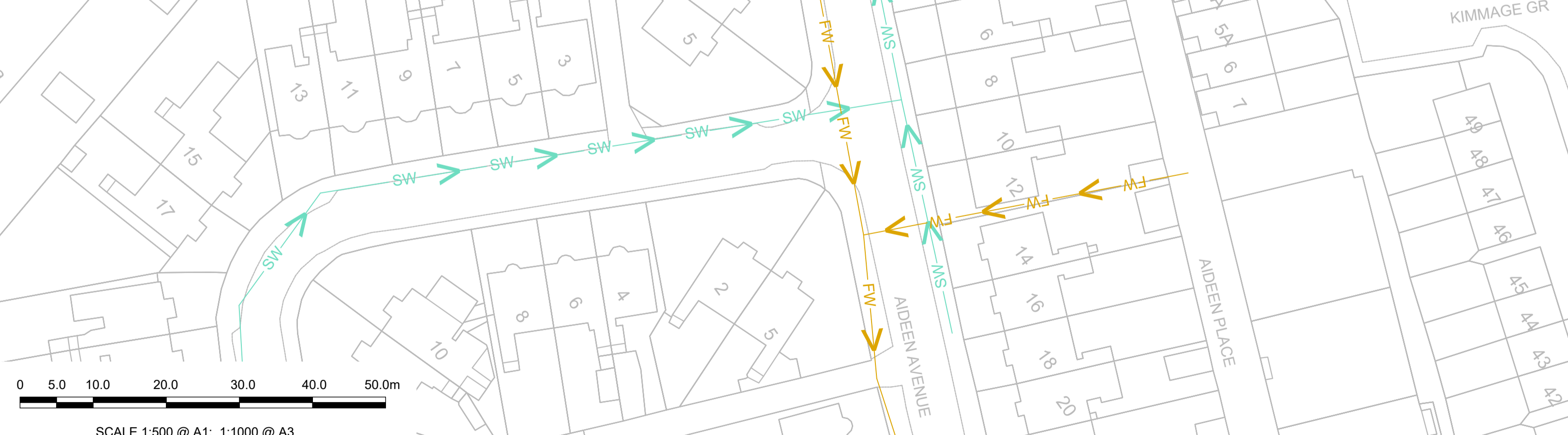
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**LEGEND:**

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- EXISTING PAVED AREAS TO BECOME GRASSED
- EXISTING GRASSED AREAS TO BE MAINTAINED
- EXISTING FOUL NETWORK
- EXISTING COMBINED DRAINAGE NETWORK
- EXISTING SURFACE WATER NETWORK
- EXISTING OVERFLOW PIPE
- SURFACE WATER PIPE - UNDER CONSTRUCTION
- PROPOSED STORM WATER PIPE
- PROPOSED OVERSIZED PIPE
- PROPOSED FILTER DRAIN/PERFORATED PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED RODDING EYE
- PROPOSED MANHOLE
- PROPOSED INSPECTION CHAMBER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- PROPOSED NEW TREE
- PROPOSED NEW TREE PIT
- PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
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**ABBREVIATIONS:**  
 ADR: ALLOWABLE DISCHARGE RATE  
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Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
 Údarás Náisiúnta Iompair  
 National Transport Authority

Engineering Designer: **CIROD**  
 TYPSA

Date: FEB 2023  
 Scale: 1:500 @ A1  
 1:1000 @ A3

Programme Code: BCIDD  
 Originator Code: ROT

Drawn: DS  
 Checked: LS  
 Approved: SMG

Programme Title: **BUSCONNECTS DUBLIN**  
**CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: **KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME**  
**PROPOSED SURFACE WATER DRAINAGE WORKS**

Drawing File Name: BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0002  
 Sheet Number: 02 of 14  
 Status: A  
 Rev: M01

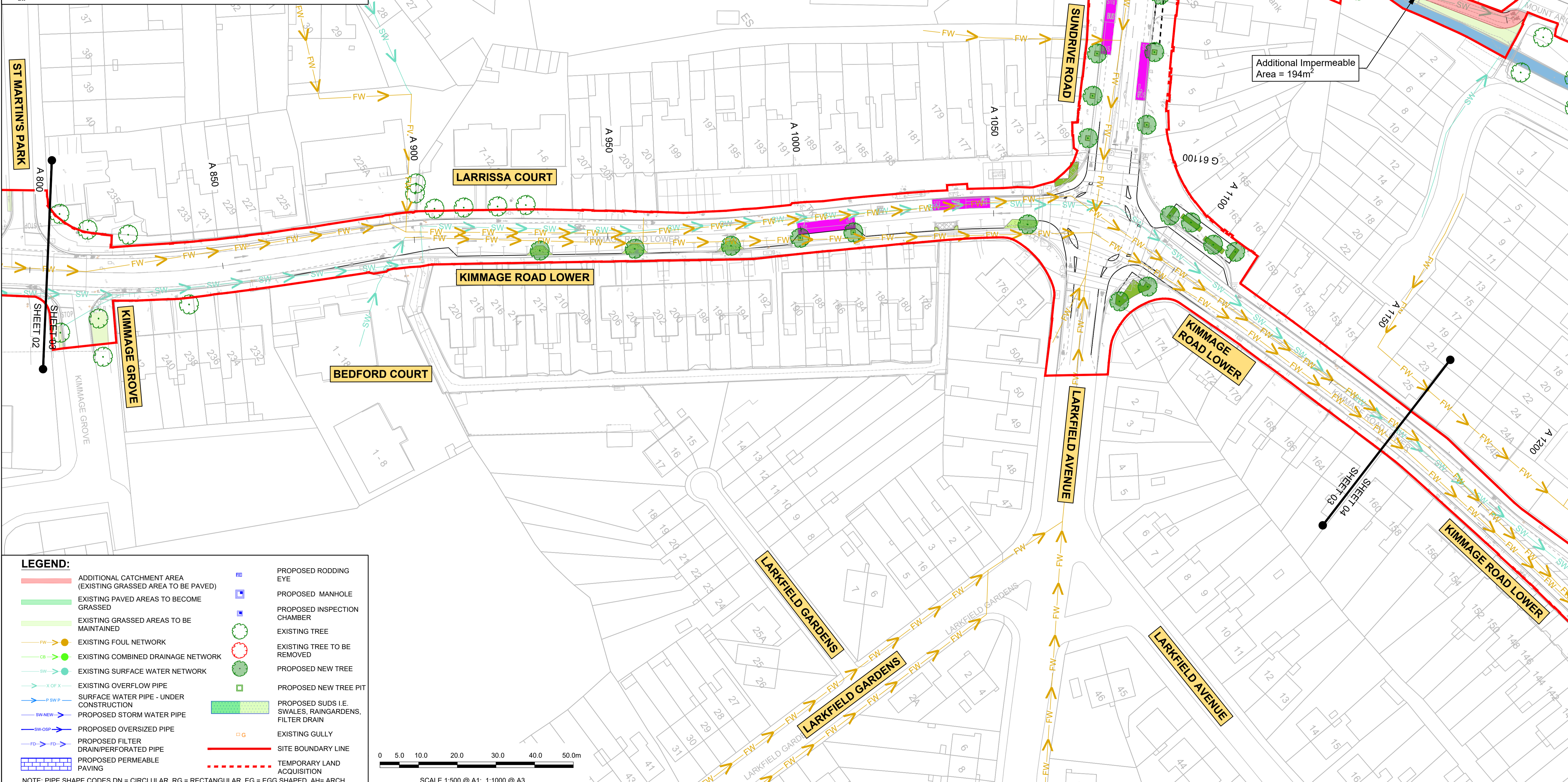
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**ABBREVIATIONS:**

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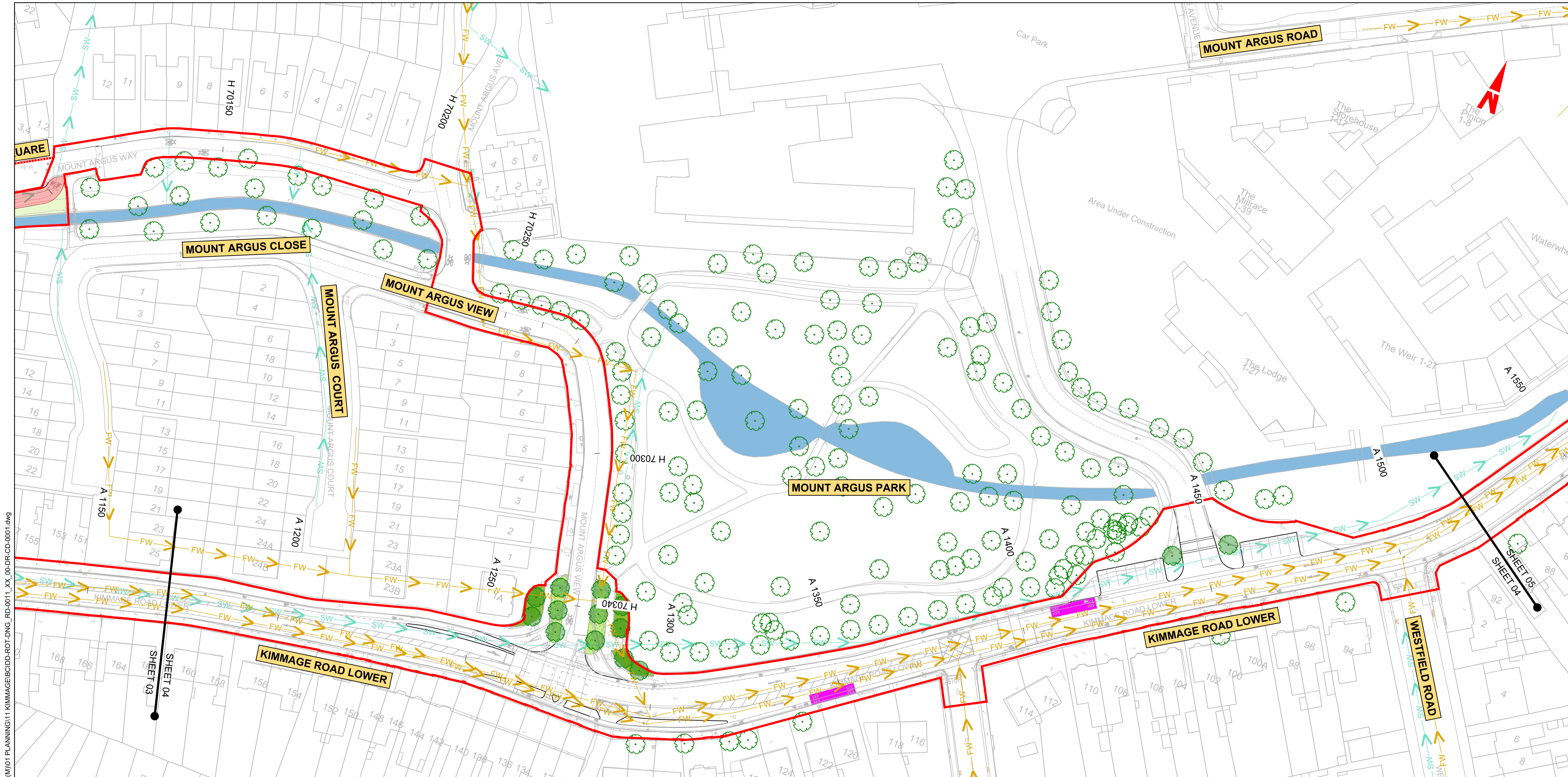
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<p>Date FEB 2023</p> <p>Scale 1:500 @ A1</p> <p>1:1000 @ A3</p> <p>Programme Code BCIDD</p> <p>Originator Code ROT</p> <p>QMS Code</p>		<p>Drawn DS</p> <p>Checked LS</p> <p>Approved SMG</p>			<p>Drawing Title</p> <p>KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME</p> <p>PROPOSED SURFACE WATER DRAINAGE WORKS</p>			<p>Drawing File Name</p> <p>BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0003</p> <p>Sheet Number 03 of 14</p> <p>Status A</p> <p>Rev M01</p>			

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**Project Ireland 2040**  
Building Ireland's Future

Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
Údarás Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **CIROD**  
TYPSA

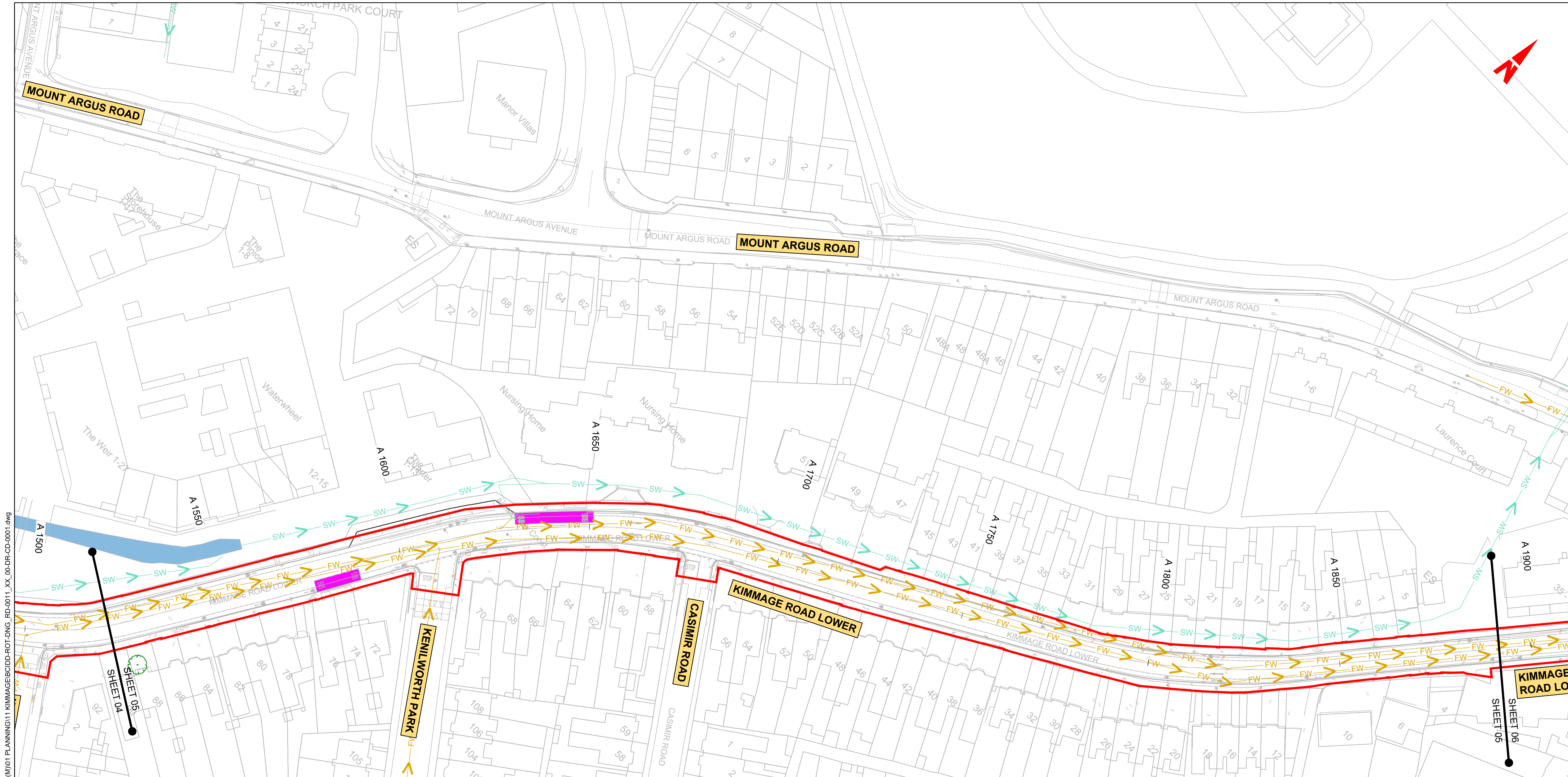
Date: FEB 2023  
Scale: 1:500 @ A1  
1:1000 @ A3

Programme Code: BCIDD  
Originator Code: ROT

Drawn: DS  
Checked: LS  
Approved: SMG

Programme Title: <b>BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>			
Drawing Title: <b>KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</b>			
Drawing File Name: BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0004	Sheet Number: 04 of 14	Status: A	Rev: M01

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Vol<sub>att</sub>: VOLUME OF ATTENUATION

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Údarás Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **CIROD**  
TYPSA

Date: FEB 2023  
Scale: 1:500 @ A1  
1:1000 @ A3

Programme Code: BCIDD  
Originator Code: ROT

Drawn: DS  
Checked: LS  
Approved: SMG

QMS Code

Programme Title: **BUSCONNECTS DUBLIN  
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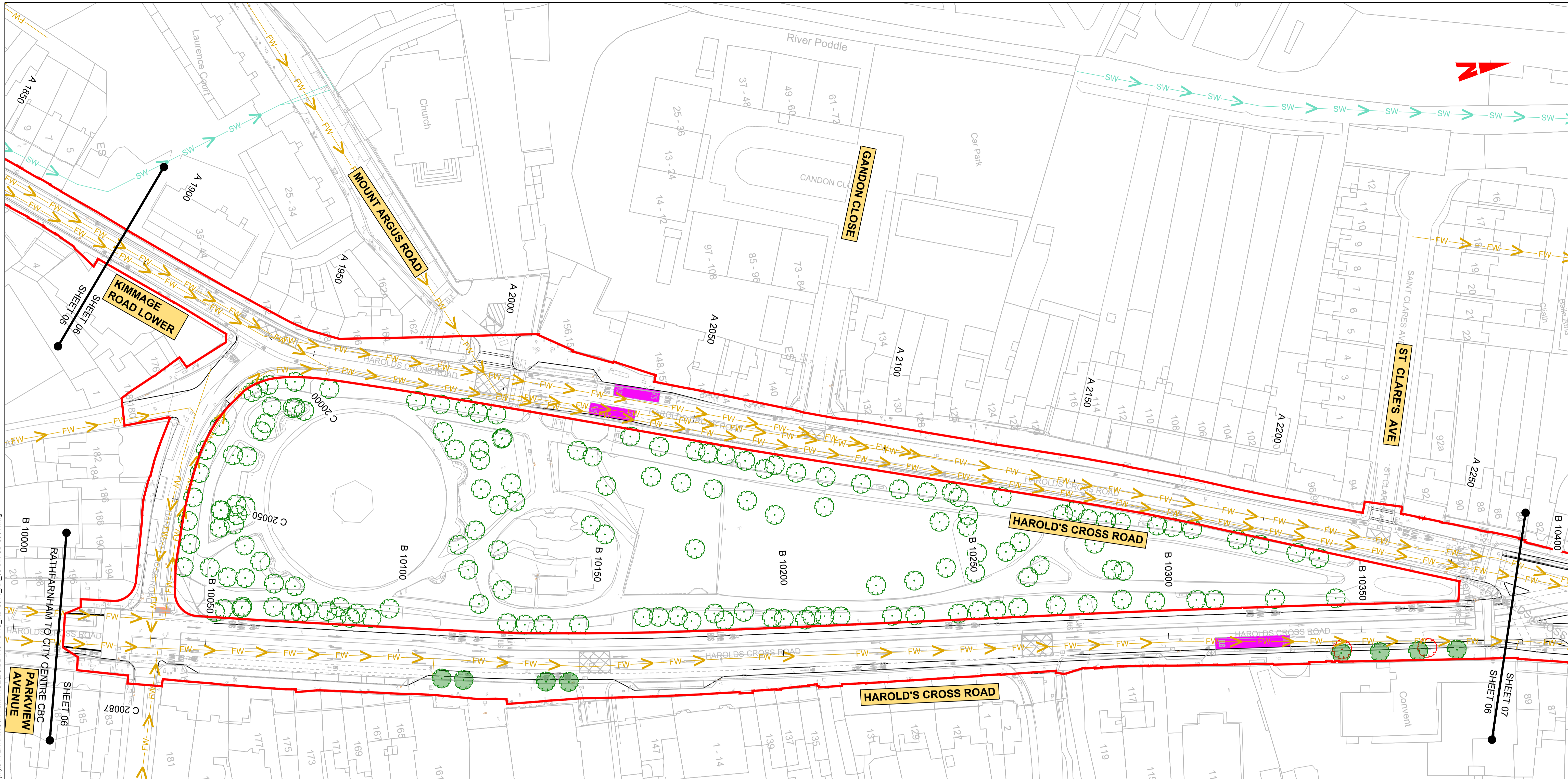
Drawing File Name: BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0005

Sheet Number: 05 of 14

Status: A

Rev: M01





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<p>Date: FEB 2023</p> <p>Scale: 1:500 @ A1 1:1000 @ A3</p> <p>Programme Code: BCIDD</p> <p>Originator Code: ROT</p>		<p>Drawn: DS</p> <p>Checked: LS</p> <p>Approved: SMG</p> <p>QMS Code:</p>			<p>Drawing Title: <b>KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</b></p>							
<p>Drawing File Name: BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0006</p>		<p>Sheet Number: 06 of 14</p>		<p>Status: A</p>		<p>Rev: M01</p>		<p>DO NOT SCALE USE FIGURED DIMENSIONS ONLY</p>				

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**PERMEABLE CAR PARK**  
CONTROLLED DISCHARGE TO EXISTING NETWORK VIA HYDRO-BRAKE

CAR PARK AREA: 554M<sup>2</sup>  
AVERAGE SURFACE SLOPE: 1 IN 100

GRANULAR STORAGE DEPTH: 0.30M  
NUMBER OF CHECK-DAMS REQUIRED: 1  
MINIMUM GRANULAR MATERIAL POROSITY: 30%

**PROPOSED CONNECTION TO SW NETWORK**  
DN225MM

CONTRACTOR TO CHECK LOCATION AND LEVELS OF EXISTING SW NETWORK.

CONTROLLED DISCHARGE FROM PERMEABLE CARPARK. FLOW RESTRICTED USING HYDRO-BRAKE:  
HYDRO-BRAKE REF: MD-SHE-0067-2000-1000-2000  
DESIGN FLOW: 2 L/S  
DESIGN HEAD 1 M

**OVERSIZED PIPE**  
90m of DN675mm pipe for attenuation purposes  
Assumed pipe slope: 1 in 100  
Storage Required: 19m<sup>3</sup>

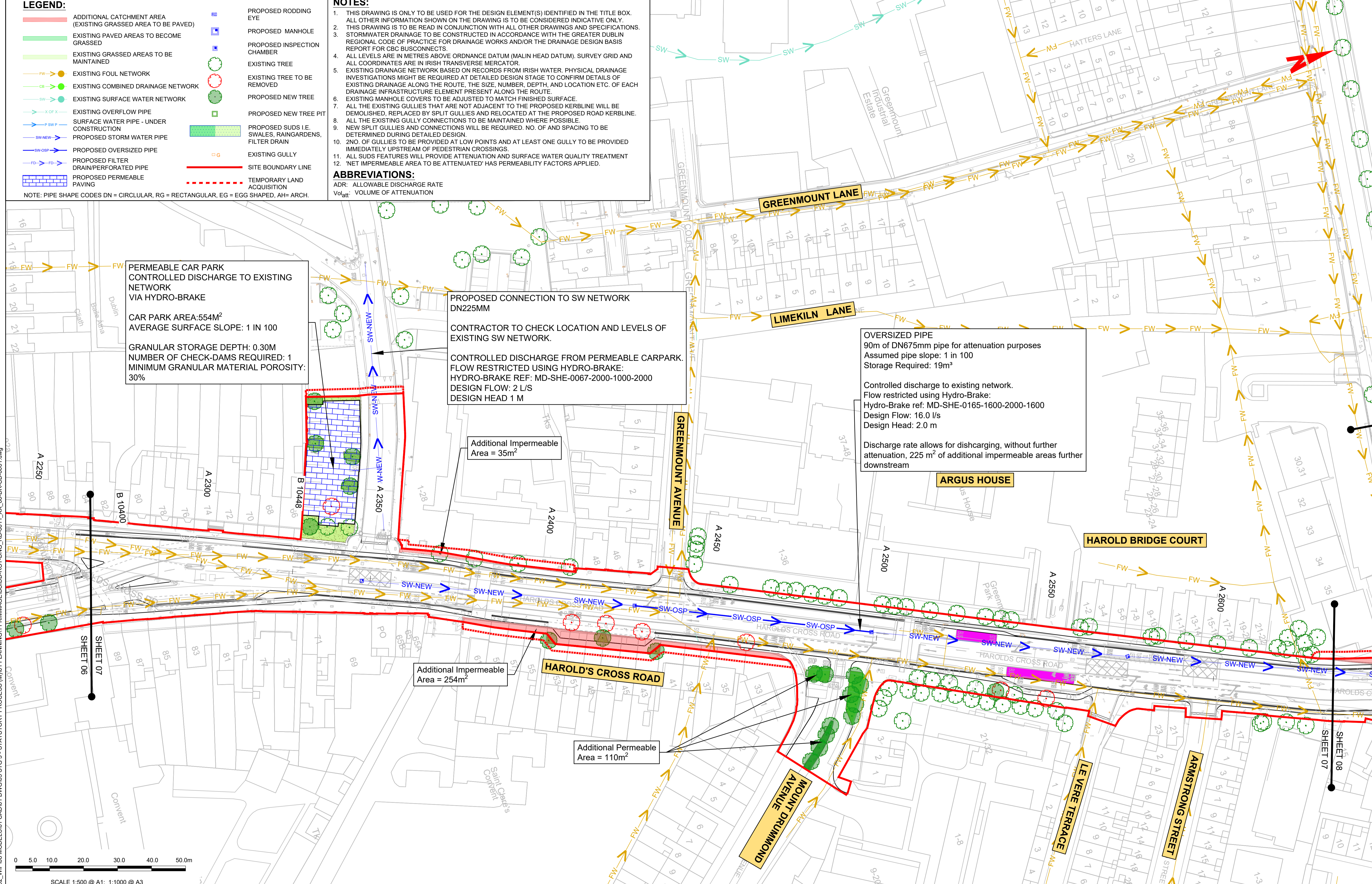
Controlled discharge to existing network.  
Flow restricted using Hydro-Brake:  
Hydro-Brake ref: MD-SHE-0165-1600-2000-1600  
Design Flow: 16.0 l/s  
Design Head: 2.0 m

Discharge rate allows for discharging, without further attenuation, 225 m<sup>2</sup> of additional impermeable areas further downstream

Additional Impermeable Area = 35m<sup>2</sup>

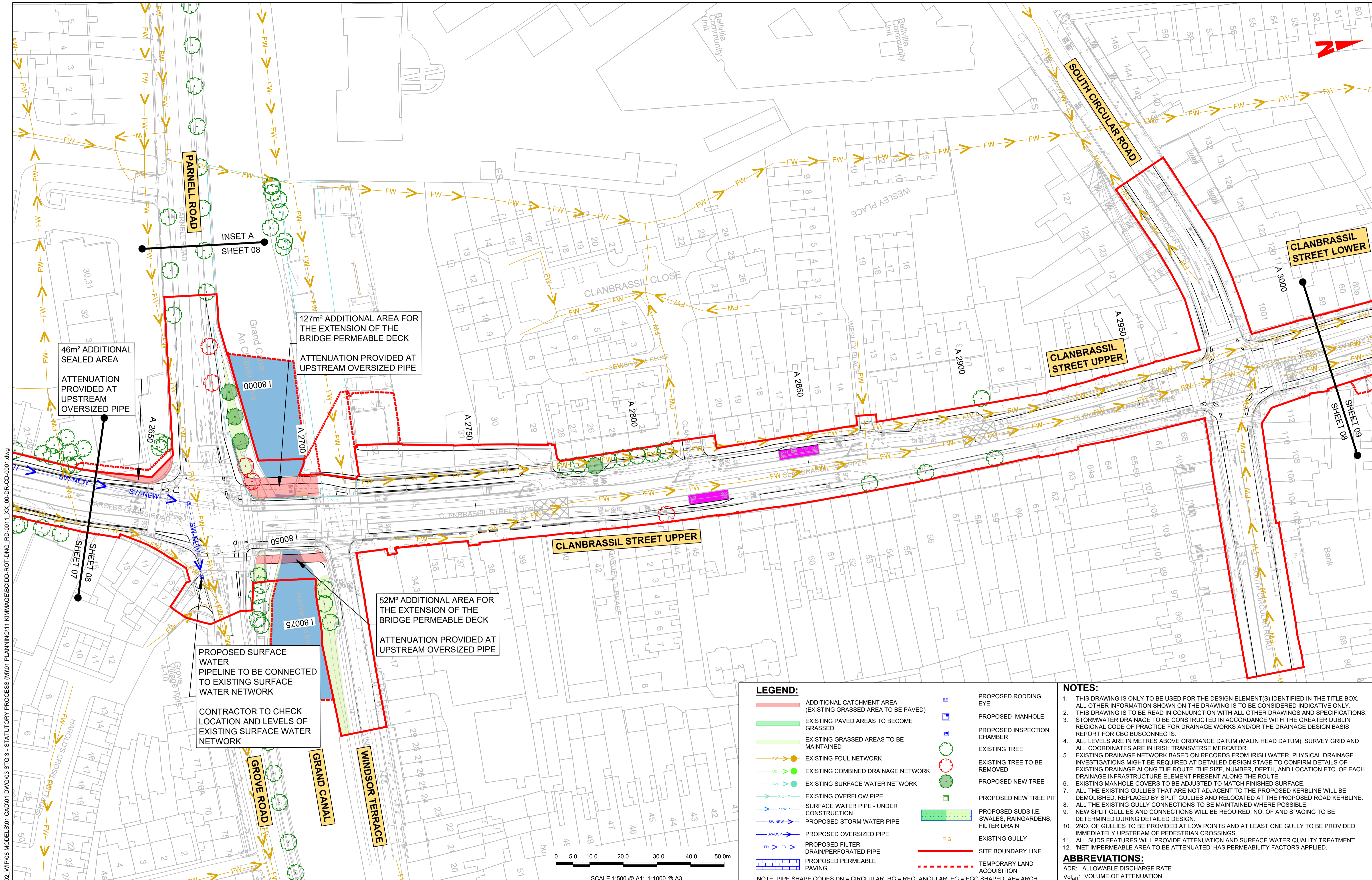
Additional Impermeable Area = 254m<sup>2</sup>

Additional Permeable Area = 110m<sup>2</sup>



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<p>Scale: 1:500 @ A1; 1:1000 @ A3</p> <p>0 5.0 10.0 20.0 30.0 40.0 50.0m</p>		<p>Project Ireland 2040 Building Ireland's Future</p>		<table border="1"> <thead> <tr> <th>Rev</th> <th>Date</th> <th>Drn</th> <th>Chk'd</th> <th>App'd</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>M01</td> <td>FEB 2023</td> <td>DS</td> <td>LS</td> <td>SMG</td> <td>ISSUED FOR PHASE 4: PLANNING</td> </tr> </tbody> </table>		Rev	Date	Drn	Chk'd	App'd	Description	M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING	<p>Client: <b>NTA</b> Udarás Náisiúnta Iompair National Transport Authority</p>		<p>Engineering Designer: <b>CIROD</b> TYPSA</p>		<p>Programme Title: <b>BUSCONNECTS DUBLIN</b> <b>CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b></p>	
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Building Ireland's Future

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TYPSA

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Drawing File Name BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0008	Sheet Number 08 of 14	Status A	Rev M01

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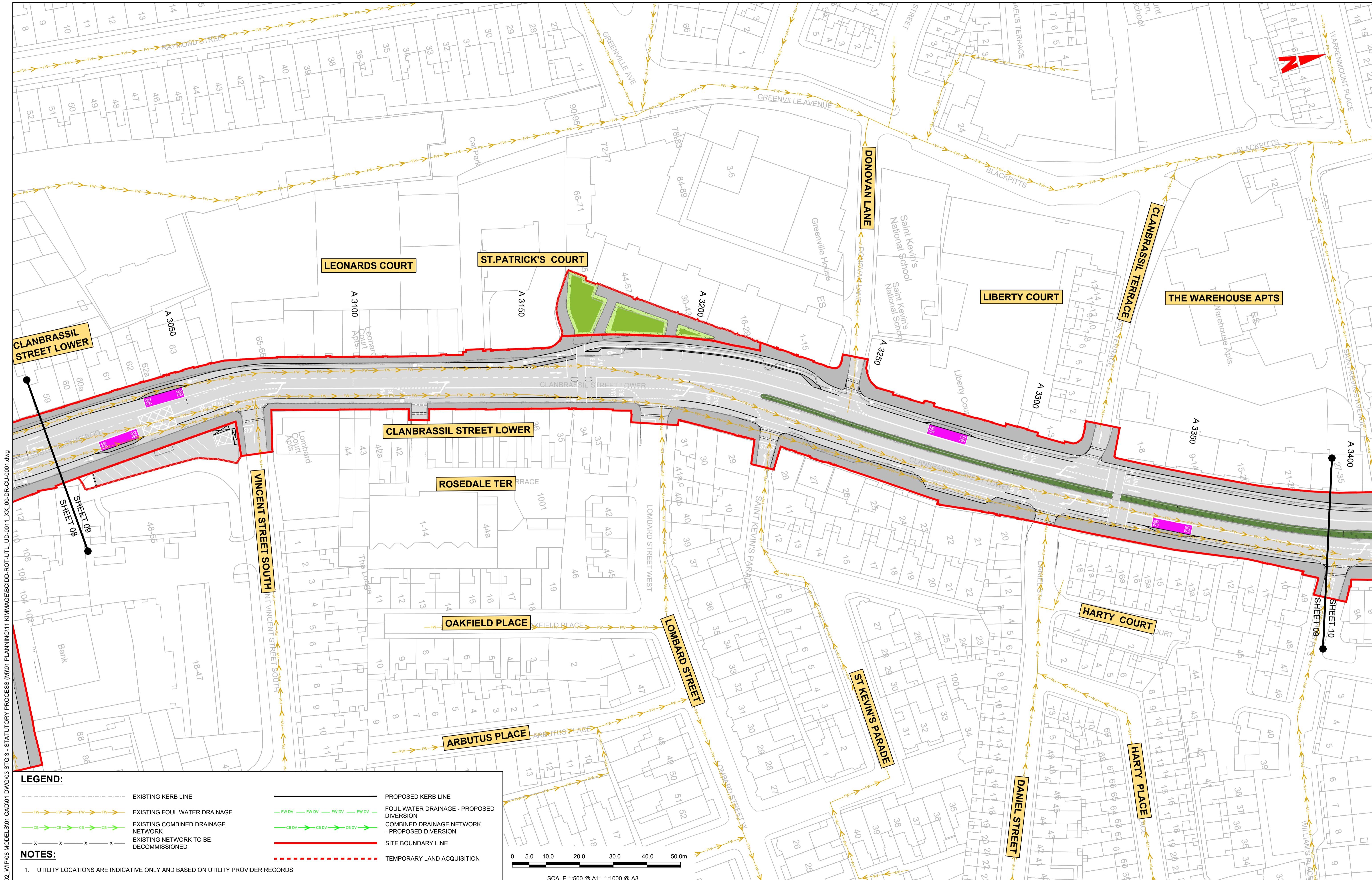
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- EXISTING DRAINAGE NETWORK BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS MIGHT BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE ALONG THE ROUTE, THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE INFRASTRUCTURE ELEMENT PRESENT ALONG THE ROUTE.
- EXISTING MANHOLE COVERS TO BE ADJUSTED TO MATCH FINISHED SURFACE.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED ROAD KERBLINE WILL BE DEMOLISHED, REPLACED BY SPLIT GULLIES AND RELOCATED AT THE PROPOSED ROAD KERBLINE.
- ALL THE EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE.
- NEW SPLIT GULLIES AND CONNECTIONS WILL BE REQUIRED. NO. OF AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
- 2NO. OF GULLIES TO BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES WILL PROVIDE ATTENUATION AND SURFACE WATER QUALITY TREATMENT 12 'NET IMPERMEABLE AREA TO BE ATTENUATED' HAS PERMEABILITY FACTORS APPLIED.

**ABBREVIATIONS:**  
ADR: ALLOWABLE DISCHARGE RATE  
Vol<sub>att</sub>: VOLUME OF ATTENUATION

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



**LEGEND:**

- - - - - EXISTING KERB LINE
- - - - - PROPOSED KERB LINE
- FW → → → EXISTING FOUL WATER DRAINAGE
- FW DV → → → FOUL WATER DRAINAGE - PROPOSED DIVERSION
- CB → → → EXISTING COMBINED DRAINAGE NETWORK
- CB DV → → → COMBINED DRAINAGE NETWORK - PROPOSED DIVERSION
- x - x - x - EXISTING NETWORK TO BE DECOMMISSIONED
- — — — — SITE BOUNDARY LINE
- - - - - TEMPORARY LAND ACQUISITION

**NOTES:**

- UTILITY LOCATIONS ARE INDICATIVE ONLY AND BASED ON UTILITY PROVIDER RECORDS



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Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

**Client:** NTA  
Udárás Náisiúnta Iompair  
National Transport Authority

**Engineering Designer:** IROD  
TYPSA

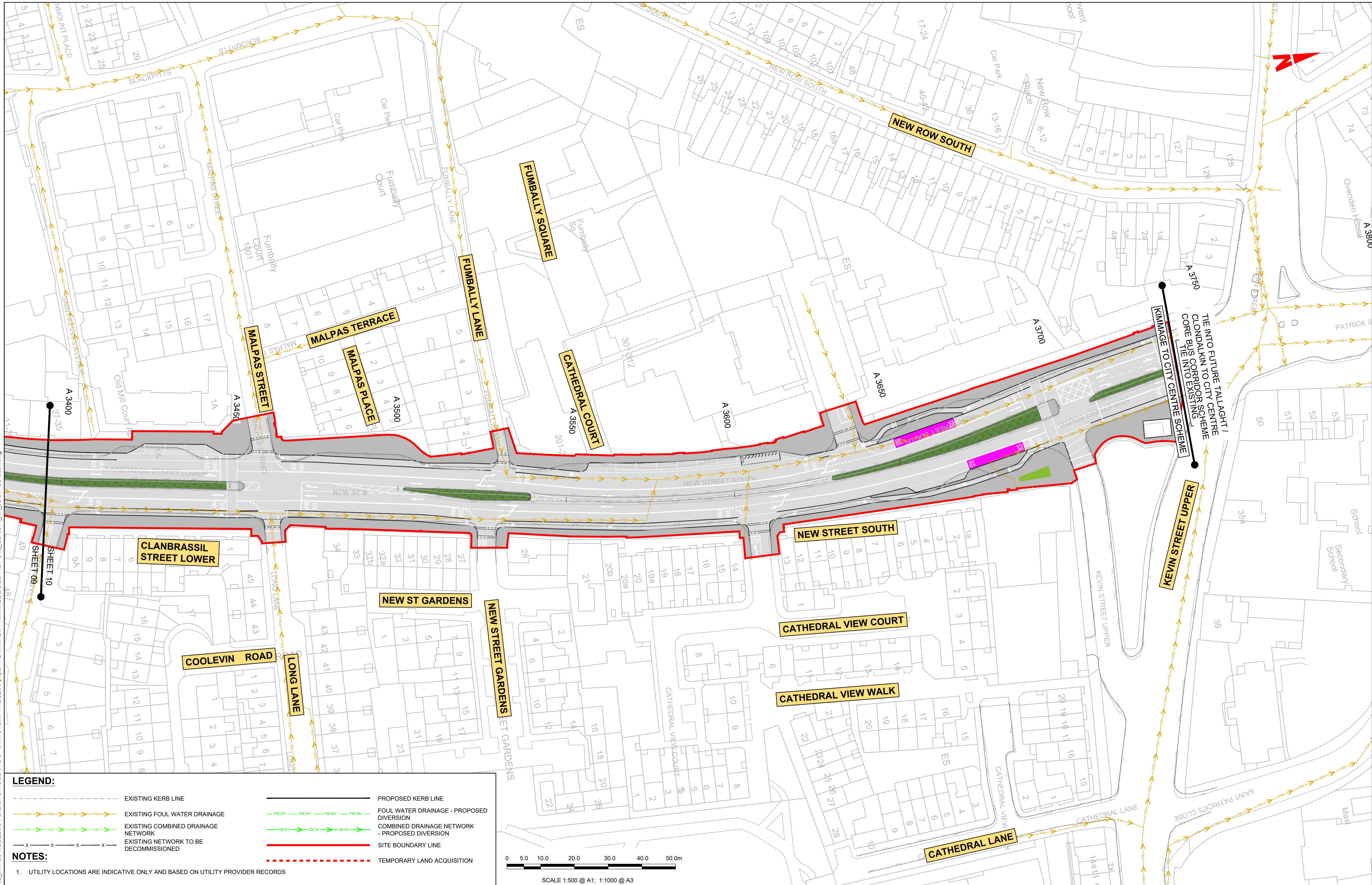
**Date:** FEB 2023  
**Scale:** 1:500 @ A1  
1:1000 @ A3

**Drawn:** DS  
**Checked:** EE  
**Approved:** SMG

**Programme Code:** BCIDD  
**Originator Code:** ROT

<b>Programme Title</b> BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
<b>Drawing Title</b> KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME IW FOUL SEWER ASSET ALTERATIONS			
<b>Drawing File Name</b> BCIDD-ROT-UTL_UD-0011_XX_00-DR-CU-0009	<b>Sheet Number</b> 09 of 14	<b>Status</b> A	<b>Rev</b> M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



**LEGEND:**

- EXISTING KERB LINE
- PROPOSED KERB LINE
- EXISTING FOUL WATER DRAINAGE
- FOUL WATER DRAINAGE - PROPOSED DIVERSION
- EXISTING COMBINED DRAINAGE NETWORK
- COMBINED DRAINAGE NETWORK - PROPOSED DIVERSION
- EXISTING NETWORK TO BE DECOMMISSIONED
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION

**NOTES:**

- UTILITY LOCATIONS ARE INDICATIVE ONLY AND BASED ON UTILITY PROVIDER RECORDS

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Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
Údarás Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **FIROD**  
TYPSA

Date: FEB 2023  
Scale: 1:500 @ A1  
1:1000 @ A3

Drawn: DS  
Checked: EE  
Approved: SMG

Programme Code: BCIDD  
Originator Code: ROT  
QMS Code:

Programme Title: **BUSCONNECTS DUBLIN  
CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: **KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME  
IW FOUL SEWER ASSET ALTERATIONS**

Drawing File Name: BCIDD-ROT-UTL\_UD-0011\_XX\_00-DR-CU-0010

Sheet Number: 10 of 14

Status: A

Rev: M01

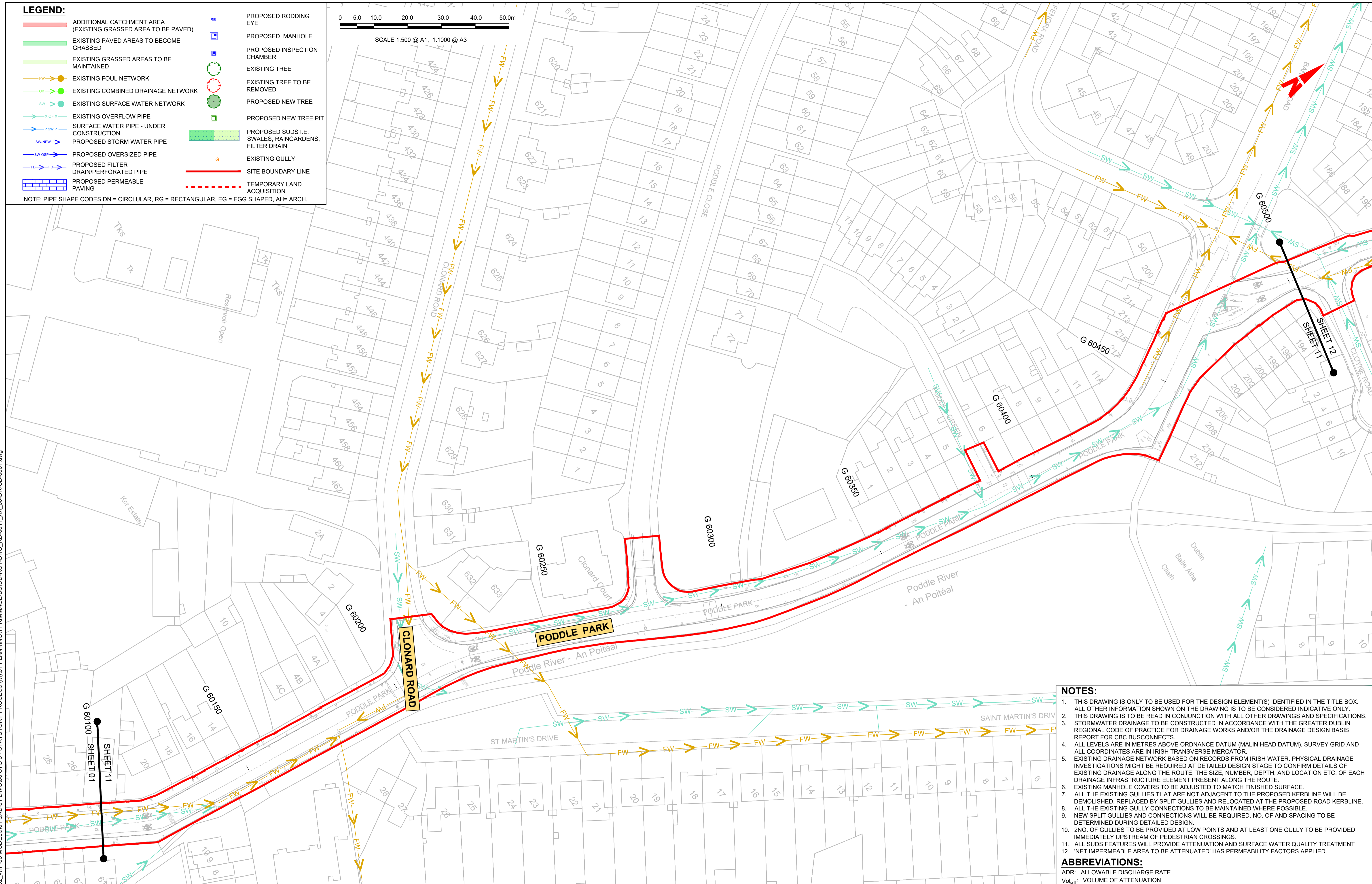
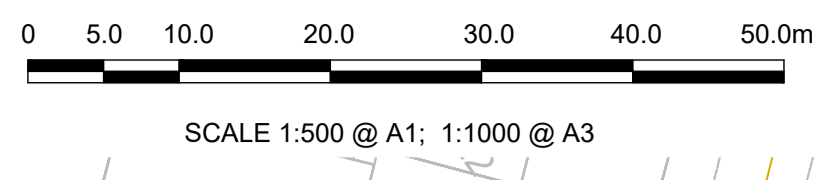
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**LEGEND:**

- ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)
- EXISTING PAVED AREAS TO BECOME GRASSED
- EXISTING GRASSED AREAS TO BE MAINTAINED
- EXISTING FOUL NETWORK
- EXISTING COMBINED DRAINAGE NETWORK
- EXISTING SURFACE WATER NETWORK
- EXISTING OVERFLOW PIPE
- SURFACE WATER PIPE - UNDER CONSTRUCTION
- PROPOSED STORM WATER PIPE
- PROPOSED OVERSIZED PIPE
- PROPOSED FILTER DRAIN/PERFORATED PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED RODDING EYE
- PROPOSED MANHOLE
- PROPOSED INSPECTION CHAMBER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- PROPOSED NEW TREE
- PROPOSED NEW TREE PIT
- PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
- EXISTING GULLY
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION

NOTE: PIPE SHAPE CODES DN = CIRCLULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.



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**ABBREVIATIONS:**  
 ADR: ALLOWABLE DISCHARGE RATE  
 Vol<sub>att</sub>: VOLUME OF ATTENUATION

\\wddp\p1\2019\1917\19117-02\_WIP\08 MODELS\01 CAD\01 DWG\03 STG 3 - STATUTORY PROCESS (M)\01 PLANNING\11 KIMMAGE\BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0001.dwg

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Rev	Date	Drn	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
 Údarás Náisiúnta Iompair  
 National Transport Authority

Engineering Designer: **CIROD**  
 TYPSA

Date: FEB 2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: DS | Checked: LS | Approved: SMG

Programme Code: BCIDD | Originator Code: ROT | QMS Code:

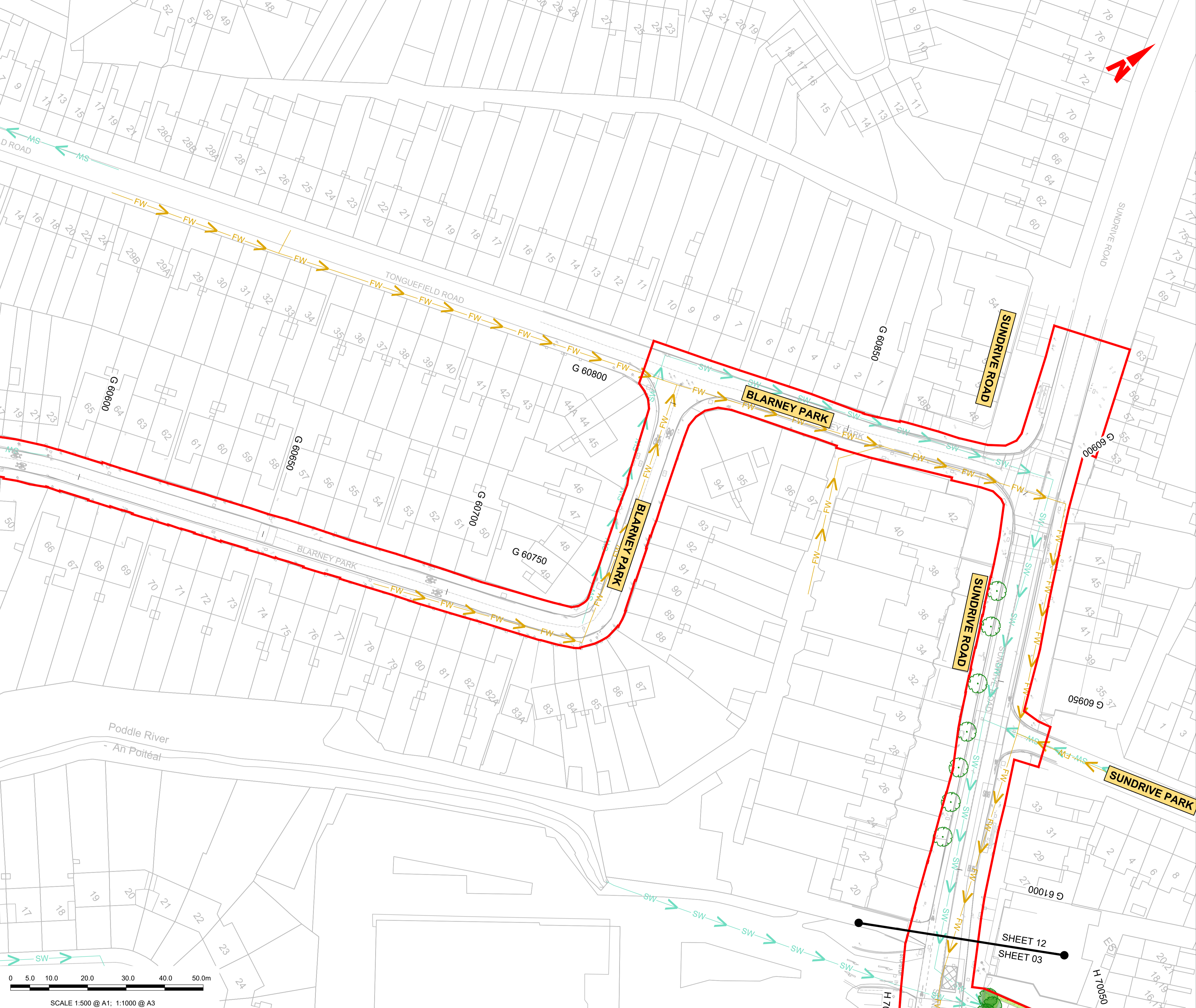
Programme Title: <b>BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>			
Drawing Title: KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0011	Sheet Number: 11 of 14	Status: A	Rev: M01

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**LEGEND:**

- ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)
- EXISTING PAVED AREAS TO BECOME GRASSED
- EXISTING GRASSED AREAS TO BE MAINTAINED
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- EXISTING SURFACE WATER NETWORK
- EXISTING OVERFLOW PIPE
- SURFACE WATER PIPE - UNDER CONSTRUCTION
- PROPOSED STORM WATER PIPE
- PROPOSED OVERSIZED PIPE
- PROPOSED FILTER DRAIN/PERFORATED PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED RODDING EYE
- PROPOSED MANHOLE
- PROPOSED INSPECTION CHAMBER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
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- PROPOSED NEW TREE PIT
- PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
- EXISTING GULLY
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION

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**ABBREVIATIONS:**  
 ADR: ALLOWABLE DISCHARGE RATE  
 Vol<sub>att</sub>: VOLUME OF ATTENUATION

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SCALE 1:500 @ A1; 1:1000 @ A3

**Project Ireland 2040**  
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
Udarás Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **CIROD**  
TYPSA

Date: FEB 2023  
Scale: 1:500 @ A1, 1:1000 @ A3

Drawn: DS  
Checked: LS  
Approved: SMG

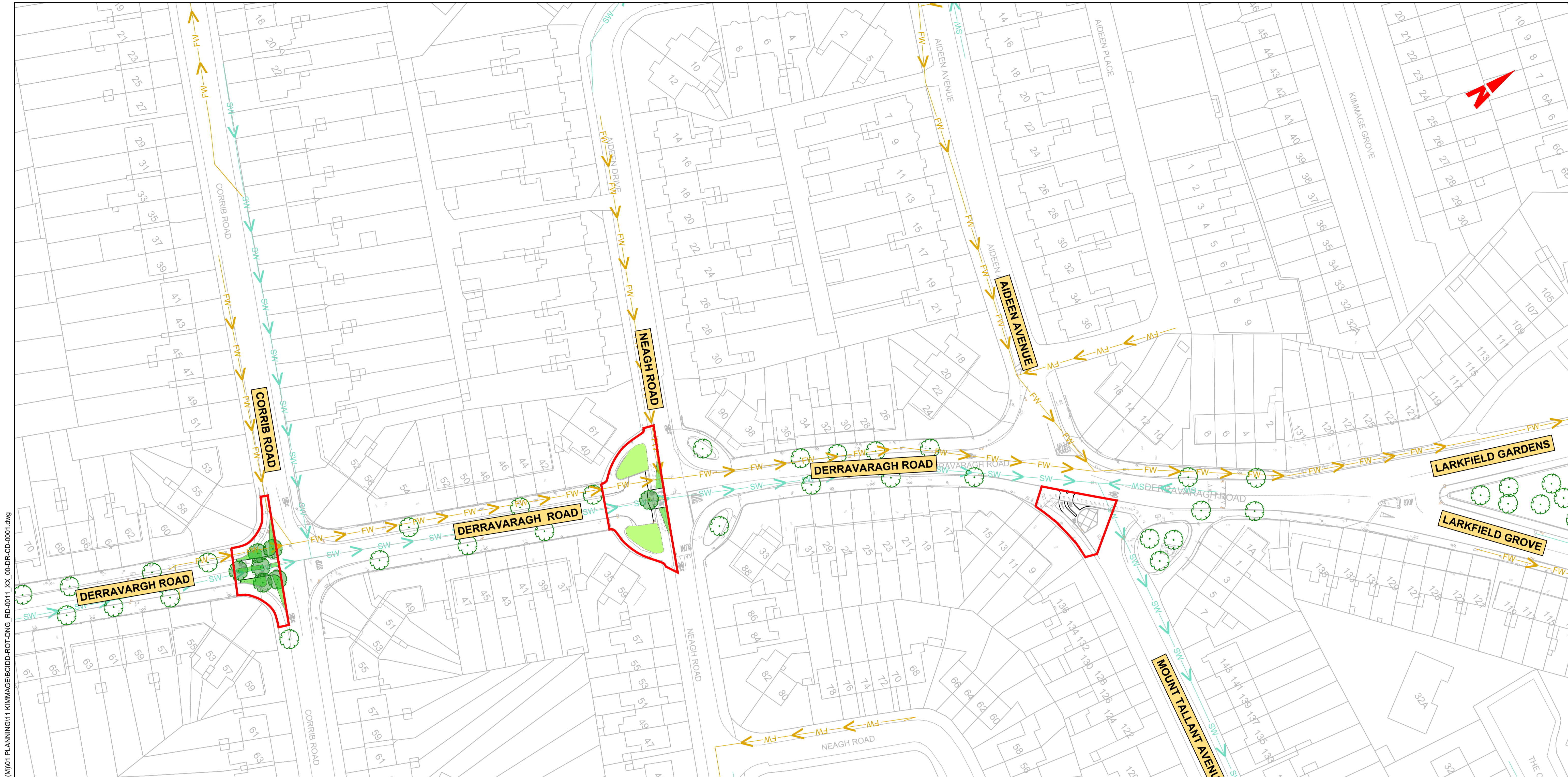
Programme Code: BCIDD  
Originator Code: ROT

Programme Title: **BUSCONNECTS DUBLIN**  
**CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

Drawing Title: **KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME**  
**PROPOSED SURFACE WATER DRAINAGE WORKS**

Drawing File Name: BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0012  
Sheet Number: 12 of 14  
Status: A  
Rev: M01

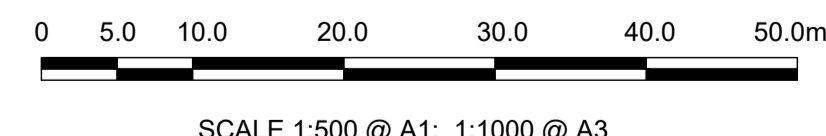
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- EXISTING GRASSED AREAS TO BE MAINTAINED
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- EXISTING COMBINED DRAINAGE NETWORK
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- EXISTING OVERFLOW PIPE
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- PROPOSED OVERSIZED PIPE
- PROPOSED FILTER DRAIN/PERFORATED PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED RODDING EYE
- PROPOSED MANHOLE
- PROPOSED INSPECTION CHAMBER
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NOTE: PIPE SHAPE CODING DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.



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**ABBREVIATIONS:**

- ADR: ALLOWABLE DISCHARGE RATE
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\\wddp\p1\U201919\17\17-02\_WIP\08 MODELS\01 CAD\01 DWG\03 STG 3 - STATUTORY PROCESS (M)\01 PLANNING\11 KIMMAGE\BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0001.dwg

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Rev	Date	Dwn	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

	Udarás Náisiúnta Iompair National Transport Authority		Engineering Designer	
Date FEB 2023	Scale 1:500 @ A1 1:1000 @ A3	Drawn DS	Checked LS	Approved SMG
Programme Code BCIDD	Originator Code ROT	QMS Code		

<b>BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>			
Drawing Title KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-0013	Sheet Number 13 of 14	Status A	Rev M01

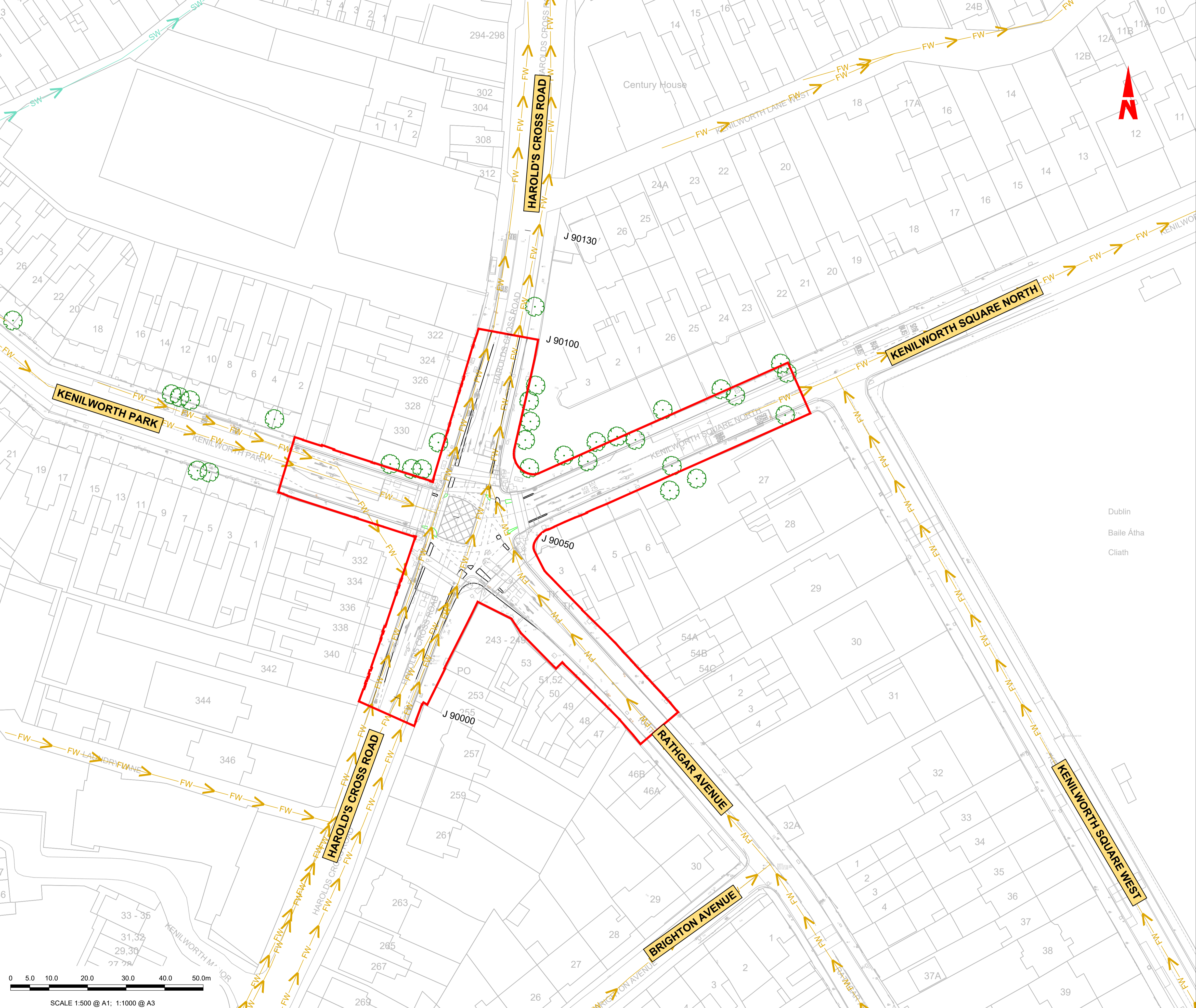
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**LEGEND:**

- ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)
- EXISTING PAVED AREAS TO BECOME GRASSED
- EXISTING GRASSED AREAS TO BE MAINTAINED
- EXISTING FOUL NETWORK
- EXISTING COMBINED DRAINAGE NETWORK
- EXISTING SURFACE WATER NETWORK
- EXISTING OVERFLOW PIPE
- SURFACE WATER PIPE - UNDER CONSTRUCTION
- PROPOSED STORM WATER PIPE
- PROPOSED OVERSIZED PIPE
- PROPOSED FILTER DRAIN/PERFORATED PIPE
- PROPOSED PERMEABLE PAVING
- PROPOSED RODDING EYE
- PROPOSED MANHOLE
- PROPOSED INSPECTION CHAMBER
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- PROPOSED NEW TREE
- PROPOSED NEW TREE PIT
- PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
- EXISTING GULLY
- SITE BOUNDARY LINE
- TEMPORARY LAND ACQUISITION

NOTE: PIPE SHAPE CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH = ARCH.



**NOTES:**

- THIS DRAWING IS ONLY TO BE USED FOR THE DESIGN ELEMENT(S) IDENTIFIED IN THE TITLE BOX. ALL OTHER INFORMATION SHOWN ON THE DRAWING IS TO BE CONSIDERED INDICATIVE ONLY.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS.
- STORMWATER DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE DRAINAGE DESIGN BASIS REPORT FOR CBC BUSCONNECTS.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRANSVERSE MERCATOR.
- EXISTING DRAINAGE NETWORK BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS MIGHT BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE ALONG THE ROUTE, THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE INFRASTRUCTURE ELEMENT PRESENT ALONG THE ROUTE.
- EXISTING MANHOLE COVERS TO BE ADJUSTED TO MATCH FINISHED SURFACE.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE DEMOLISHED, REPLACED BY SPLIT GULLIES AND RELOCATED AT THE PROPOSED ROAD KERBLINE.
- ALL THE EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE.
- NEW SPLIT GULLIES AND CONNECTIONS WILL BE REQUIRED. NO. OF AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
- 2NO. OF GULLIES TO BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES WILL PROVIDE ATTENUATION AND SURFACE WATER QUALITY TREATMENT
- 'NET IMPERMEABLE AREA TO BE ATTENUATED' HAS PERMEABILITY FACTORS APPLIED.

**ABBREVIATIONS:**

ADR: ALLOWABLE DISCHARGE RATE  
Vol<sub>att</sub>: VOLUME OF ATTENUATION

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Project Ireland 2040  
Building Ireland's Future

Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

Client: **NTA**  
Udarás Náisiúnta Iompair  
National Transport Authority

Engineering Designer: **CIROD**  
TYPSA

Date: FEB 2023  
Scale: 1:500 @ A1  
1:1000 @ A3

Drawn: DS  
Checked: LS  
Approved: SMG

Programme Code: BCIDD  
Originator Code: ROT  
QMS Code:

Programme Title: **BUSCONNECTS DUBLIN  
CORE BUS CORRIDORS INFRASTRUCTURE WORKS**

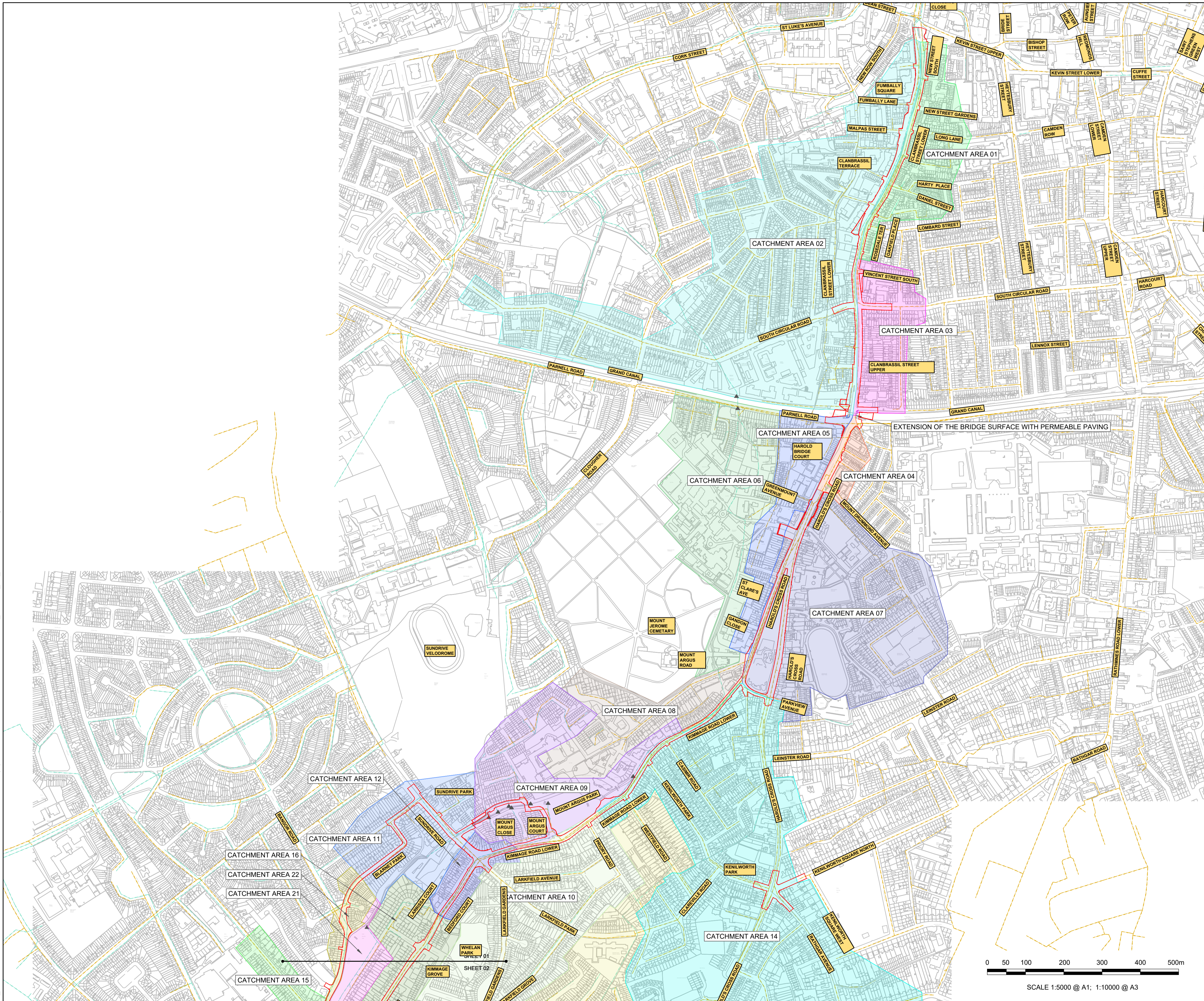
Drawing Title: **KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME  
PROPOSED SURFACE WATER DRAINAGE WORKS**

Drawing File Name: BCIDD-ROT-DNG\_RD-0011\_XX\_00-DR-CD-0014  
Sheet Number: 14 of 14  
Status: A  
Rev: M01

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Dublin  
Baile Átha  
Cliath



**LEGEND:**

	CATCHMENT AREA 1		CATCHMENT AREA 12
	CATCHMENT AREA 2		CATCHMENT AREA 13
	CATCHMENT AREA 3		CATCHMENT AREA 14
	CATCHMENT AREA 4		CATCHMENT AREA 15
	CATCHMENT AREA 5		CATCHMENT AREA 16
	CATCHMENT AREA 6		CATCHMENT AREA 17
	CATCHMENT AREA 7		CATCHMENT AREA 18
	CATCHMENT AREA 8		CATCHMENT AREA 19
	CATCHMENT AREA 9		CATCHMENT AREA 20
	CATCHMENT AREA 10		CATCHMENT AREA 21
	CATCHMENT AREA 11		CATCHMENT AREA 22

	EXISTING SURFACE WATER DRAINAGE		DISCHARGE POINT
	EXISTING COMBINED DRAINAGE		
	EXISTING OVERFLOW DRAINAGE		
	EXISTING FOUL DRAINAGE		
	TEMPORARY LAND ACQUISITION		
	SITE BOUNDARY LINE		
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREAS TO BE PAVED)		
	EXISTING PAVED AREAS TO BECOME GRASSED		

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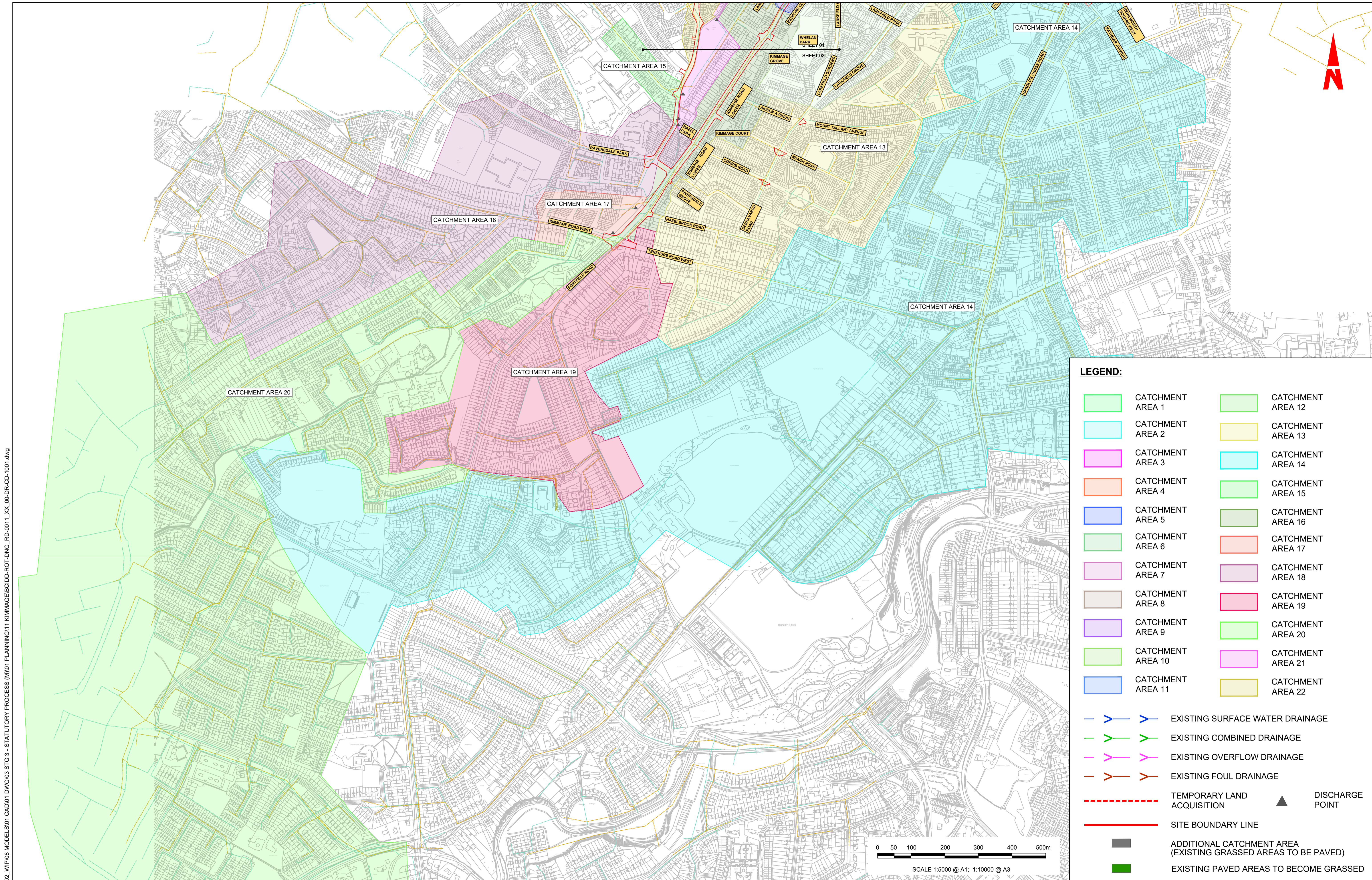


Rev	Date	Drm	Chk'd	App'd	Description
M01	FEB 2023	DS	LS	SMG	ISSUED FOR PHASE 4: PLANNING

 Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer  TYPSA		
Date	Scale	Drawn	Checked	Approved
FEB 2023	1:5,000 @ A1 1:10,000 @ A3	DS	LS	SMG
Programme Code	Originator Code	QMS Code		
BCIDD	ROT			

Programme Title <b>BUSCONNECTS DUBLIN</b> <b>CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>			
Drawing Title KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-1001	01 of 02	A	M01

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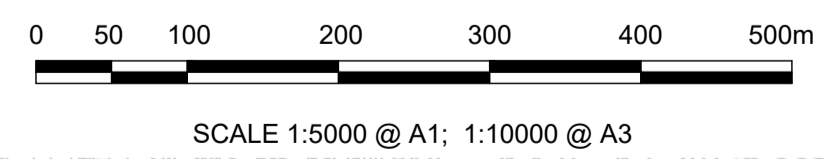


**LEGEND:**

	CATCHMENT AREA 1		CATCHMENT AREA 12
	CATCHMENT AREA 2		CATCHMENT AREA 13
	CATCHMENT AREA 3		CATCHMENT AREA 14
	CATCHMENT AREA 4		CATCHMENT AREA 15
	CATCHMENT AREA 5		CATCHMENT AREA 16
	CATCHMENT AREA 6		CATCHMENT AREA 17
	CATCHMENT AREA 7		CATCHMENT AREA 18
	CATCHMENT AREA 8		CATCHMENT AREA 19
	CATCHMENT AREA 9		CATCHMENT AREA 20
	CATCHMENT AREA 10		CATCHMENT AREA 21
	CATCHMENT AREA 11		CATCHMENT AREA 22

	EXISTING SURFACE WATER DRAINAGE		DISCHARGE POINT
	EXISTING COMBINED DRAINAGE		
	EXISTING OVERFLOW DRAINAGE		
	EXISTING FOUL DRAINAGE		
	TEMPORARY LAND ACQUISITION		
	SITE BOUNDARY LINE		
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREAS TO BE PAVED)		
	EXISTING PAVED AREAS TO BECOME GRASSED		



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 Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer  I-ROD TYPSA		
Date	Scale	Drawn	Checked	Approved
FEB 2023	1:5,000 @ A1 1:10,000 @ A3	DS	LS	SMG
Programme Code	Originator Code	QMS Code		
BCIDD	ROT			

Programme Title <b>BUSCONNECTS DUBLIN</b> <b>CORE BUS CORRIDORS INFRASTRUCTURE WORKS</b>			
Drawing Title KIMMAGE TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDD-ROT-DNG_RD-0011_XX_00-DR-CD-1002	02 of 02	A	M01

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