

Appendix II
Proposed Surface Water
Drainage Works



BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS

SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME

DRAWING SERIES NUMBER(S)	DRAWING SERIES DESCRIPTION
BCIDB-JFM-DNG_IX-0002_XX_00-DR-CD-0001	SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS. COVER SHEET
BCIDB-JFM-DNG_KP-0002_XX_00-DR-CD-0001	SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS. KEY PLAN
BCIDB-JFM-DNG_RD-0002_XX_00-DR-CD-1001 to 1006	SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME. OVERALL CATCHMENT AREAS
BCIDB-JFM-DNG_RD-0002_XX_00-DR-CD-0001 to 0037	SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME. PROPOSED SURFACE WATER DRAINAGE WORKS

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Client NTA Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer Jacobs		
Date 06/04/2023	Scale NTS @ A1 NTS @ A3	Drawn FM	Checked IL	Approved HOS
Project Code BCIDB	Originator Code JFM	QMS Code		

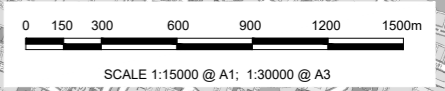
Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS COVER SHEET			
Drawing File Name BCIDB-JAC-DNG_IX-0002_XX_00-DR-CD-0001	Sheet Number 01 of 01	Status A	Rev M01

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LEGEND:

- PROPOSED DESIGN SHEET EXTENTS
- NO DESIGN CONTENT



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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Project Code: BCIDB

Scale: 1:15000 @ A1
1:30000 @ A3

Originator Code: JFM

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

QMS Code:

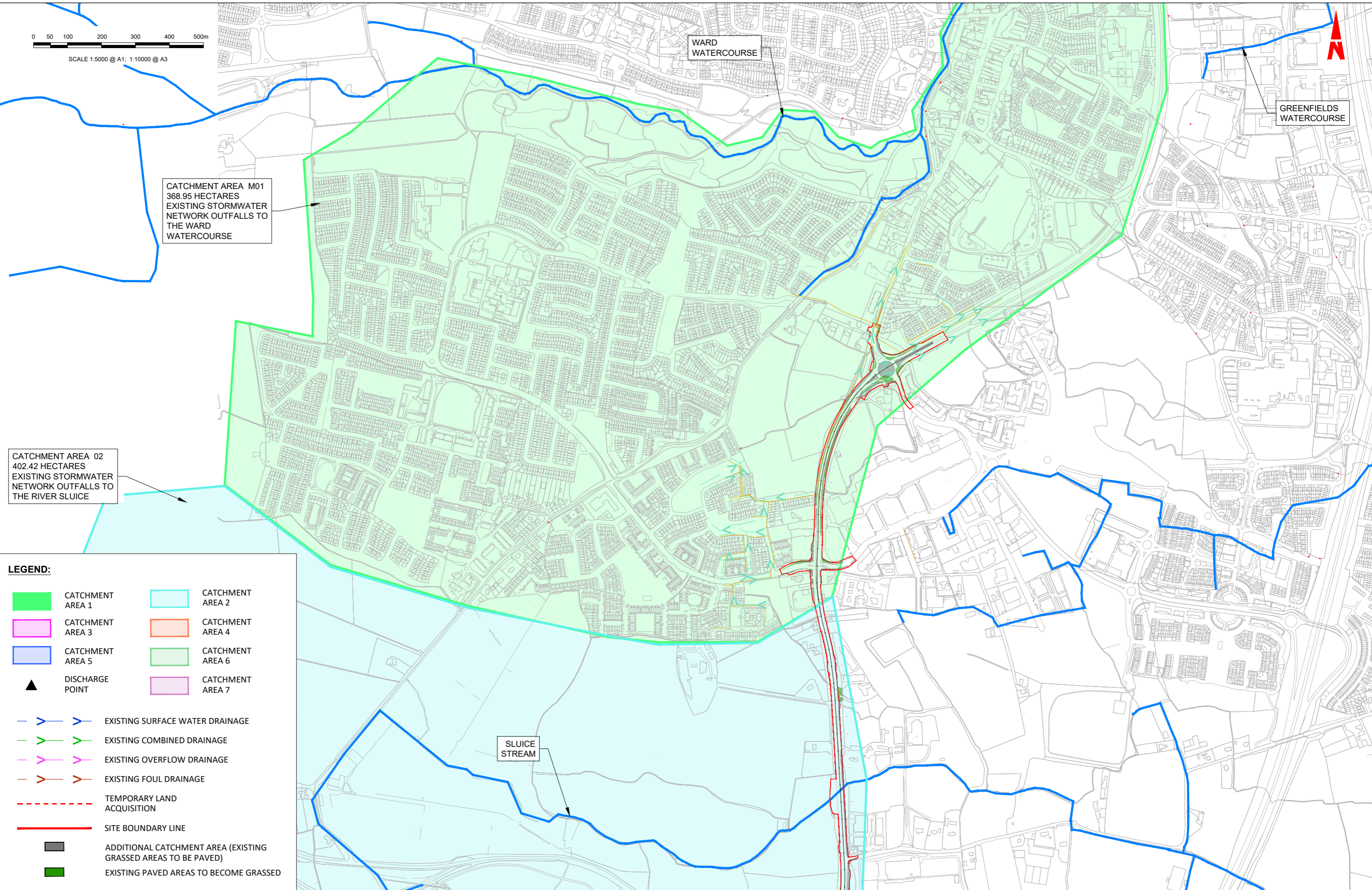
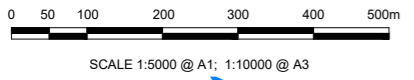
Programme Title: **BUSCONNECTS DUBLIN**
CORE BUS CORRIDORS INFRASTRUCTURE WORKS

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

Drawing File Name: BCIDB-JAC-DNG_KP-0002_XX_00-DR-CD-0001

Sheet Number: 01 of 01
Status: A
Rev: M01

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CATCHMENT AREA M01
368.95 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE WARD
WATERCOURSE

WARD
WATERCOURSE

GREENFIELDS
WATERCOURSE

CATCHMENT AREA 02
402.42 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE RIVER SLUICE

SLUICE
STREAM

LEGEND:

	CATCHMENT AREA 1		CATCHMENT AREA 2
	CATCHMENT AREA 3		CATCHMENT AREA 4
	CATCHMENT AREA 5		CATCHMENT AREA 6
	DISCHARGE POINT		CATCHMENT AREA 7
	EXISTING SURFACE WATER DRAINAGE		
	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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Client: **NTA**
Údarás Náisiúnta Iompair
National Transport Authority

Date: 06/04/2023
Scale: 1:5000 @ A1
1:10000 @ A3

Project Code: BCIDB
Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM	Checked: IL	Approved: HOS
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QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-1001	Sheet Number: 01 of 06	Status: A	Rev: M01

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LEGEND:

- CATCHMENT AREA 1
- CATCHMENT AREA 3
- CATCHMENT AREA 5
- DISCHARGE POINT
- CATCHMENT AREA 2
- CATCHMENT AREA 4
- CATCHMENT AREA 6
- CATCHMENT AREA 7
- EXISTING SURFACE WATER DRAINAGE
- 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

CATCHMENT AREA 02
402.42 HECTARES
EXISTING STORMWATER NETWORK OUTFALLS TO THE RIVER SLUICE

CATCHMENT AREA 03
391.74 HECTARES
EXISTING STORMWATER NETWORK OUTFALLS TO THE CUCKOO STREAM

CUCKOO STREAM



SCALE 1:5000 @ A1; 1:10000 @ A3

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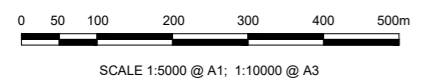


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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

 Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer 		
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:5000 @ A1 1:10000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-1002	02 of 06	A	M01

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CATCHMENT AREA 05
906.724 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE RIVER SANTRY

RIVER
MAYNE
09

CATCHMENT AREA 04
217.99 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE RIVER MAYNE

MAYNE 09
WATERCOURSE

SANTRY
WATERCOURSE

BALLYMUN
WATERCOURSE

LEGEND:

	CATCHMENT AREA 1		CATCHMENT AREA 2
	CATCHMENT AREA 3		CATCHMENT AREA 4
	CATCHMENT AREA 5		CATCHMENT AREA 6
	DISCHARGE POINT		CATCHMENT AREA 7

	EXISTING SURFACE WATER DRAINAGE
	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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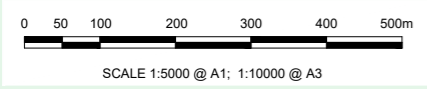
Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

 Client		 Engineering Designer		
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:5000 @ A1 1:10000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-1003	03 of 06	A	M01

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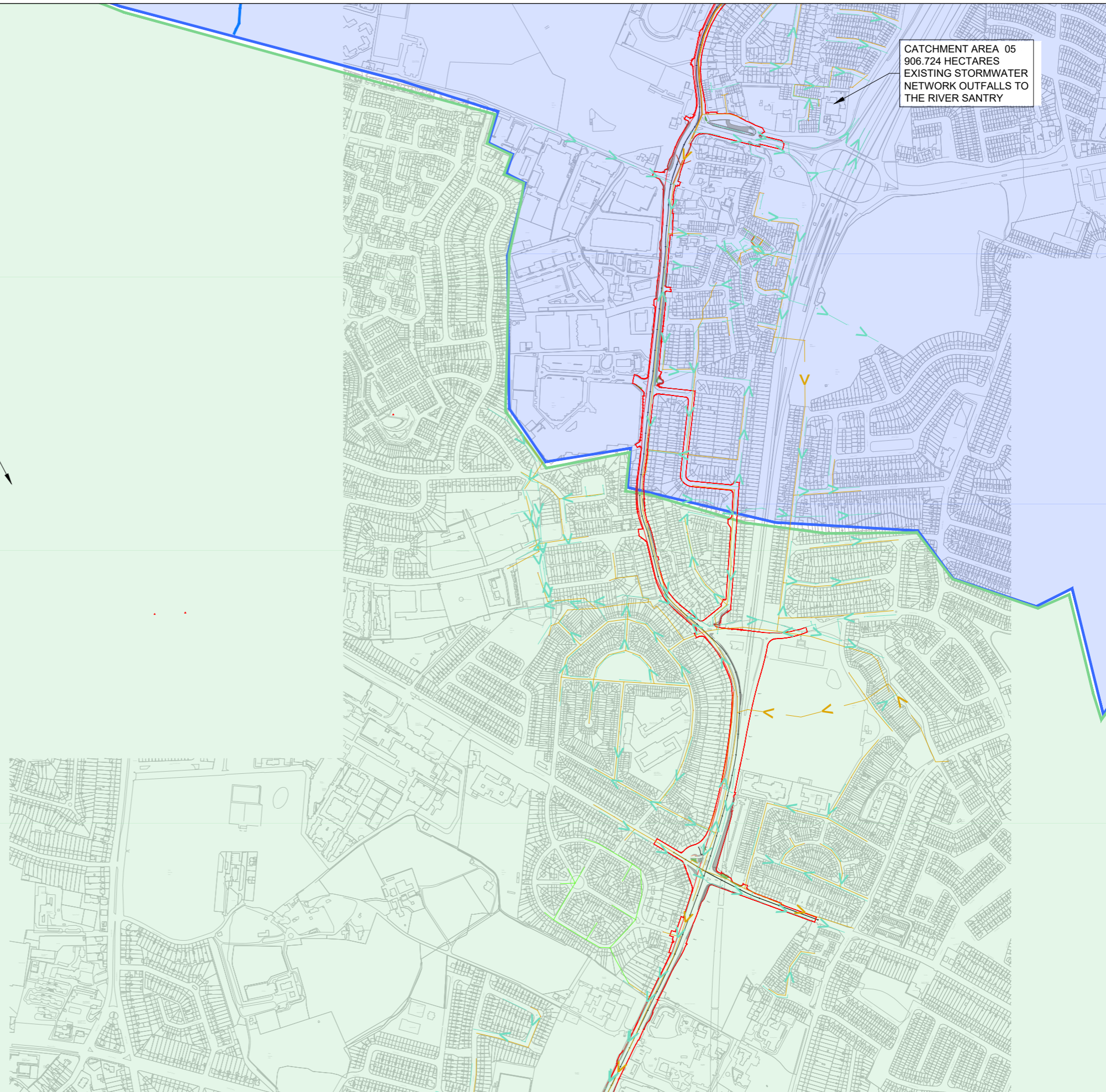


CATCHMENT AREA 06
3168.06 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE RIVER TOLKA

CATCHMENT AREA 05
906.724 HECTARES
EXISTING STORMWATER
NETWORK OUTFALLS TO
THE RIVER SANTRY

LEGEND:

	CATCHMENT AREA 1		CATCHMENT AREA 2
	CATCHMENT AREA 3		CATCHMENT AREA 4
	CATCHMENT AREA 5		CATCHMENT AREA 6
	DISCHARGE POINT		CATCHMENT AREA 7
	EXISTING SURFACE WATER DRAINAGE		
	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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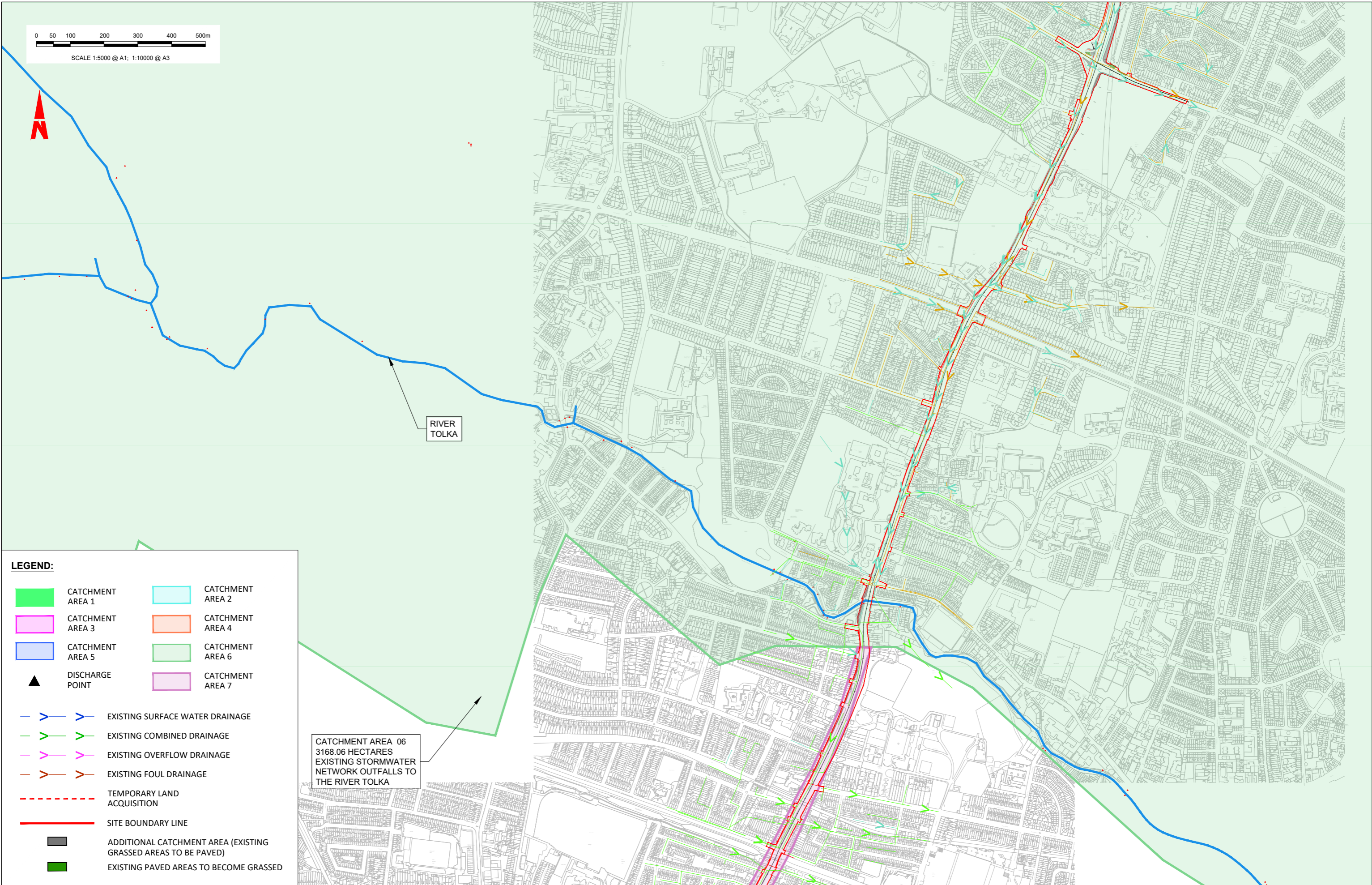
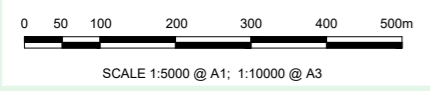
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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

 Údarás Náisiúnta Iompair National Transport Authority		 Engineering Designer		
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:5000 @ A1 1:10000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-IAC-DNG_RD-0002_XX_00-DR-CD-1004	04 of 06	A	M01

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LEGEND:

	CATCHMENT AREA 1		CATCHMENT AREA 2
	CATCHMENT AREA 3		CATCHMENT AREA 4
	CATCHMENT AREA 5		CATCHMENT AREA 6
	DISCHARGE POINT		CATCHMENT AREA 7
	EXISTING SURFACE WATER DRAINAGE		
	EXISTING COMBINED DRAINAGE		
	EXISTING OVERFLOW DRAINAGE		
	EXISTING FOUL DRAINAGE		
	TEMPORARY LAND ACQUISITION		
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	EXISTING PAVED AREAS TO BECOME GRASSED		

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 Date: 06/04/2023 Project Code: BCIDB		 Scale: 1:5000 @ A1 1:10000 @ A3 Originator Code: JAC		Drawn: FM Checked: IL Approved: HOS
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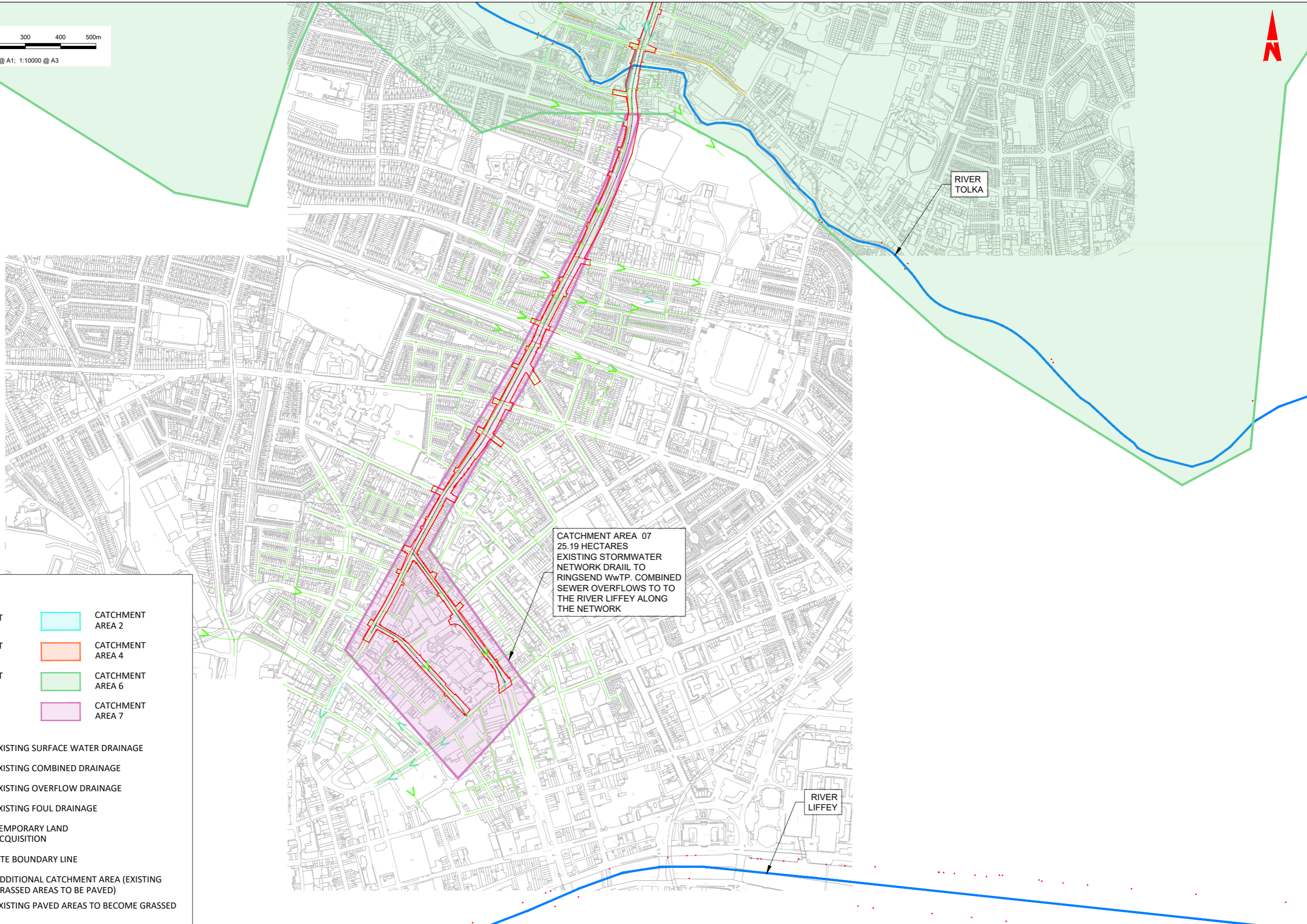
Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-1005	05 of 06	A	M01

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0 50 100 200 300 400 500m

SCALE 1:5000 @ A1; 1:10000 @ A3



CATCHMENT AREA 07
25.19 HECTARES
EXISTING STORMWATER
NETWORK DRAIL TO
RINGSEND WWTP. COMBINED
SEWER OVERFLOWS TO TO
THE RIVER LIFFEY ALONG
THE NETWORK

LEGEND:

- CATCHMENT AREA 1
- CATCHMENT AREA 3
- CATCHMENT AREA 5
- DISCHARGE POINT
- EXISTING SURFACE WATER DRAINAGE
- 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
- CATCHMENT AREA 2
- CATCHMENT AREA 4
- CATCHMENT AREA 6
- CATCHMENT AREA 7

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Date	Scale	Drawn	Checked	Approved
06/04/2023	1:5000 @ A1 1:10000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME OVERALL CATCHMENT AREAS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-1006	06 of 06	A	M01

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

- NOTES:**
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 - ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAVERSE MERCATOR.
 - EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
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 - ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
 - EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE. WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
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 - ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
 - PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIONS:**
- ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

- CHAINAGE A0 - A300**
- Drainage catchment 1a
 - Additional impermeable area 2965m²
 - Design attenuation volume 150m³
 - Drainage to existing surface water network
 - Attenuation to be provided through interception of existing surface water network
 - Where kerblines are to be changed existing gullies to be removed and replaced with side entry gullies



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

LEGEND:

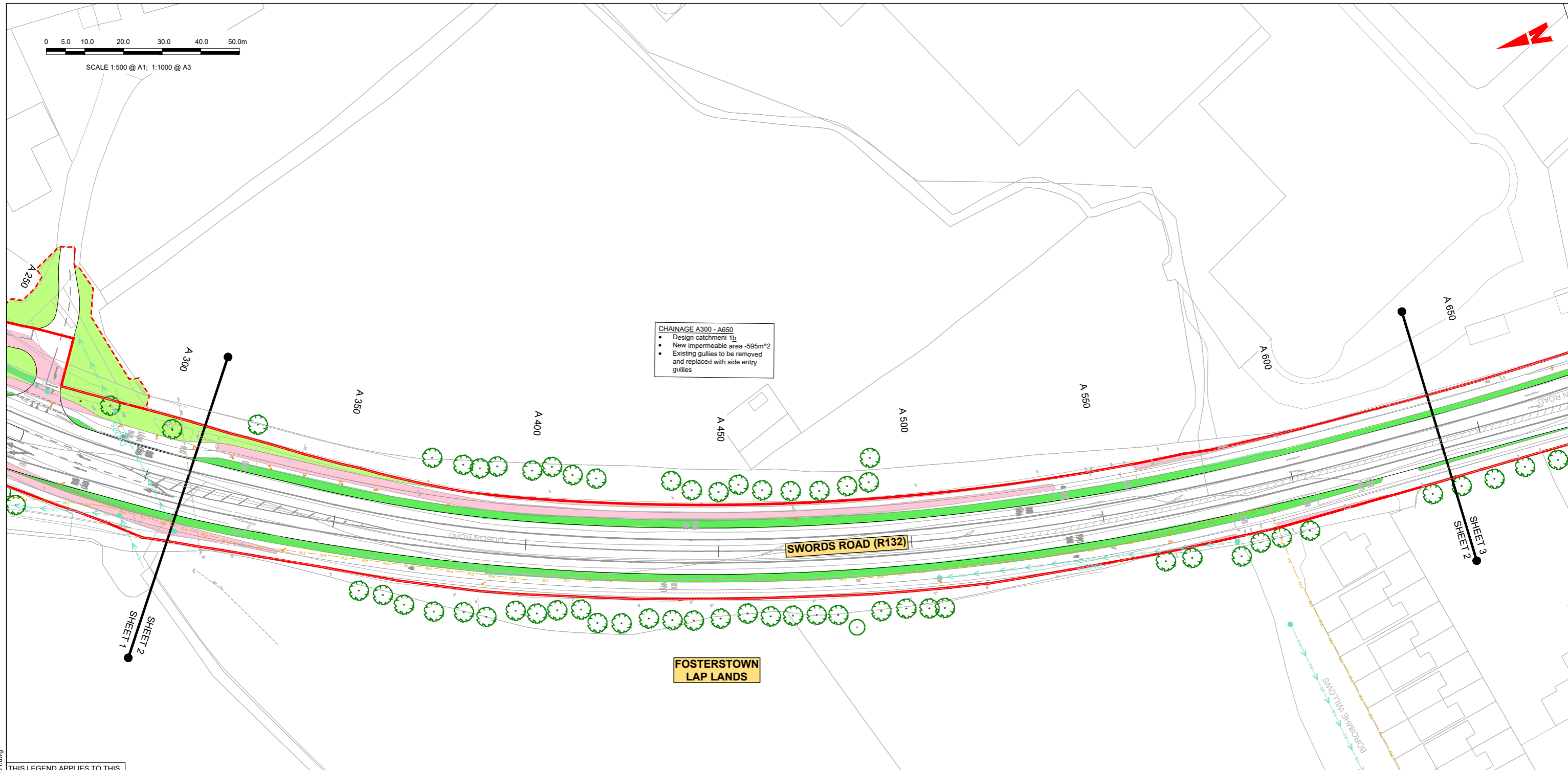
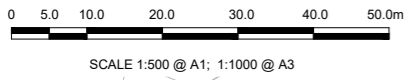
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

<p>Rev M01 Date 06/04/2023 Dm FM Chk'd IL App'd HOS Description ISSUE FOR PHASE 4: PLANNING</p>	<p>Client NTA Údarás Náisiúnta Iompair National Transport Authority</p>	<p>Engineering Designer Jacobs</p>			<p>Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>		
		<p>Date 06/04/2023 Scale 1:500 @ A1 1:1000 @ A3</p>	<p>Drawn FM</p>	<p>Checked IL</p>	<p>Approved HOS</p>	<p>Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</p>	
<p>Project Code BCIDB Originator Code JAC</p>		<p>QMS Code</p>	<p>Drawing File Name BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0001</p>	<p>Sheet Number 01 of 37</p>	<p>Status A</p>	<p>Rev M01</p>	

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CHAINAGE A300 - A650

- Design catchment 1b
- New impermeable area -595m²
- Existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 IMPERMEABLE PAVING		

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10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIOHOS:

ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

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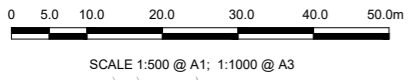


Rev	Date	Drn	Chk'd	App'd	Description
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06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0002	02 of 37	A	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



CHAINAGE A650 - A1000 (east)

- Design catchment 1c
- New impermeable area 198m²
- Design attenuation volume 6m³
- Where kerblines are to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by new surface water drainage pipes

AIRSIDE RETAIL PARK

PROPOSED OVERSIZED PIPES

NEW IMPERMEABLE AREAS TO DISCHARGE TO EXISTING SURFACE WATER NETWORK - DISCHARGE LOCATION TBC

PREMIER INN

NEVINSTOWN LANE

AIRSIDE JUNCTION

TEXACO

SWARDS ROAD (R132)

BORQUINE ROAD

CHAINAGE A650 - A1000 (west)

- Design catchment 1c
- New impermeable area 802m²
- Design attenuation volume 25m³
- New impermeable area to drain to new surface water drainage system running to new rain garden
- Existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by intercepting existing surface water network

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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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	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

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ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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PROPOSED FILTER DRAIN 0.5m WIDE. STORAGE VOLUME 4M³

PROPOSED RAIN GARDEN, 0.5m DEEP. 100m². STORAGE VOLUME 25M³

FLOW CONTROL DEVICE - 2.0 l/s

FLOW CONTROL DEVICE - 2.0 l/s

Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Client		Engineering Designer		
 Údarás Náisiúnta Iompair National Transport Authority				
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title			
BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title			
SWARDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0003	03 of 37	A	M01

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



CHAINAGE A1000 - A1450

- Design catchment 2a
- New impermeable area 463m²
- Design attenuation volume 84.5m³
- New impermeable area to drain to new surface water network
- Where kerbline is to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by dry detention basin

N1 BUSINESS PARK

GLENMORE HOUSE

KILRONAN HOUSE

SWORDS ROAD (R132)

MC COMISH LTD

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
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	PROPOSED OVERSIZED PIPE		SITE BOUNDARY LINE
	PROPOSED FILTER DRAIN/PERFORATED PIPE		TEMPORARY LAND ACQUISITION
	PROPOSED PERMEABLE PAVING		

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ABBREVIATIOHOS:

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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

Project Code: BCIDB
Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0004	Sheet Number: 04 of 37	Status: A	Rev: M01

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- FORMWORK DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE ISSUE FOR PHASE 4: PLANNING BASIS REPORT FOR CBC BUSCONNECTS.
- ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAHOSVERSE MERCATOR.
- EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
- EXISTING MANHOLE COVERS SHALL BE ADJUSTED TO MATCH FINISHED SURFACES.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
- EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE. WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
- 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

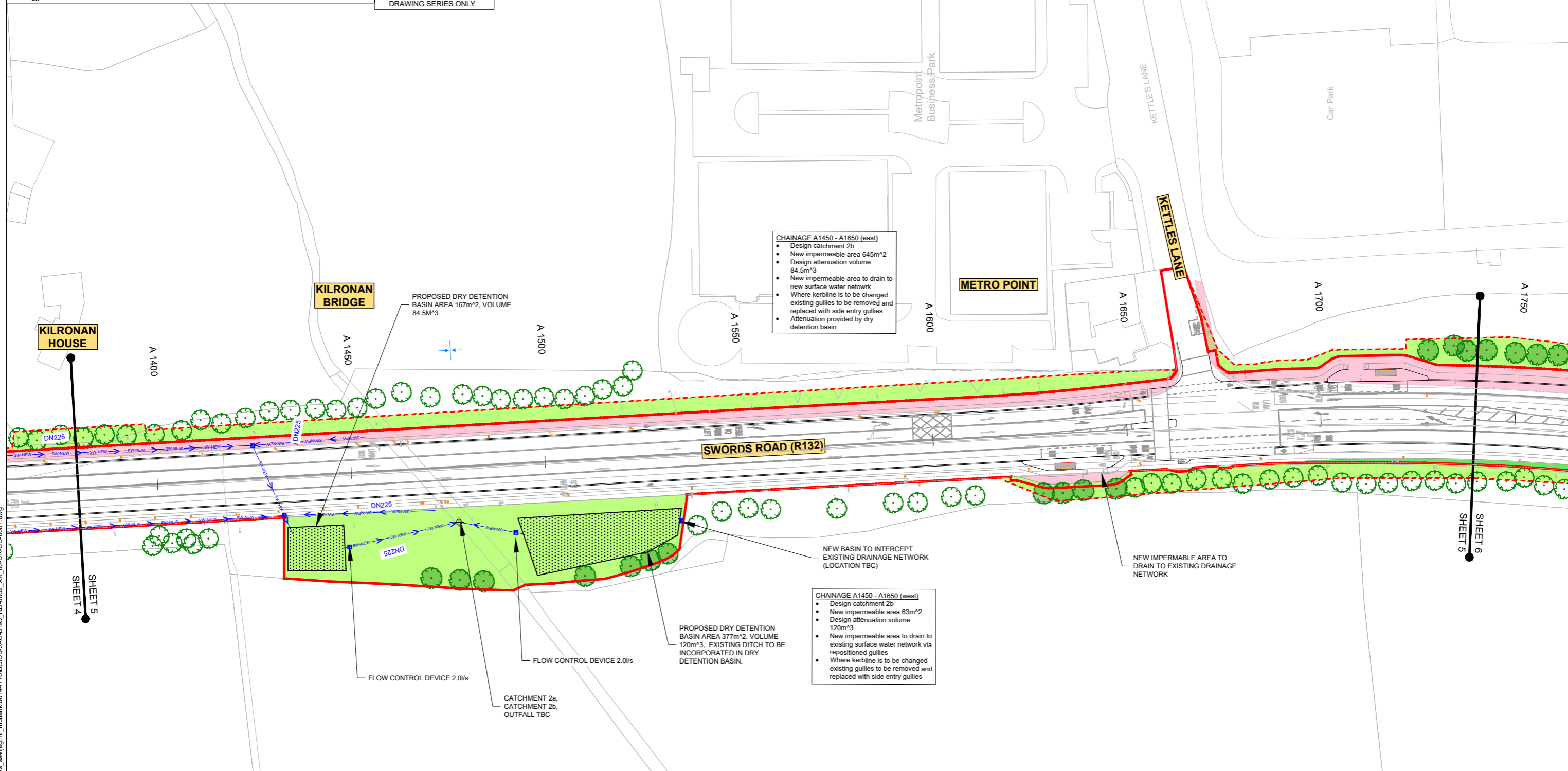
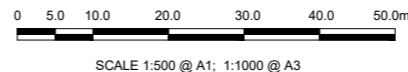
ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

LEGEND:

- ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)
- EXISTING PAVED AREAS TO BECOME GRASSED
- EXISTING GRASSED AREAS TO BE MAINTAINED
- FW — FW — EXISTING FOUL NETWORK
- CB — CB — EXISTING COMBINED NETWORK
- SW — SW — EXISTING SURFACE WATER NETWORK
- X OF X — EXISTING OVERFLOW PIPE
- P SW P — PLANNED SURFACE WATER PIPE
- SW-NEW — PROPOSED STORM WATER PIPE
- SW-OSP — PROPOSED OVERSIZED PIPE
- FD — FD — 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.
THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY



CHAINAGE A1450 - A1650 (east)

- Design catchment 2b
- New impermeable area 645m²
- Design attenuation volume 84.5m³
- New impermeable area to drain to new surface water network
- Where kerblines is to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by dry detention basin

CHAINAGE A1450 - A1650 (west)

- Design catchment 2b
- New impermeable area 63m²
- Design attenuation volume 120m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines is to be changed existing gullies to be removed and replaced with side entry gullies

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<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3 Drawn: FM Checked: IL Approved: HOS</p> <p>Project Code: BCIDB Originator Code: JAC QMS Code: []</p>						<p>Drawing Title</p> <p>SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</p>													
<p>Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0005</p>						<table border="1"> <tr> <td>Sheet Number</td> <td>Status</td> <td>Rev</td> </tr> <tr> <td>05 of 37</td> <td>A</td> <td>M01</td> </tr> </table>	Sheet Number	Status	Rev	05 of 37	A	M01							
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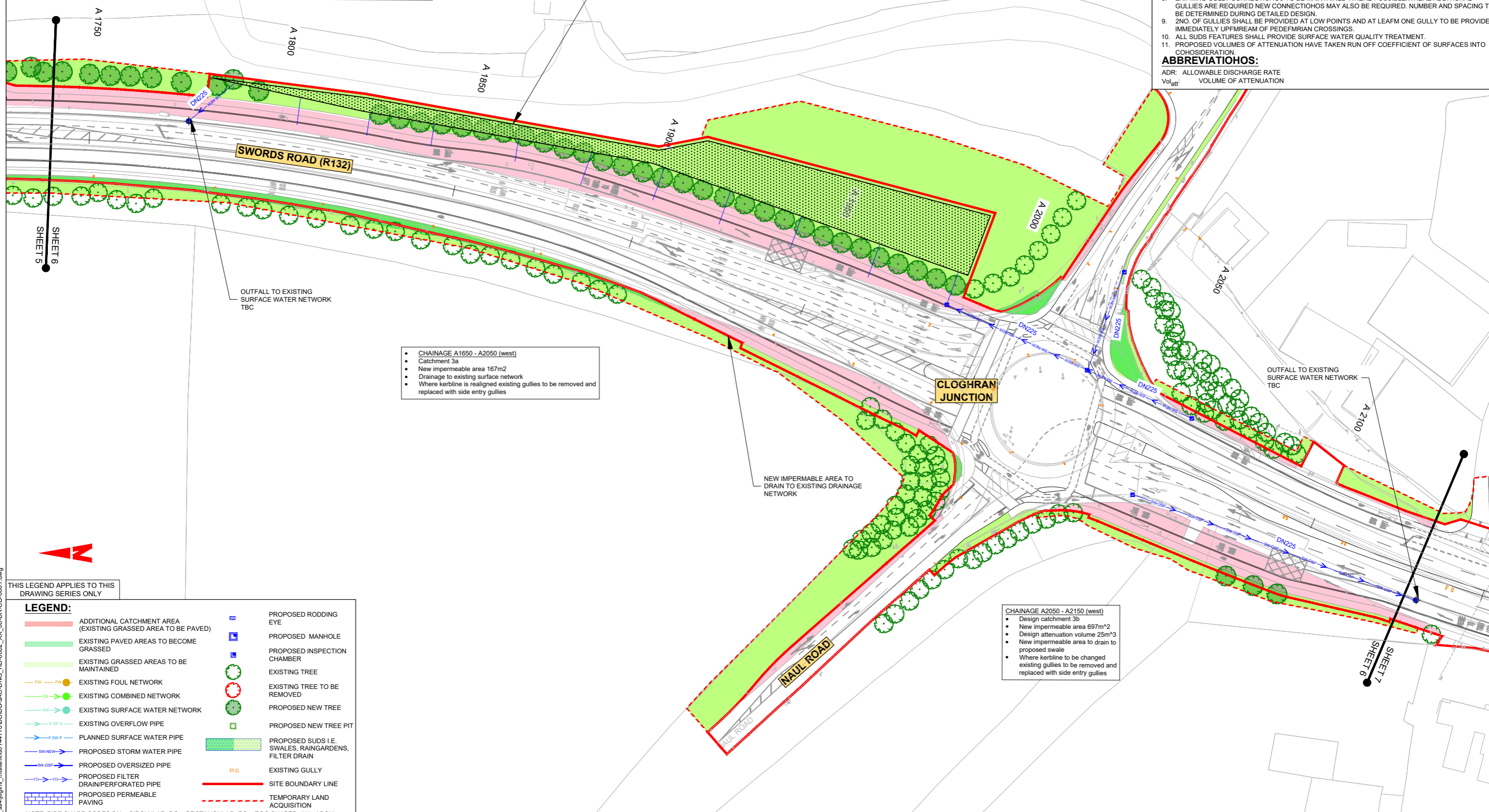


SCALE 1:500 @ A1; 1:1000 @ A3

- CHAINAGE A1650 - A2150 (east)**
- Design catchment 3a
 - New impermeable area 2167m²
 - Design attenuation volume 200m³
 - New impermeable area to drain to proposed swale
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

PROPOSED BIORETENTION ZONE 3.5m WIDE 212m LONG, VOLUME 200m³ - EXISTING TREES TO BE REPLANTED

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 10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
 11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIOHOS:**
- ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION



- CHAINAGE A1650 - A2050 (west)**
- Catchment 3a
 - New impermeable area 167m²
 - Drainage to existing surface network
 - Where kerblines is realigned existing gullies to be removed and replaced with side entry gullies

- CHAINAGE A2050 - A2150 (west)**
- Design catchment 3b
 - New impermeable area 697m²
 - Design attenuation volume 25m³
 - New impermeable area to drain to proposed swale
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCLULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Engineering Designer: **Jacobs**

Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3

Project Code: BCIDB Originator Code: JAC

Drawn: FM Checked: IL Approved: HOS

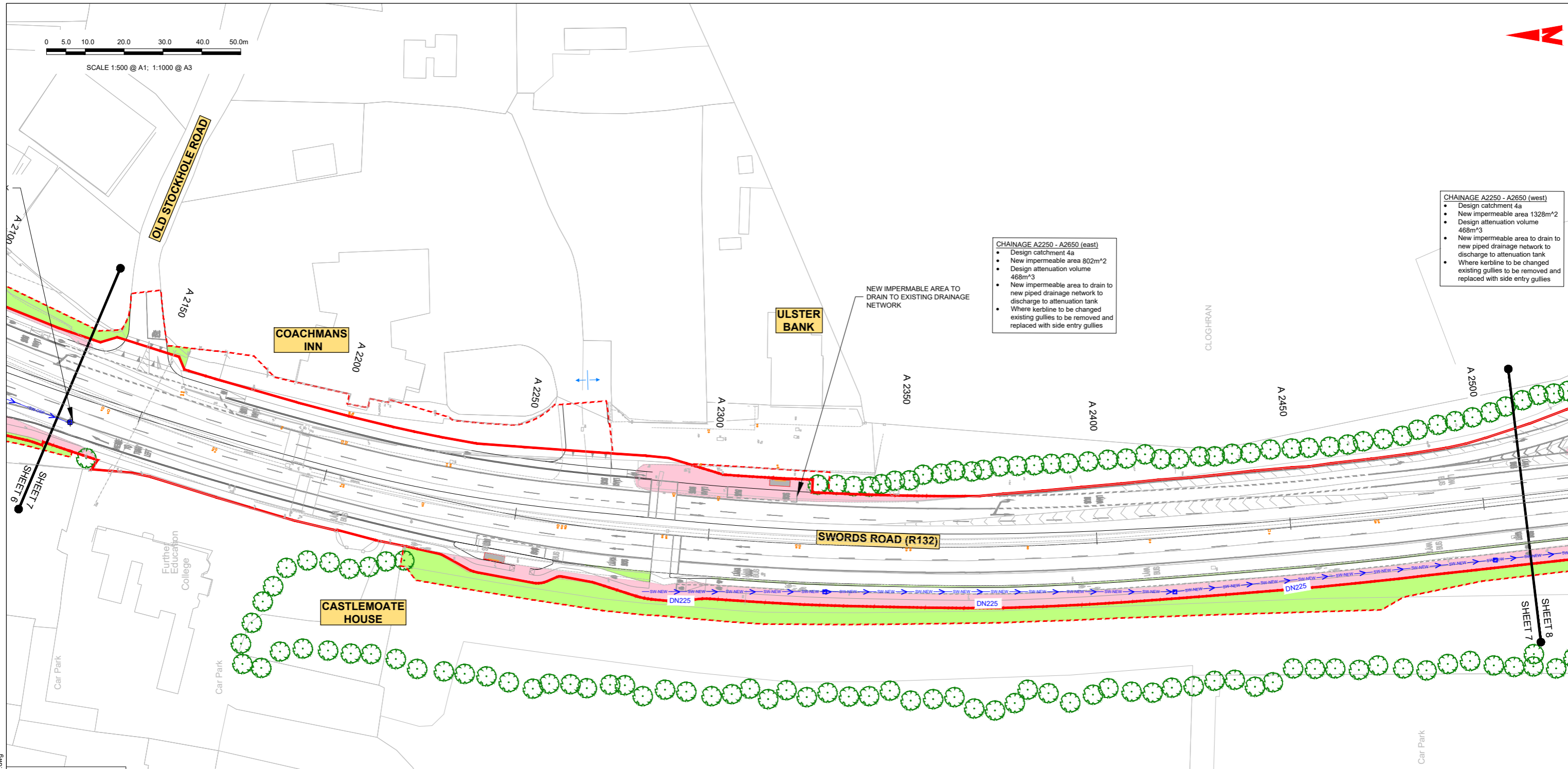
QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0006	Sheet Number: 06 of 37	Status: A	Rev: M01

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



CHAINAGE A2250 - A2650 (east)

- Design catchment 4a
- New impermeable area 802m²
- Design attenuation volume 468m³
- New impermeable area to drain to new piped drainage network to discharge to attenuation tank
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A2250 - A2650 (west)

- Design catchment 4a
- New impermeable area 1328m²
- Design attenuation volume 468m³
- New impermeable area to drain to new piped drainage network to discharge to attenuation tank
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

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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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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		

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11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONHOS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Client NTA Údarás Náisiúnta Iompair National Transport Authority	Engineering Designer Jacobs
Date 06/04/2023	Scale 1:500 @ A1 1:1000 @ A3
Project Code BCIDB	Originator Code JAC
Drawn FM	Checked IL
Approved HOS	

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0001	Sheet Number 07 of 37	Status A	Rev M01

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



PROPOSED UNDERGROUND ATTENUATION TANK,
VOLUME 468m³
FLOW CONTROL DEVICE 2L/S. OUTFALL LOCATION
TBC DEPENDENT ON RECEIPT OF SURFACE WATER
DRAINAGE PLANS

CHAINAGE A2250 - A2650 (west)

- Design catchment 4a
- New impermeable area 1328m²
- Design attenuation volume 468m³
- New impermeable area to drain to new piped drainage network to discharge to attenuation tank
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A2650 - A2900

- Design catchment 4c
- New impermeable area 702m²
- Design attenuation volume 25m³
- New impermeable area to drain to new piped drainage network
- Attenuation provided by oversized pipe and new pipe network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
	PROPOSED STORM WATER PIPE		EXISTING GULLY
	PROPOSED OVERSIZED PIPE		TEMPORARY LAND ACQUISITION PAVING
	PROPOSED FILTER DRAIN/PERFORATED PIPE		SITE BOUNDARY LINE
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Project Ireland 2040
Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Engineering Designer: **Jacobs**

Date: 06/04/2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: FM | Checked: IL | Approved: HOS

Project Code: BCIDB | Originator Code: JAC | QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0001	Sheet Number: 08 of 37	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

LEGEND:

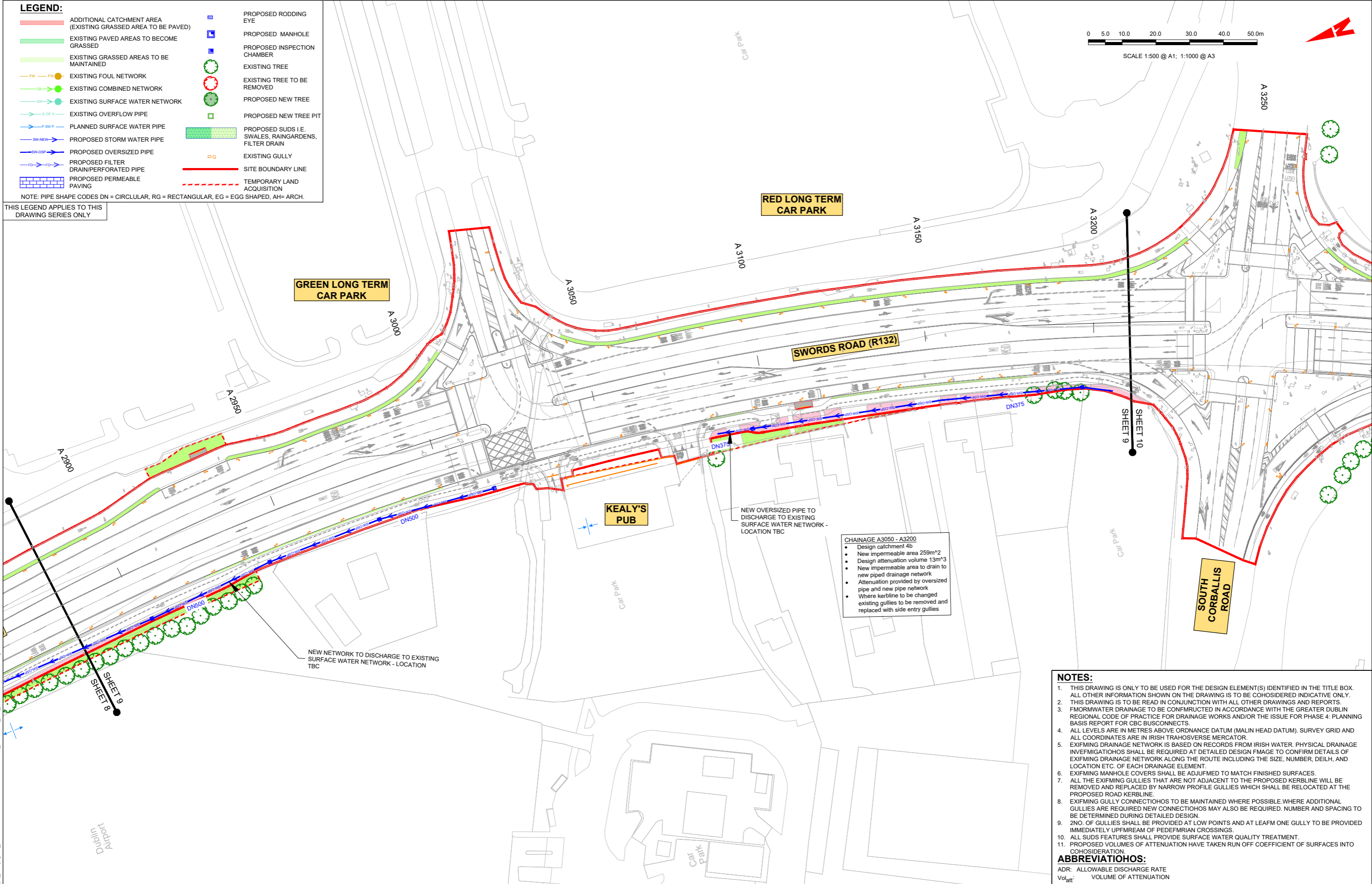
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCLULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

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



CHAINAGE A3050 - A3200

- Design catchment 4b
- New impermeable area 259m²
- Design attenuation volume 13m³
- New impermeable area to drain to new piped drainage network
- Attenuation provided by oversized pipe and new pipe network
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies

NOTES:

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3. FMORMWATER DRAINAGE TO BE CONFMRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE ISSUE FOR PHASE 4: PLANNING BASIS REPORT FOR CBC BUSCONNECTS.
4. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAHOSVERSE MERCATOR.
5. EXIFMING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVEFMGATIOHOS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
6. EXIFMING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
7. ALL THE EXIFMING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXIFMING GULLY CONNETHOS TO BE MAINTAINED WHERE POSSIBLE. WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNETHOS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIOHOS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

Project Code: BCIDB
Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

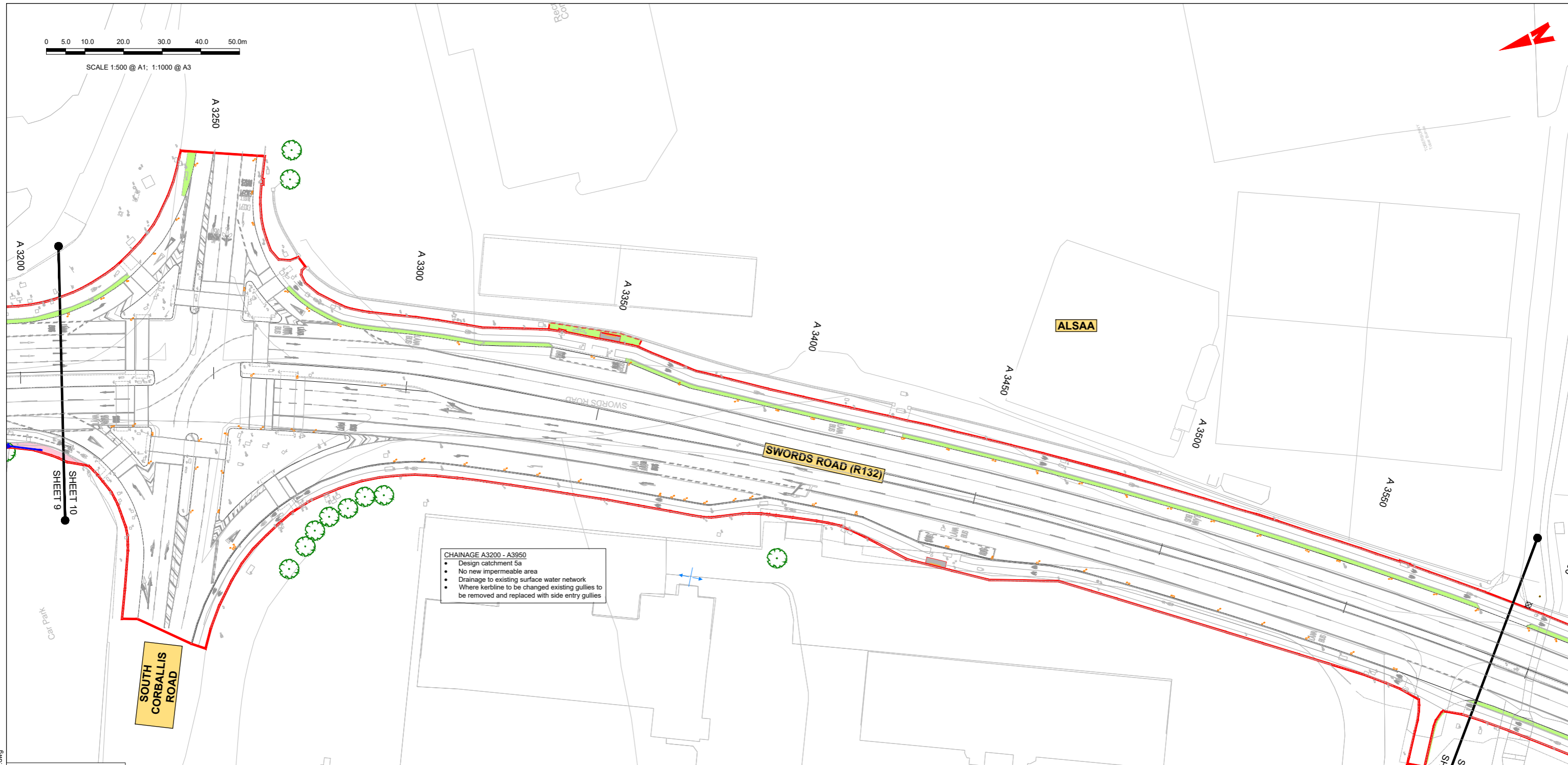
QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0009	Sheet Number: 09 of 37	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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



CHAINAGE A3200 - A3950

- Design catchment 5a
- No new impermeable area
- Drainage to existing surface water network
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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		

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5. EXIFMING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVFMIGATIONHOS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT
6. EXIFMING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
7. ALL THE EXIFMING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXIFMING GULLY CONNETHOSHOS TO BE MAINTAINED WHERE POSSIBLE.WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNETHOSHOS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIOHOS:

ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

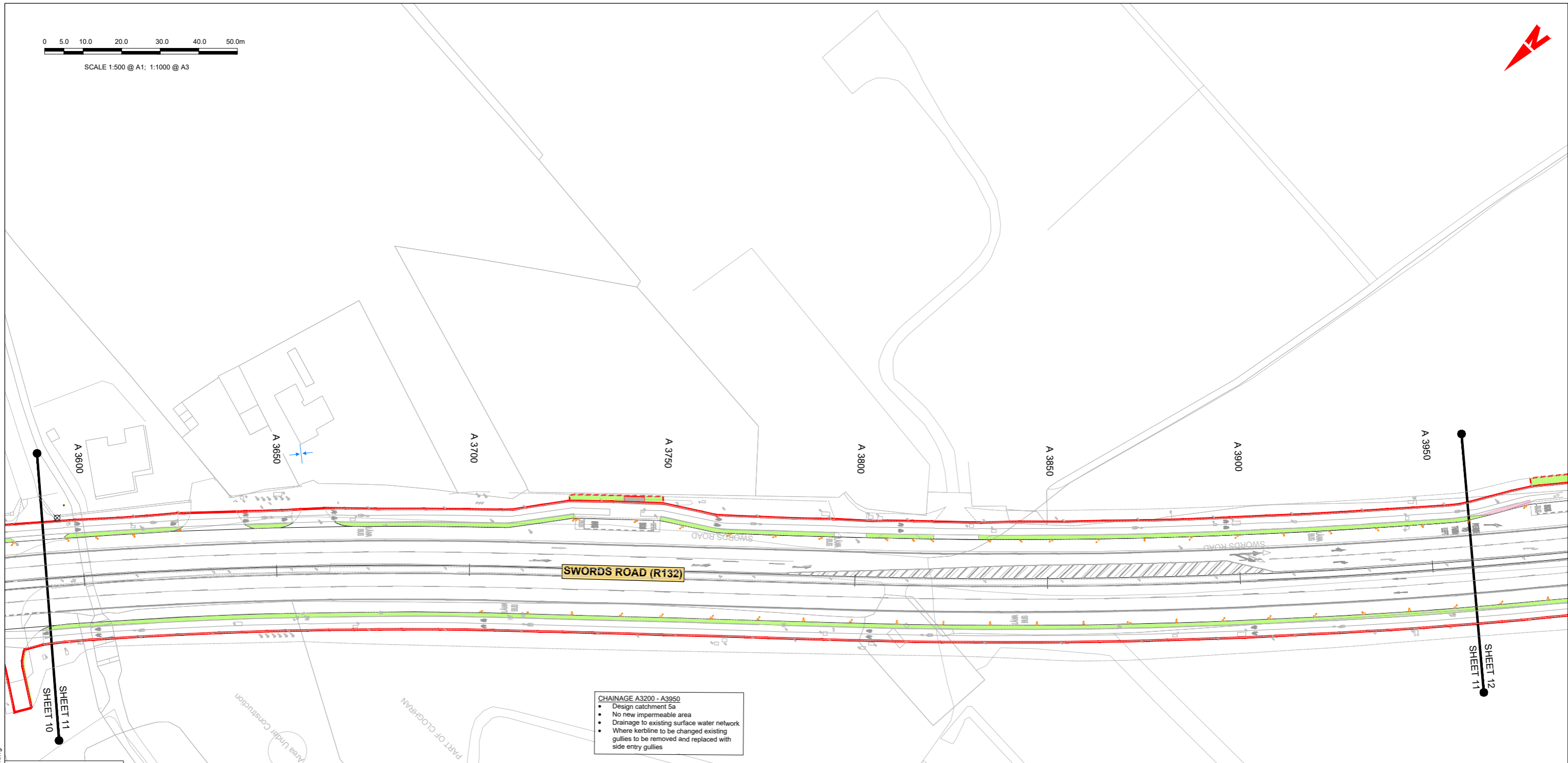
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0010	10 of 37	A	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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



CHAINAGE A3200 - A3950

- Design catchment 5a
- No new impermeable area
- Drainage to existing surface water network
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

LEGEND:

	ADDITIONAL CATCHMENT AREA (EXISTING GRASSSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSSED		PROPOSED MANHOLE
	EXISTING GRASSSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 PAVING
	PROPOSED PERMEABLE PAVING		

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6. EXIFMING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
7. ALL THE EXIFMING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXIFMING GULLY CONNECTIONHOS TO BE MAINTAINED WHERE POSSIBLE WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONHOS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONHOS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0011	11 of 37	A	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



CHAINAGE A3950 - A4100 (east)

- Design catchment 5b
- New impermeable area 168m²
- New impermeable area to drain to existing network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A4100 - A4350 (east)

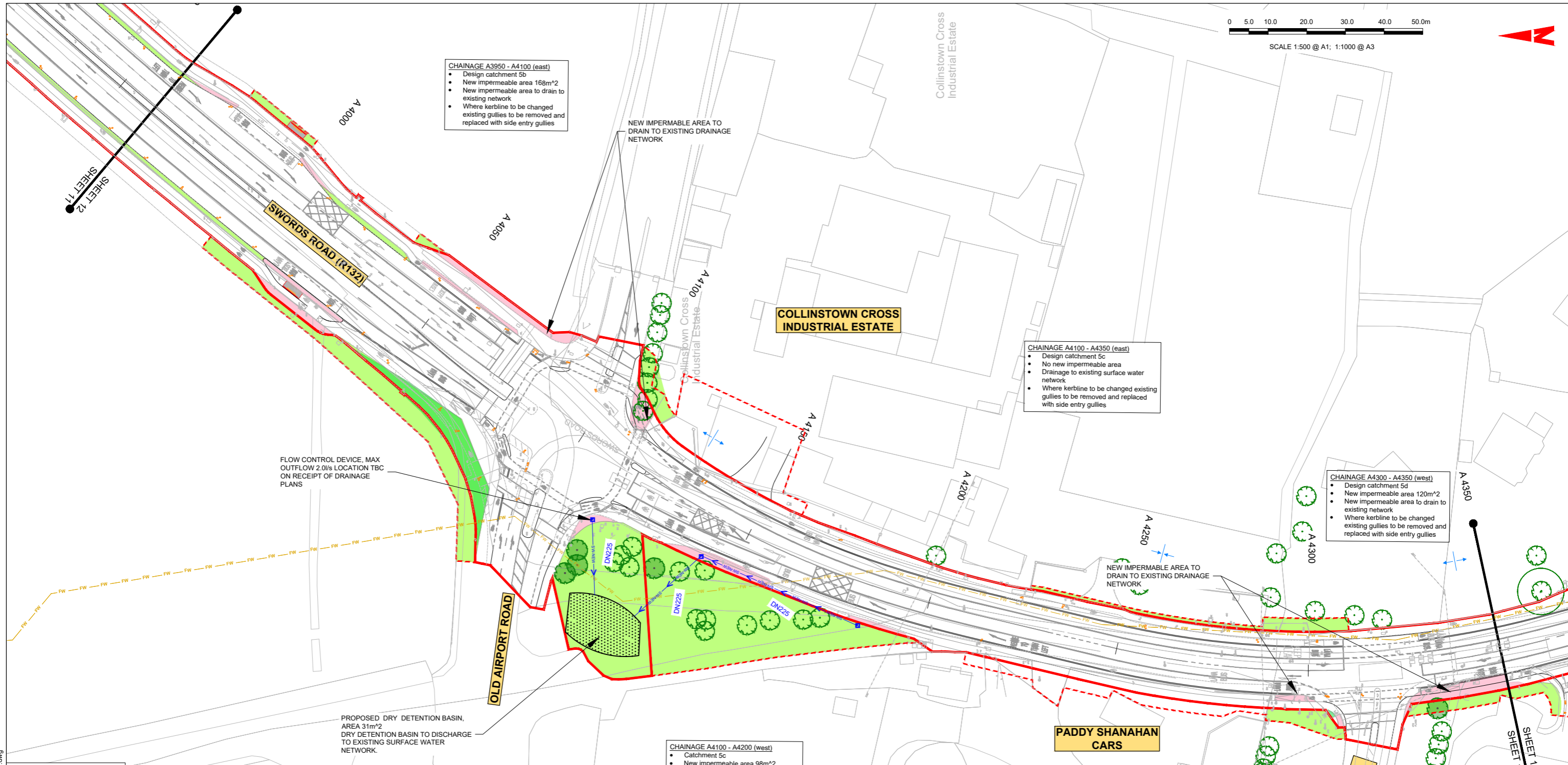
- Design catchment 5c
- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A4300 - A4350 (west)

- Design catchment 5d
- New impermeable area 120m²
- New impermeable area to drain to existing network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A4100 - A4200 (west)

- Catchment 5c
- New impermeable area 98m²
- Design attenuation volume 31m³
- New impermeable area to drain to proposed dry retention basin
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies



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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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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
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5. EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
6. EXISTING MANHOLE COVERS SHALL BE ADJUSTED TO MATCH FINISHED SURFACES.
7. ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE. WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. TWO OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

Project Code: BCIDB
Originator Code: JAC
QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0012	Sheet Number: 12 of 37	Status: A	Rev: M01

LEGEND:

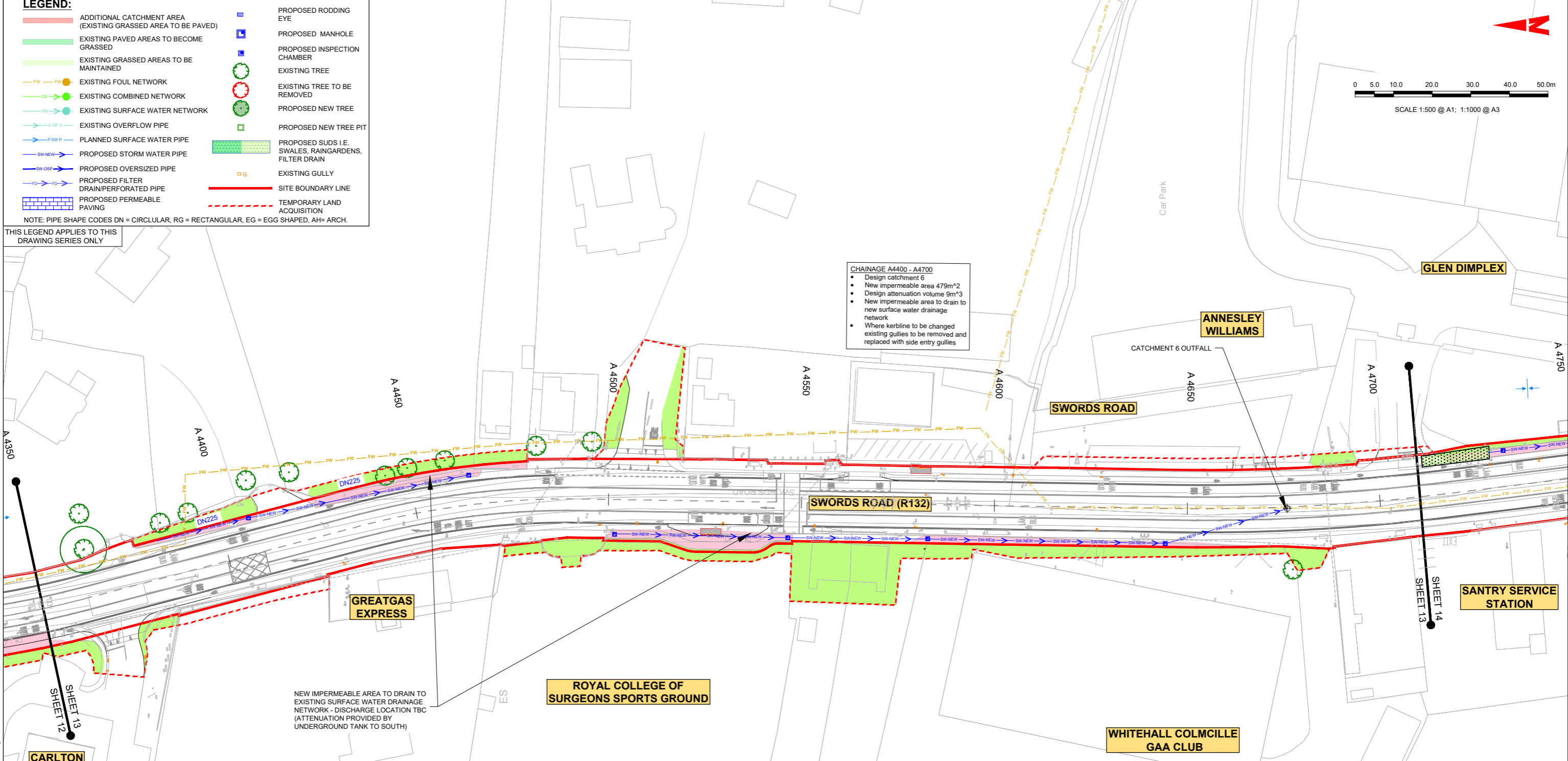
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

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



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- 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
- ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONHOSIDERATION.

ABBREVIATIOHOS:

ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

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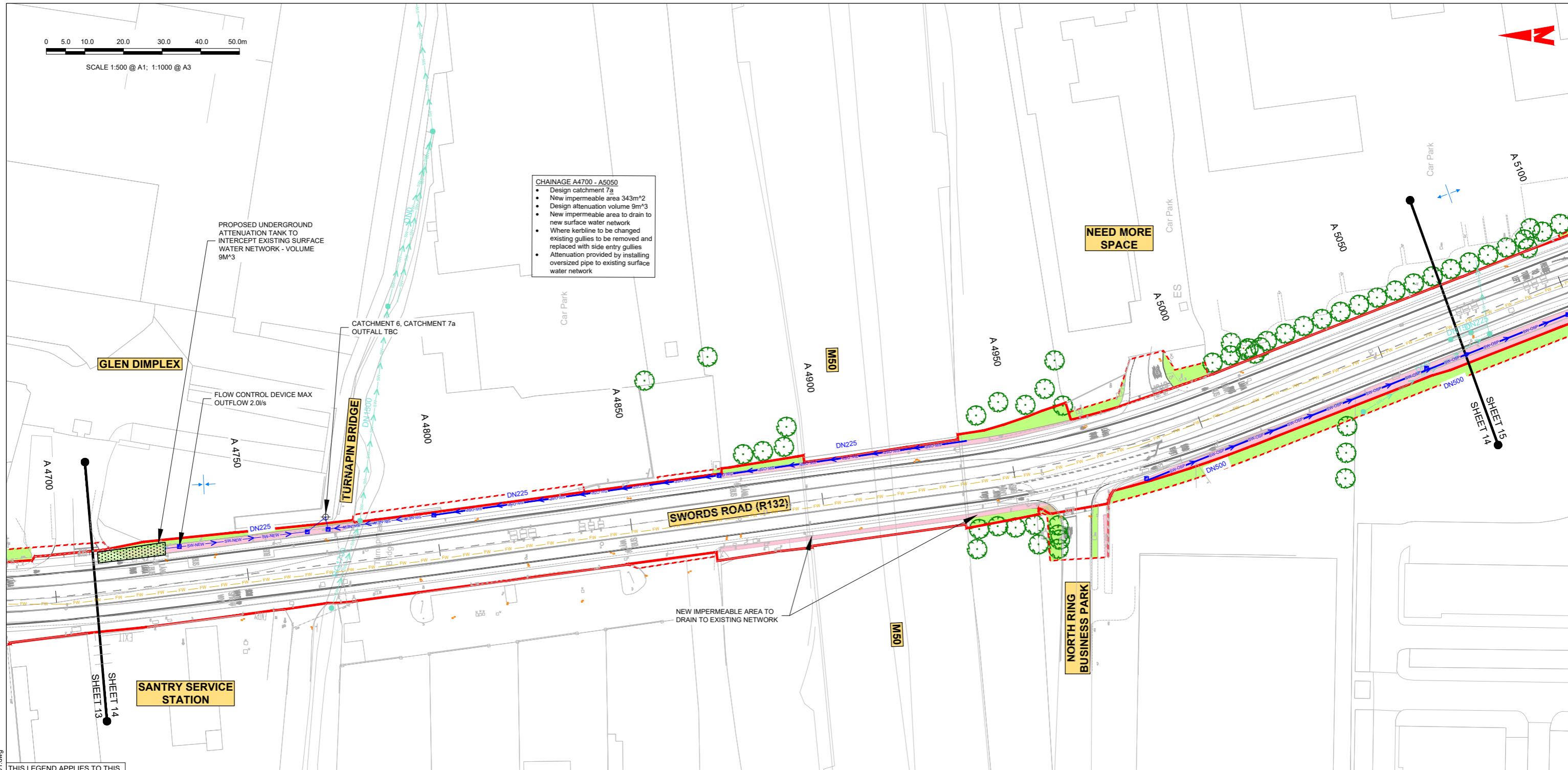
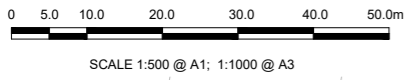
Client: **NTA**
Údarás Náisiúnta Iompair
National Transport Authority

Engineering Designer: **Jacobs**

Date: 06/04/2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: FM, Checked: IL, Approved: HOS

Project Code: BCIDB | Originator Code: JAC | QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0013	Sheet Number: 13 of 37	Status: A	Rev: M01



CHAINAGE A4700 - A5050

- Design catchment 7a
- New impermeable area 343m²
- Design attenuation volume 9m³
- New impermeable area to drain to new surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

PROPOSED UNDERGROUND ATTENUATION TANK TO INTERCEPT EXISTING SURFACE WATER NETWORK - VOLUME 9M³

CATCHMENT 6, CATCHMENT 7a
OUTFALL TBC

FLOW CONTROL DEVICE MAX OUTFLOW 2.0l/s

TURNAPIN BRIDGE

SWORDS ROAD (R132)

NEW IMPERMEABLE AREA TO DRAIN TO EXISTING NETWORK

NORTH RING BUSINESS PARK

NEED MORE SPACE

GLEN DIMPLEX

SANTRY SERVICE STATION

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	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

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10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
VolAtt: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

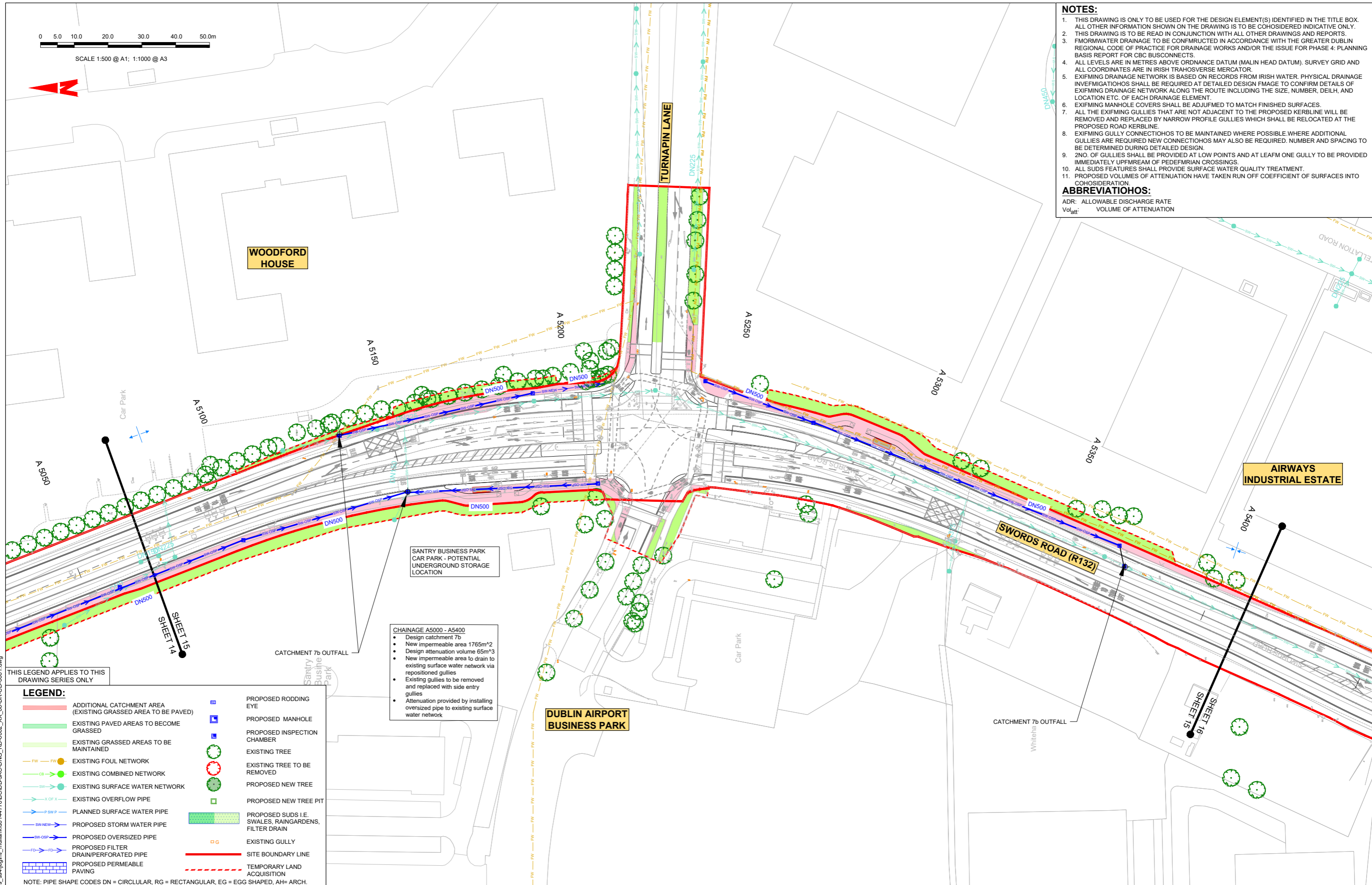
Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0014	14 of 37	A	M01

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

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 - ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
 - PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIONS:**
- ADR: ALLOWABLE DISCHARGE RATE
VolAtt: VOLUME OF ATTENUATION



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

CHAINAGE A5000 - A5400

- Design catchment 7b
- New impermeable area 1765m²
- Design attenuation volume 65m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

 Údarás Náisiúnta Iompair National Transport Authority		 Engineering Designer		
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0015	15 of 37	A	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

0 5.0 10.0 20.0 30.0 40.0 50.0m

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

AIRWAYS INDUSTRIAL ESTATE

A 5400

A 5450

A 5500

A 5550

A 5600

A 5650

A 5700

A 5750

SHEET 15

SHEET 16

SHEET 17

CHAINAGE A5400 - A5750

- Design catchment 8
- New impermeable area 557m²
- Design attenuation volume 15m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

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ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
- EXISTING SURFACE WATER NETWORK
- EXISTING OVERFLOW PIPE
- PLANNED SURFACE WATER PIPE
- 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 SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
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NOTE: PIPE SHAPE CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

C:\pwworking\jacobs_uk_highways_ss4\legint_mullian\00144776\BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0016.dwg

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Engineering Designer: **Jacobs**

Date: 06/04/2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: FM | Checked: IL | Approved: HOS

Project Code: BCIDB | Originator Code: JAC | QMS Code:

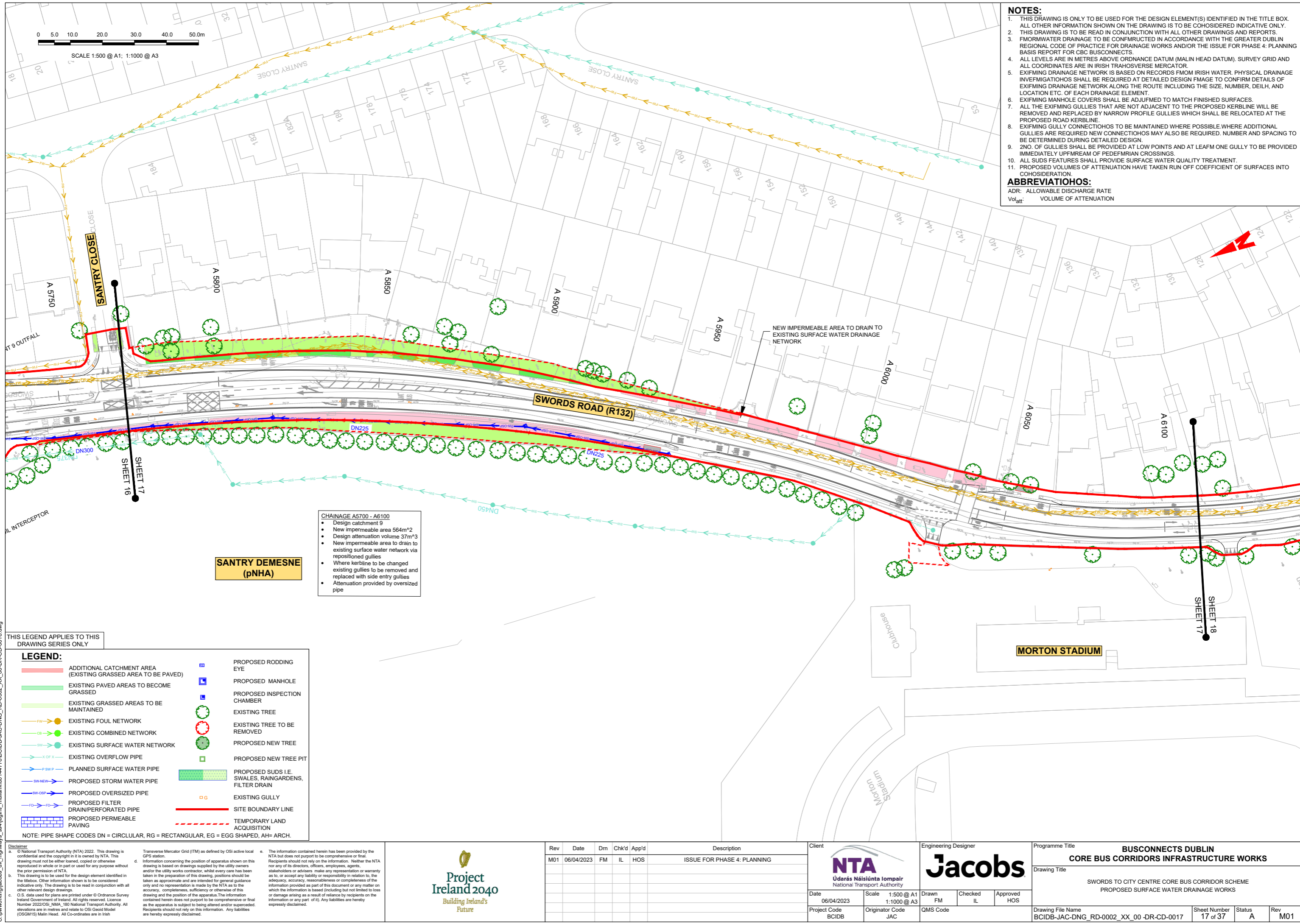
Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0016	Sheet Number: 16 of 37	Status: A	Rev: M01

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

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 3. FLOWMETER DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE ISSUE FOR PHASE 4: PLANNING BASIS REPORT FOR CBC BUSCONNECTS.
 4. ALL LEVELS ARE IN METRES ABOVE ORDINANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRANSVERSE MERCATOR.
 5. EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DETAIL, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
 6. EXISTING MANHOLE COVERS SHALL BE ADJUSTED TO MATCH FINISHED SURFACES.
 7. ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
 8. EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
 9. TWO OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
 10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
 11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIONS:**
- ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION



- CHAINAGE A5700 - A6100**
- Design catchment 9
 - New impermeable area 564m²
 - Design attenuation volume 37m³
 - New impermeable area to drain to existing surface water network via repositioned gullies
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
 - Attenuation provided by oversized pipe

SANTRY DEMESNE (pNHA)

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

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National Transport Authority

Engineering Designer: **Jacobs**

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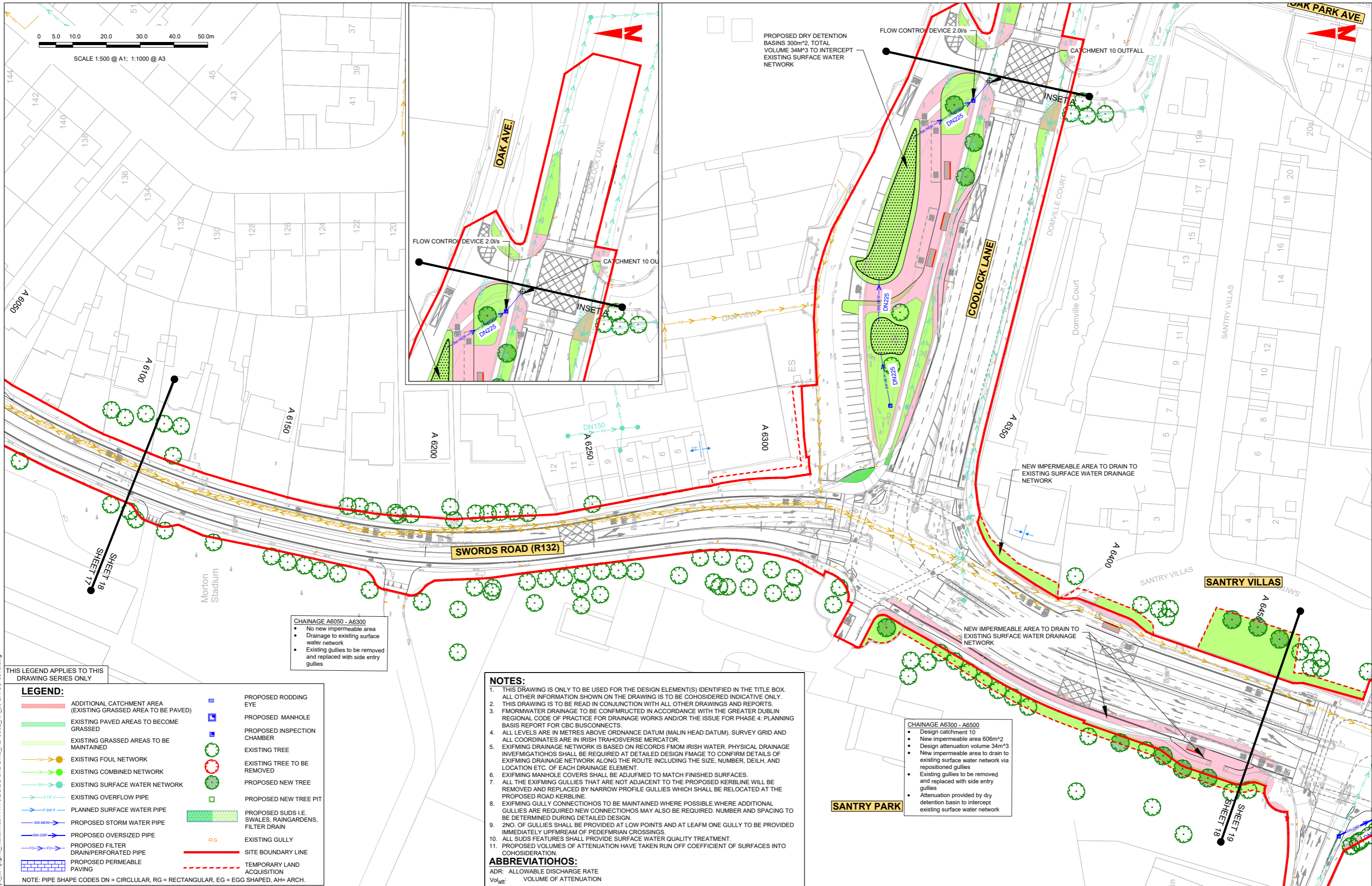
Drawn: FM
Checked: IL
Approved: HOS

Project Code: BCIDB
Originator Code: JAC
QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0017	Sheet Number: 17 of 37	Status: A	Rev: M01

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THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		PROPOSED SUDDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
	PROPOSED STORM WATER PIPE		EXISTING GULLY
	PROPOSED OVERSIZED PIPE		TEMPORARY LAND ACQUISITION
	PROPOSED FILTER DRAIN/PERFORATED PIPE		SITE BOUNDARY LINE
	PROPOSED PERMEABLE PAVING		

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

CHAINAGE A6050 - A6300

- No new impermeable area
- Drainage to existing surface water network
- Existing gullies to be removed and replaced with side entry gullies

CHAINAGE A6300 - A6500

- Design catchment 10
- New impermeable area 606m²
- Design attenuation volume 34m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by dry detention basin to intercept existing surface water network

NOTES:

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- EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
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- 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

ABBREVIATIONS:
 ADR: ALLOWABLE DISCHARGE RATE
 Vol_{att}: VOLUME OF ATTENUATION

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

Engineering Designer: **Jacobs**

Date: 06/04/2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: FM | Checked: IL | Approved: HOS

Project Code: BCIDB | Originator Code: JAC | QMS Code:

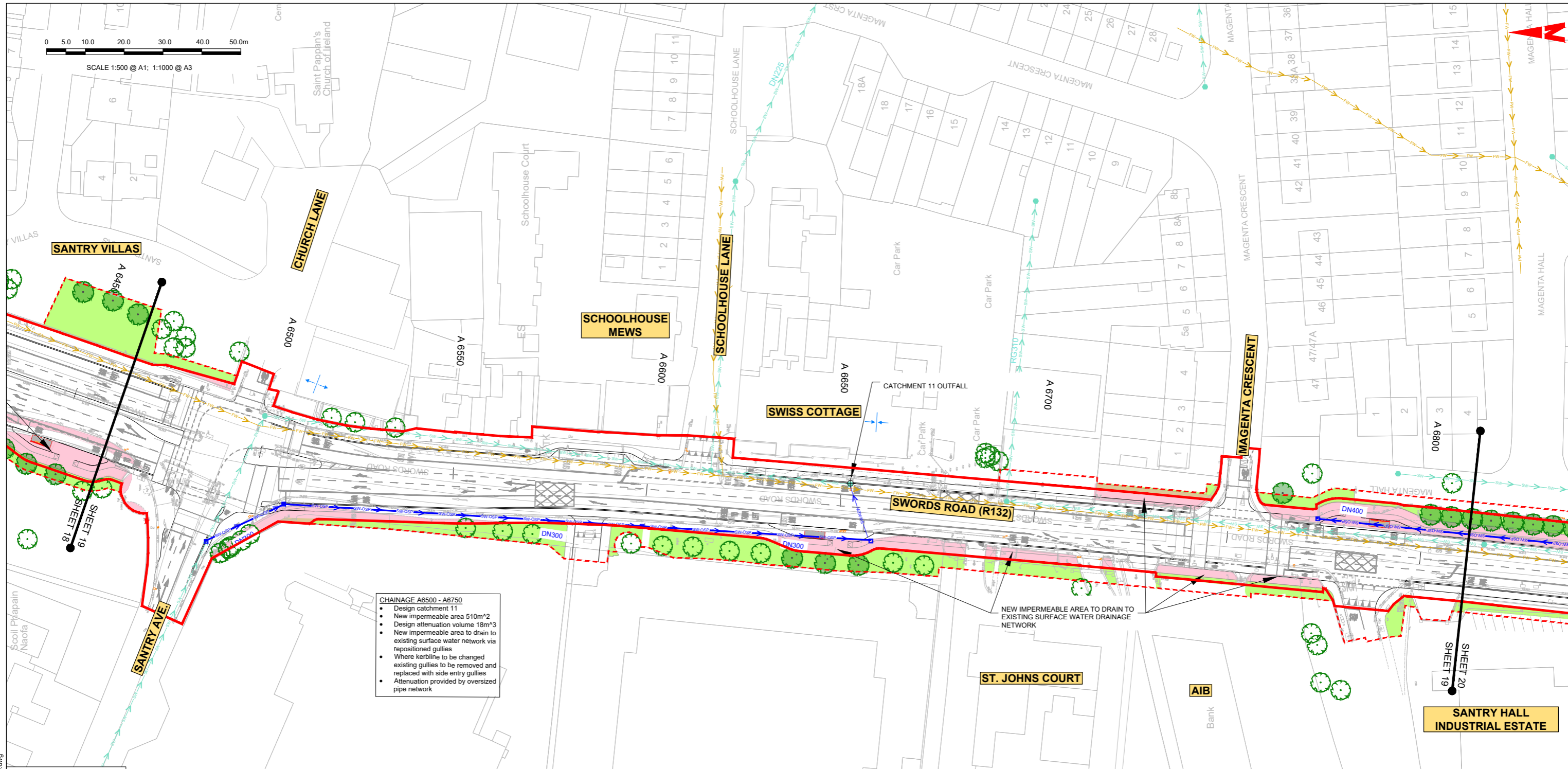
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Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0018	Sheet Number: 18 of 37	Status: A	Rev: M01

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



- CHAINAGE A6500 - A6750**
- Design catchment 11
 - New impermeable area 510m²
 - Design attenuation volume 18m³
 - New impermeable area to drain to existing surface water network via repositioned gullies
 - Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies
 - Attenuation provided by oversized pipe network

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

LEGEND:

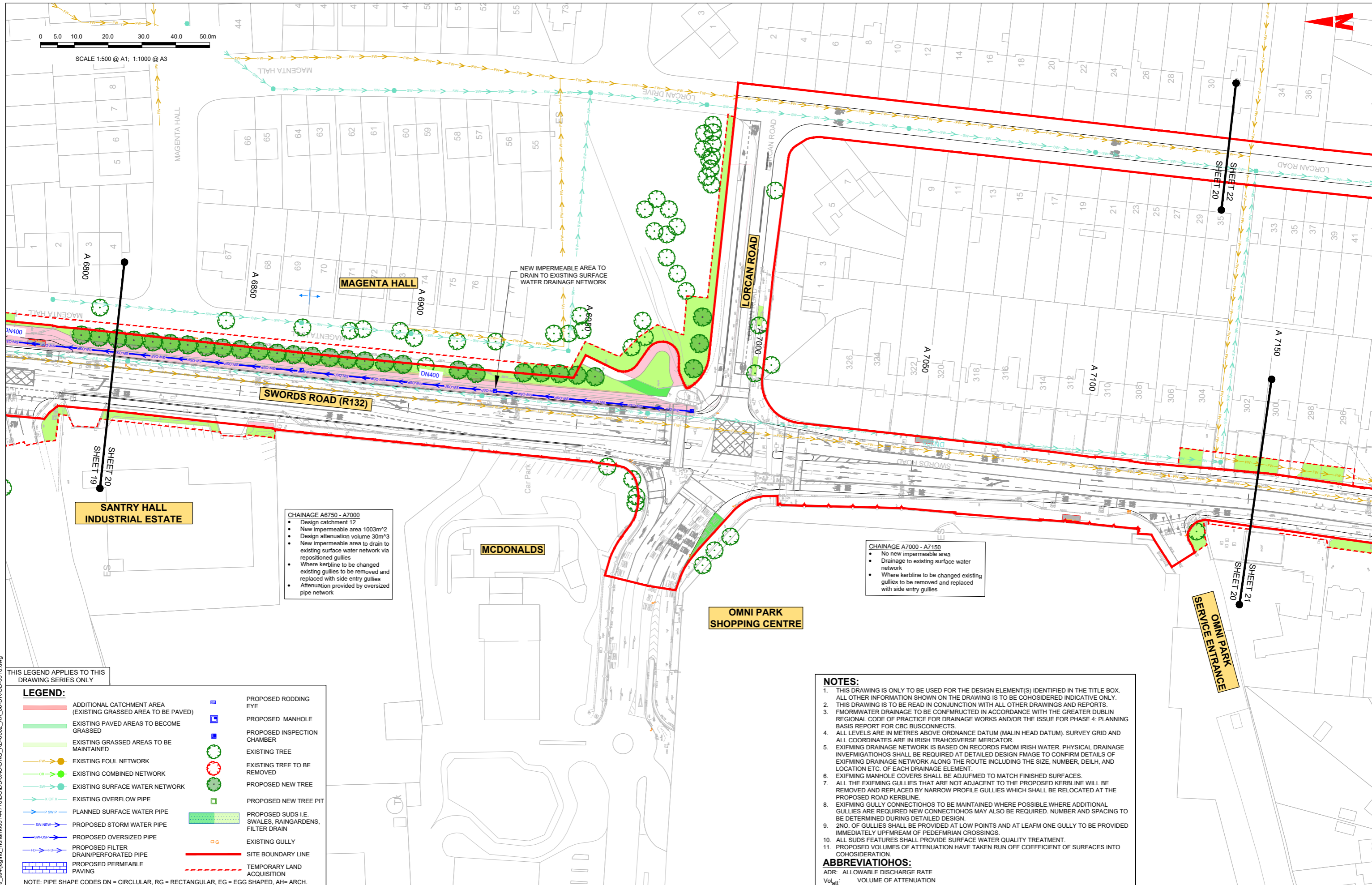
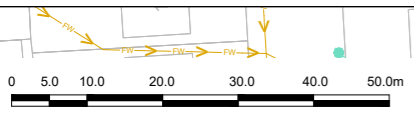
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	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
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	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
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	PROPOSED PERMEABLE PAVING		

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 9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
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- ABBREVIATIOHOS:**
ADR: ALLOWABLE DISCHARGE RATE
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<p>Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0019</p>						<p>Sheet Number: 19 of 37</p> <p>Status: A</p> <p>Rev: M01</p>													

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CHAINAGE A6750 - A7000

- Design catchment 12
- New impermeable area 1003m²
- Design attenuation volume 30m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by oversized pipe network

CHAINAGE A7000 - A7150

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

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	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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
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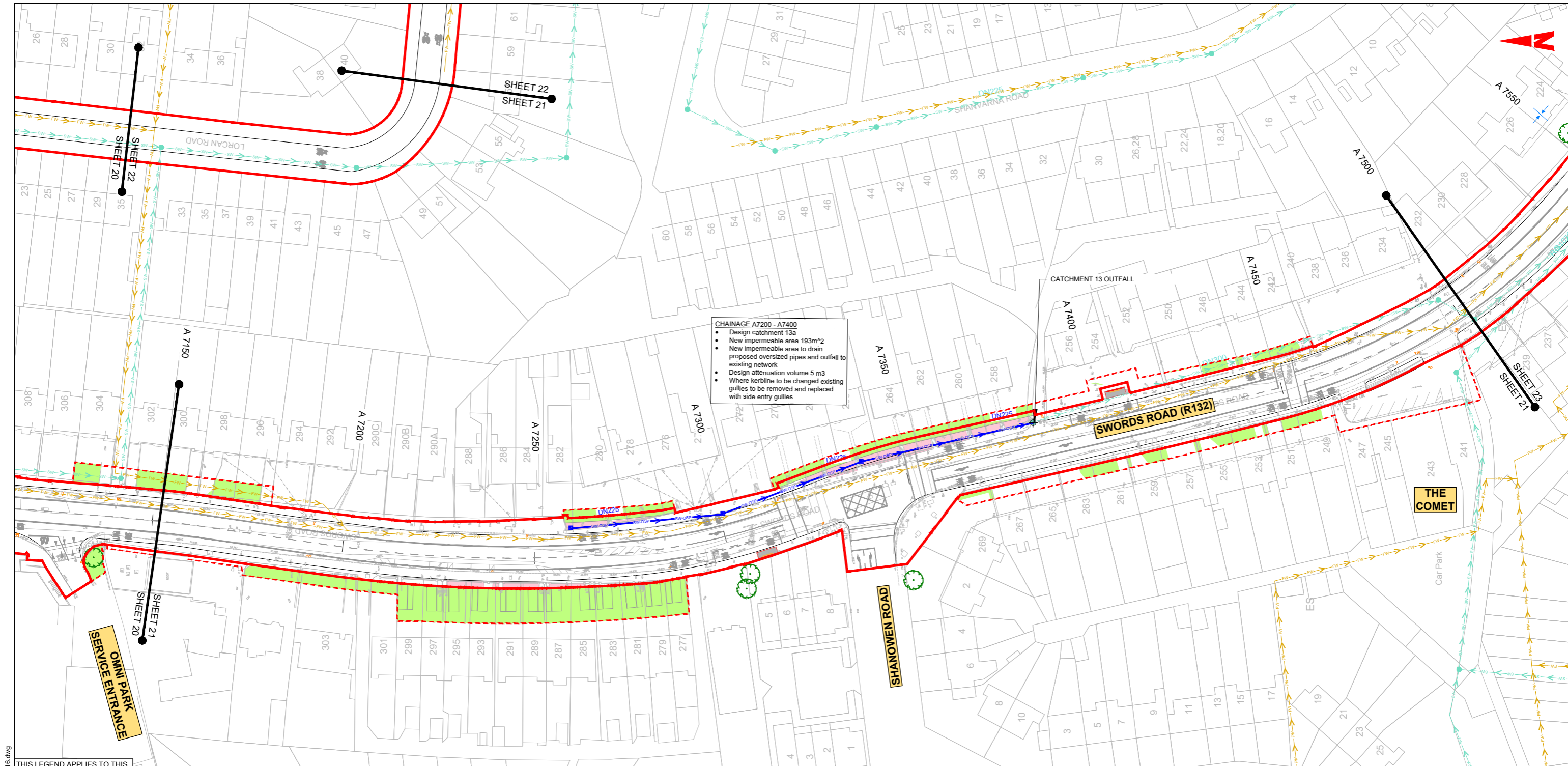
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ABBREVIATIOHOS:
 ADR: ALLOWABLE DISCHARGE RATE
 Vol_{att}: VOLUME OF ATTENUATION

<p>Project Ireland 2040 Building Ireland's Future</p>		<p>Rev M01 Date 06/04/2023 Drn FM Chk'd IL App'd HOS Description ISSUE FOR PHASE 4: PLANNING</p>	<p>Client NTA Údará Náisiúnta Iompair National Transport Authority</p>	<p>Engineering Designer Jacobs</p>	<p>Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>
<p>Disclaimers: a. © National Transport Authority (NTA) 2022. This drawing is confidential and the copyright in it is owned by NTA. This drawing must not be either loaned, copied or otherwise reproduced in whole or in part or used for any purpose without the prior permission of NTA. b. This drawing is to be used for the design element identified in the titlebox. Other information shown is to be considered indicative only. The drawing is to be read in conjunction with all other relevant design drawings. c. O.S. data used for plans are printed under © Ordnance Survey Ireland Government of Ireland. All rights reserved. Licence Number 2022/OSI_MMA_180 National Transport Authority. All elevations are in metres and relate to OSI Good Model (OSGM15) Malin Head. All Co-ordinates are in Irish Transverse Mercator Grid (ITM) as defined by OSI active local GPS station. d. Information concerning the position of apparatus shown on this drawing is based on drawings supplied by the utility owners and/or the utility works contractor, whilst every care has been taken as appropriate and are intended for general guidance only and no representation is made by the NTA as to the accuracy, completeness, sufficiency or otherwise of this drawing and the position of the apparatus. The information contained herein does not purport to be comprehensive or final as the apparatus is subject to being altered and/or superseded. Recipients should not rely on this information. Any liabilities are hereby expressly disclaimed.</p>		<p>Date 06/04/2023 Scale 1:500 @ A1 1:1000 @ A3 Drawn FM Checked IL Approved HOS</p>	<p>Project Code BCIDB Originator Code JAC QMS Code</p>	<p>Drawing File Name BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0020</p>	<p>Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</p>
<p>Sheet Number 20 of 37 Status A Rev M01</p>		<p>DO NOT SCALE USE FIGURED DIMENSIONS ONLY</p>			



CHAINAGE A7200 - A7400

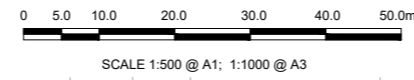
- Design catchment 13a
- New impermeable area 193m²
- New impermeable area to drain proposed oversized pipes and outfall to existing network
- Design attenuation volume 5 m³
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCLULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.



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4. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAHOSVERSE MERCATOR.
5. EXIFMING DRAINAGE NETWORK IS BASED ON RECORDS FMOM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATIONS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
6. EXIFMING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
7. ALL THE EXIFMING GULLIES THAT ARE NOT ADJUFMED TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXIFMING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE.WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDEFMRIA CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONOS:
 ADR: ALLOWABLE DISCHARGE RATE
 Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0021	21 of 37	A	M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	PROPOSED STORM WATER PIPE
	PROPOSED OVERSIZED PIPE
	PROPOSED FILTER DRAIN/PERFORATED PIPE
	PROPOSED PERMEABLE PAVING
	PROPOSED RODDING EYE
	PROPOSED MANHOLE 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.

CHAINAGE A7200 - A7400

- Design catchment 13a
- New impermeable area 193m²
- New impermeable area to drain proposed oversized pipes and outfall to existing network
- Design attenuation volume 5 m³
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

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 - ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAHOSVERSE MERCATOR.
 - EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INFEMIGATIONOS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
 - EXIFING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
 - ALL THE EXIFING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
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 - ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
 - PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONOS:
 ADR: ALLOWABLE DISCHARGE RATE
 Volatt: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
 Scale: 1:500 @ A1
 1:1000 @ A3

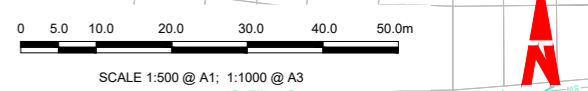
Engineering Designer: **Jacobs**

Drawn: FM
 Checked: IL
 Approved: HOS

Project Code: BCIDB
 Originator Code: JAC
 QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0022	Sheet Number: 22 of 37	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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LEGEND:	
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)
	EXISTING PAVED AREAS TO BECOME GRASSED
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	PLANNED SURFACE WATER PIPE
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	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.

CHAINAGE A7700 - A7950

- Design catchment 13b
- New impermeable area 707m²
- Design attenuation volume 20m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

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- ABBREVIATIOHOS:**
ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023 Scale: 1:500 @ A1
1:1000 @ A3

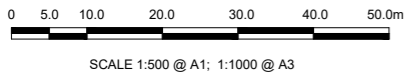
Project Code: BCIDB Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM Checked: IL Approved: HOS

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0023	Sheet Number: 23 of 37	Status: A	Rev: M01

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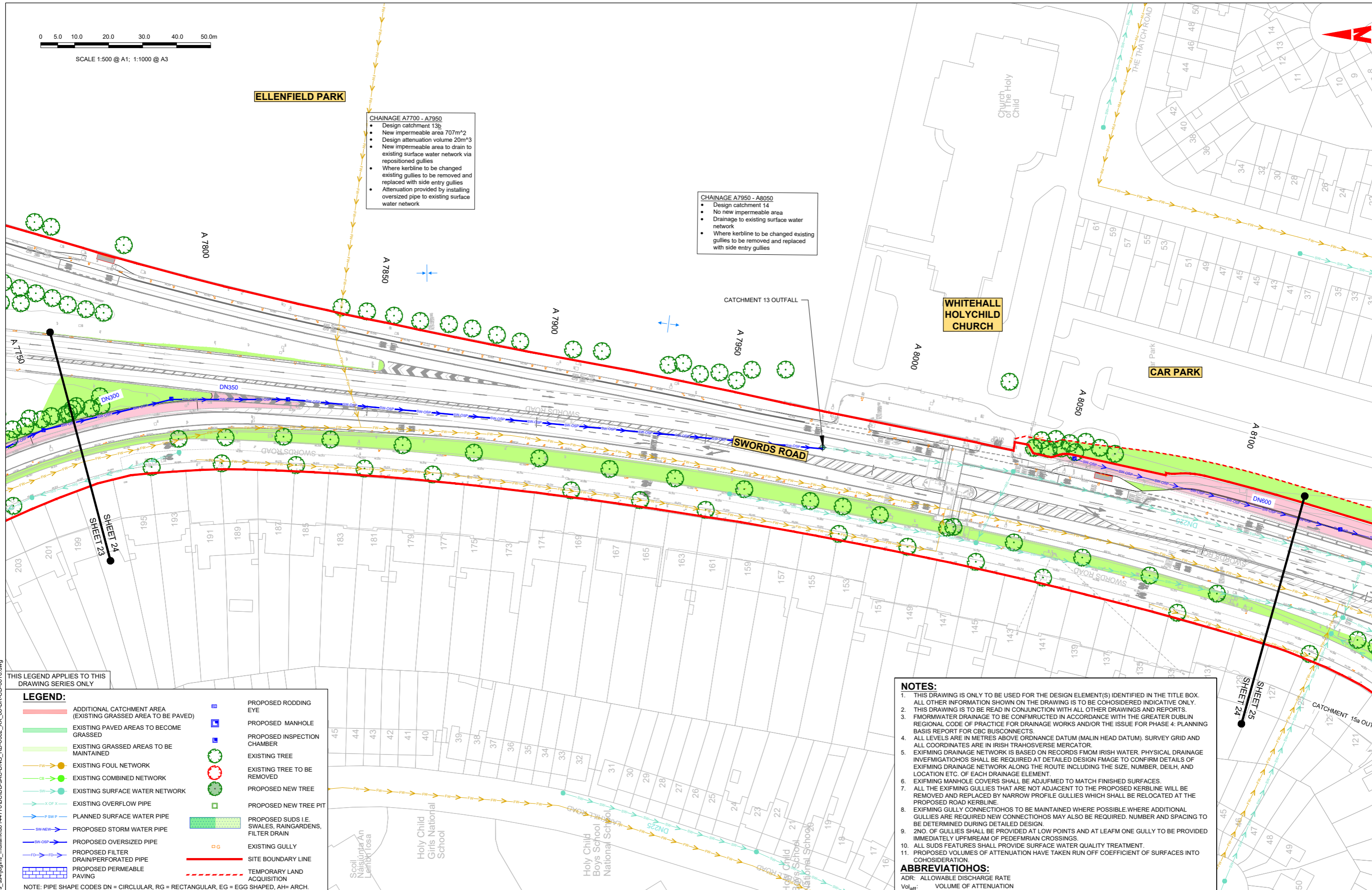
ELLENFIELD PARK

CHAINAGE A7700 - A7950

- Design catchment 13b
- New impermeable area 707m²
- Design attenuation volume 20m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

CHAINAGE A7950 - A8050

- Design catchment 14
- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies



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	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN
	PROPOSED STORM WATER PIPE		EXISTING GULLY
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- ABBREVIATIONHOS:**
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 Vol:att: VOLUME OF ATTENUATION

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<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3</p>		<p>Drawn: FM</p>		<p>Checked: IL</p>		<p>Approved: HOS</p>	
<p>Project Code: BCIDB</p>		<p>Originator Code: JAC</p>		<p>QMS Code:</p>		<p>Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0024</p>	
<p>Sheet Number: 24 of 37</p>		<p>Status: A</p>		<p>Rev: M01</p>		<p>DO NOT SCALE USE FIGURED DIMENSIONS ONLY</p>	

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

SHEET 26
SHEET 25

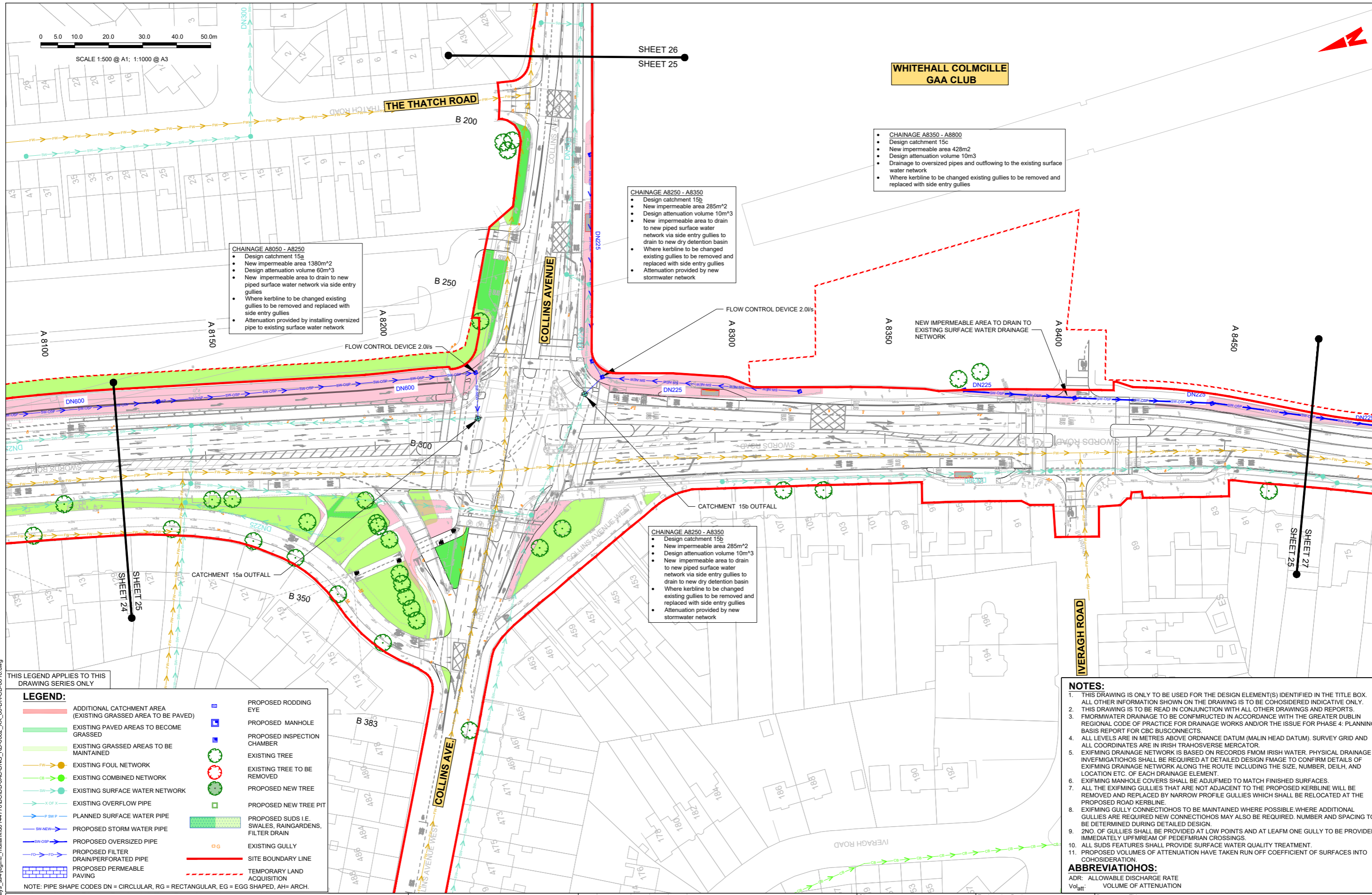
**WHITEHALL COLMCILLE
GAA CLUB**

- CHAINAGE A8350 - A8800
- Design catchment 15c
- New impermeable area 428m²
- Design attenuation volume 10m³
- Drainage to oversized pipes and outflowing to the existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

- CHAINAGE A8250 - A8350
- Design catchment 15b
- New impermeable area 285m²
- Design attenuation volume 10m³
- New impermeable area to drain to new piped surface water network via side entry gullies to drain to new dry detention basin
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by new stormwater network

- CHAINAGE A8050 - A8250
- Design catchment 15a
- New impermeable area 1380m²
- Design attenuation volume 60m³
- New impermeable area to drain to new piped surface water network via side entry gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

- CHAINAGE A8250 - A8350
- Design catchment 15b
- New impermeable area 285m²
- Design attenuation volume 10m³
- New impermeable area to drain to new piped surface water network via side entry gullies to drain to new dry detention basin
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by new stormwater network



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 CODES DN = CIRCULAR, RG = RECTANGULAR, EG = EGG SHAPED, AH= ARCH.

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- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND REPORTS.
- STORMWATER DRAINAGE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE ISSUE FOR PHASE 4: PLANNING 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 IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVESTIGATION SHALL BE REQUIRED AT DETAILED DESIGN STAGE TO CONFIRM DETAILS OF EXISTING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEPTH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
- EXISTING MANHOLE COVERS SHALL BE ADJUSTED TO MATCH FINISHED SURFACES.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
- EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE. WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
- 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

ABBREVIATIONS:
ADR: ALLOWABLE DISCHARGE RATE
VolAtt: VOLUME OF ATTENUATION

<p>Rev M01 06/04/2023 FM IL HOS ISSUE FOR PHASE 4: PLANNING</p>					<p>Client: NTA Údarás Náisiúnta Iompair National Transport Authority</p>			<p>Engineering Designer: Jacobs</p>			<p>Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>			
<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3</p>					<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3</p>			<p>Drawn: FM, Checked: IL, Approved: HOS</p>			<p>Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</p>			
<p>Project Code: BCIDB, Originator Code: JAC</p>					<p>Project Code: BCIDB, Originator Code: JAC</p>			<p>QMS Code</p>			<p>Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0025</p>			
<p>Project Ireland 2040 Building Ireland's Future</p>					<p>Project Code: BCIDB, Originator Code: JAC</p>			<p>QMS Code</p>			<p>Sheet Number: 25 of 37, Status: A, Rev: M01</p>			

DO NOT SCALE USE FIGURED DIMENSIONS ONLY

**THIS DRAWING
CONTAINS NO
DESIGN CONTENT**

CHAINAGE A8350 - A11764

- No new impermeable area
- Drainage to existing surface water network
- Existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	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

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Engineering Designer: **Jacobs**

Date: 06/04/2023 | Scale: 1:500 @ A1, 1:1000 @ A3 | Drawn: FM | Checked: IL | Approved: HOS

Project Code: BCIDB | Originator Code: JAC | QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0026	Sheet Number: 26 of 37	Status: A	Rev: M01

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- EXIFIMING DRAINAGE NETWORK IS BASED ON RECORDS FMOM IRISH WATER. PHYSICAL DRAINAGE INVEFMIGATIONOS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFIMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT
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ABBREVIATIONOS:
ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

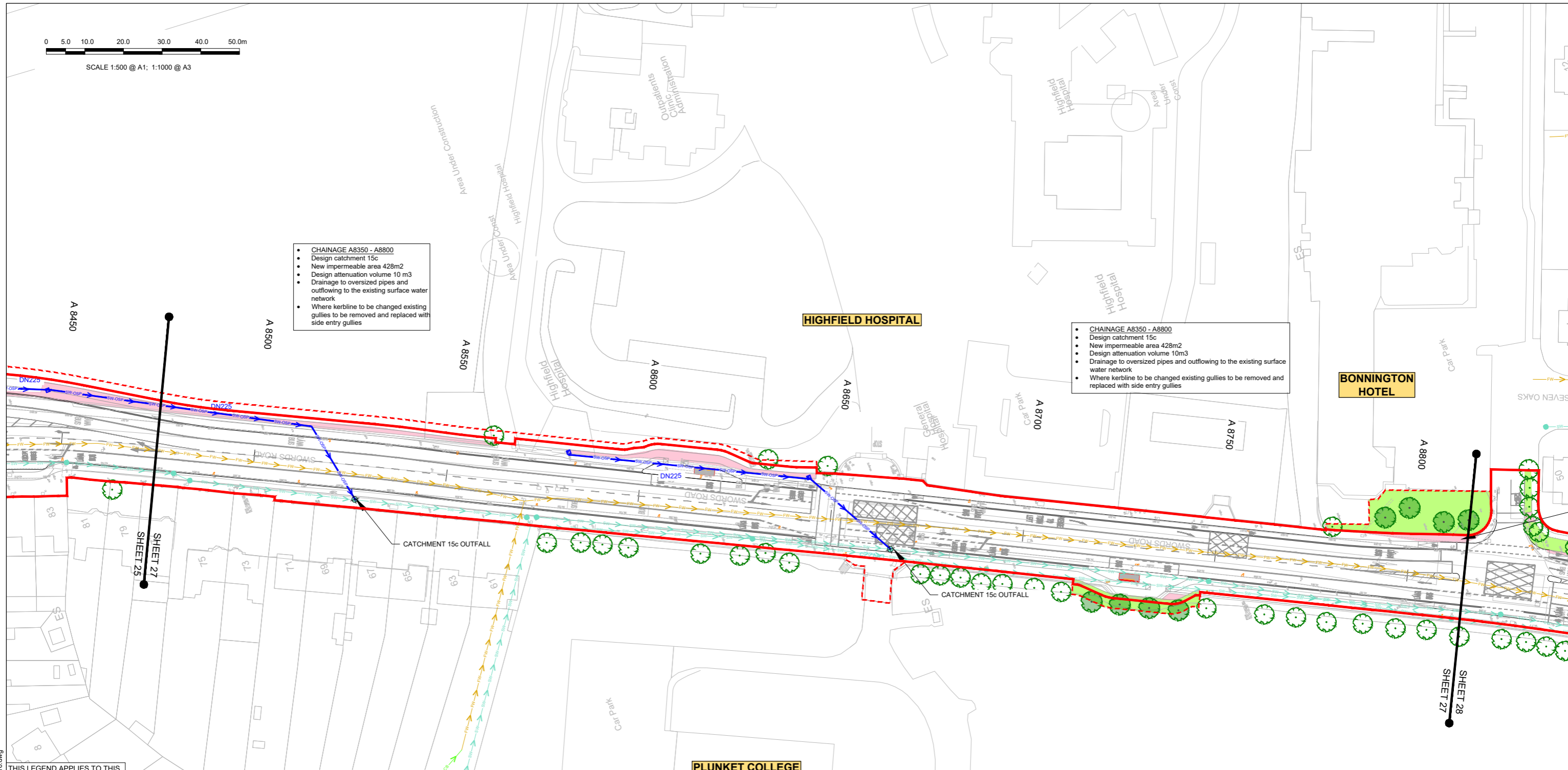
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SCALE 1:500 @ A1; 1:1000 @ A3

- CHAINAGE A8350 - A8800
- Design catchment 15c
- New impermeable area 428m²
- Design attenuation volume 10 m³
- Drainage to oversized pipes and outflowing to the existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

- CHAINAGE A8350 - A8800
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THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK | | EXISTING TREE TO BE REMOVED |
| | EXISTING SURFACE WATER NETWORK | | PROPOSED NEW TREE |
| | EXISTING OVERFLOW PIPE | | PROPOSED NEW TREE PIT |
| | PLANNED SURFACE WATER PIPE | | PROPOSED SUDS I.E. SWALES, RAINGARDENS, FILTER DRAIN |
| | PROPOSED STORM WATER PIPE | | EXISTING GULLY |
| | PROPOSED OVERSIZED PIPE | | SITE BOUNDARY LINE |
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- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONHOS:

- ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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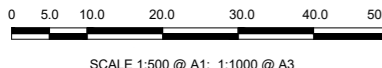


Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

 Údarás Náisiúnta Iompair National Transport Authority		Engineering Designer 		
Date	Scale	Drawn	Checked	Approved
06/04/2023	1:500 @ A1 1:1000 @ A3	FM	IL	HOS
Project Code	Originator Code	QMS Code		
BCIDB	JAC			

Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0027	27 of 37	A	M01

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BONNINGTON HOTEL

SEVEN OAKS

SWARDS ROAD

GRIFFITH DOWNS

GRIFFITH AVENUE

WHITEHALL GARDA STATION

GRIFFITH AVENUE

- CHAINAGE A8800 - A9500**
- Design catchment 16a
 - New impermeable area 200m*2
 - Design attenuation volume 11m*3
 - New impermeable area to drain to existing surface water network via repositioned gullies
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
 - Attenuation provided by installing oversized pipe to existing surface water network

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 PAVING

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 11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIOHOS:**
ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

Project Code: BCIDB
Originator Code: JAC
QMS Code:

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWARDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0028	Sheet Number: 28 of 37	Status: A	Rev: M01

DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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



CHAINAGE A8800 - A9500

- Design catchment 16a
- New impermeable area 200m*2
- Design attenuation volume 11m*3
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

ABLE AREA TO DRAIN TO FACE WATER DRAINAGE



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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
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	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
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3. FFORMWATER DRAINAGE TO BE CONFRUCTED IN ACCORDANCE WITH THE GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS AND/OR THE ISSUE FOR PHASE 4: PLANNING BASIS REPORT FOR CBC BUSCONNECTS.
4. ALL LEVELS ARE IN METRES ABOVE ORDANCE DATUM (MALIN HEAD DATUM). SURVEY GRID AND ALL COORDINATES ARE IN IRISH TRAHOSVERSE MERCATOR.
5. EXIFMING DRAINAGE NETWORK IS BASED ON RECORDS FROM IRISH WATER. PHYSICAL DRAINAGE INVEFMIGATIONHS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT
6. EXIFMING MANHOLE COVERS SHALL BE ADJUFMED TO MATCH FINISHED SURFACES.
7. ALL THE EXIFMING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
8. EXIFMING GULLY CONNECTIONHS TO BE MAINTAINED WHERE POSSIBLE.WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONHS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
9. 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAFM ONE GULLY TO BE PROVIDED IMMEDIATELY UPFMREAM OF PEDEFMRIAN CROSSINGS.
10. ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
11. PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONHS:
ADR: ALLOWABLE DISCHARGE RATE
Volatt: VOLUME OF ATTENUATION

<p>Project Ireland 2040 Building Ireland's Future</p>		<p>Rev M01 Date 06/04/2023 Dm FM Chk'd IL App'd HOS Description ISSUE FOR PHASE 4: PLANNING</p>		<p>Client NTA Údaráis Náisiúnta Iompair National Transport Authority</p>		<p>Engineering Designer Jacobs</p>		<p>Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>	
<p>Date 06/04/2023 Scale 1:500 @ A1 1:1000 @ A3</p>		<p>Project Code BCIDB Originator Code JAC</p>		<p>Drawn FM Checked IL Approved HOS</p>		<p>Drawing File Name BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0029</p>		<p>Sheet Number 29 of 37 Status A Rev M01</p>	

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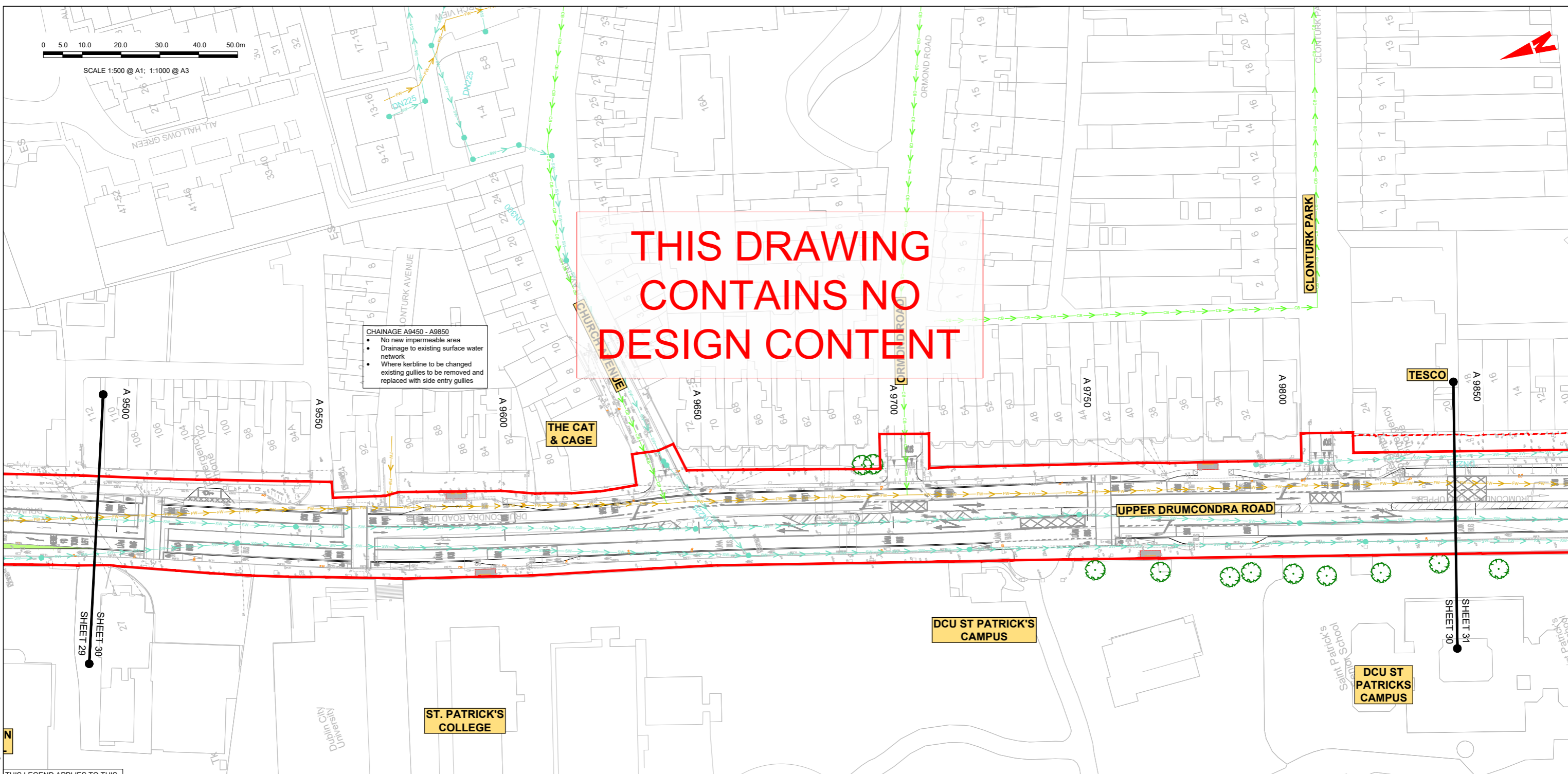
SCALE 1:500 @ A1; 1:1000 @ A3



**THIS DRAWING
CONTAINS NO
DESIGN CONTENT**

CHAINAGE A9450 - A9850

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

<p>LEGEND:</p> <ul style="list-style-type: none"> 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 NETWORK EXISTING SURFACE WATER NETWORK EXISTING OVERFLOW PIPE PLANNED SURFACE WATER PIPE PROPOSED STORM WATER PIPE PROPOSED OVERSIZED PIPE PROPOSED FILTER DRAIN/PERFORATED PIPE PROPOSED PERMEABLE PAVING 	<ul style="list-style-type: none"> 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 TEMPORARY LAND ACQUISITION
---	--

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- EXISTING DRAINAGE NETWORK IS BASED ON RECORDS FMOM IRISH WATER. PHYSICAL DRAINAGE INVEFMIGATIOHOS SHALL BE REQUIRED AT DETAILED DESIGN FMAGE TO CONFIRM DETAILS OF EXIFMING DRAINAGE NETWORK ALONG THE ROUTE INCLUDING THE SIZE, NUMBER, DEILH, AND LOCATION ETC. OF EACH DRAINAGE ELEMENT.
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- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIOHOS:

ADR: ALLOWABLE DISCHARGE RATE
Vol^{att}: VOLUME OF ATTENUATION

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Rev	Date	Drm	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUE FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

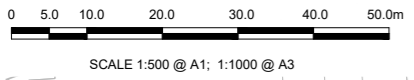
Project Code: BCIDB
Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

Programme Title: BUSCONNECTS DUBLIN			
Drawing Title: CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing File Name: BCIDB-JAC-DNG_RD-0002_XX_00-DR-CD-0030			
Sheet Number: 30 of 37	Status: A	Rev: M01	

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- CHAINAGE A10150 - A10500**
- Design catchment 17a
 - New impermeable area 213m²
 - Design attenuation volume 3m³
 - New impermeable area to drain to existing surface water network via repositioned gullies
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
 - Attenuation provided by installing oversized pipe to existing surface water network

- CHAINAGE A9500 - A10150**
- Design catchment 16b
 - New impermeable area 644m²
 - Design attenuation volume 20m³
 - New impermeable area to drain to existing surface water network via repositioned gullies
 - Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
 - Attenuation provided by installing oversized pipe to existing surface water network and tree pits

NEW BRIDGE RUNOFF TO BE COLLECTED BY SLOT DRAIN OR SIMILAR - DRAINAGE TO CONNECT TO EXISTING SURFACE WATER NETWORK

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

LEGEND:

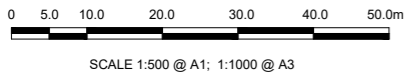
	ADDITIONAL CATCHMENT AREA (EXISTING GRASSED AREA TO BE PAVED)		PROPOSED RODDING EYE
	EXISTING PAVED AREAS TO BECOME GRASSED		PROPOSED MANHOLE
	EXISTING GRASSED AREAS TO BE MAINTAINED		PROPOSED INSPECTION CHAMBER
	EXISTING FOUL NETWORK		EXISTING TREE
	EXISTING COMBINED NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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		

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- ABBREVIATIONOS:**
ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

<p>Project Ireland 2040 Building Ireland's Future</p>	<p>Rev M01 Date 06/04/2023 Dm FM Chk'd IL App'd HOS Description ISSUED FOR PHASE 4: PLANNING</p>	<p>Client NTA Údarás Náisiúnta Iompair National Transport Authority</p>	<p>Engineering Designer Jacobs</p>	<p>Programme Title BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>
	<p>Date 06/04/2023 Scale 1:500 @ A1 1:1000 @ A3</p> <p>Project Code BCIDB Originator Code JAC</p>	<p>Drawn FM Checked IL Approved HOS</p> <p>QMS Code</p>	<p>Drawing File Name BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0031</p> <p>Sheet Number 31 of 37 Status A Rev M01</p>	

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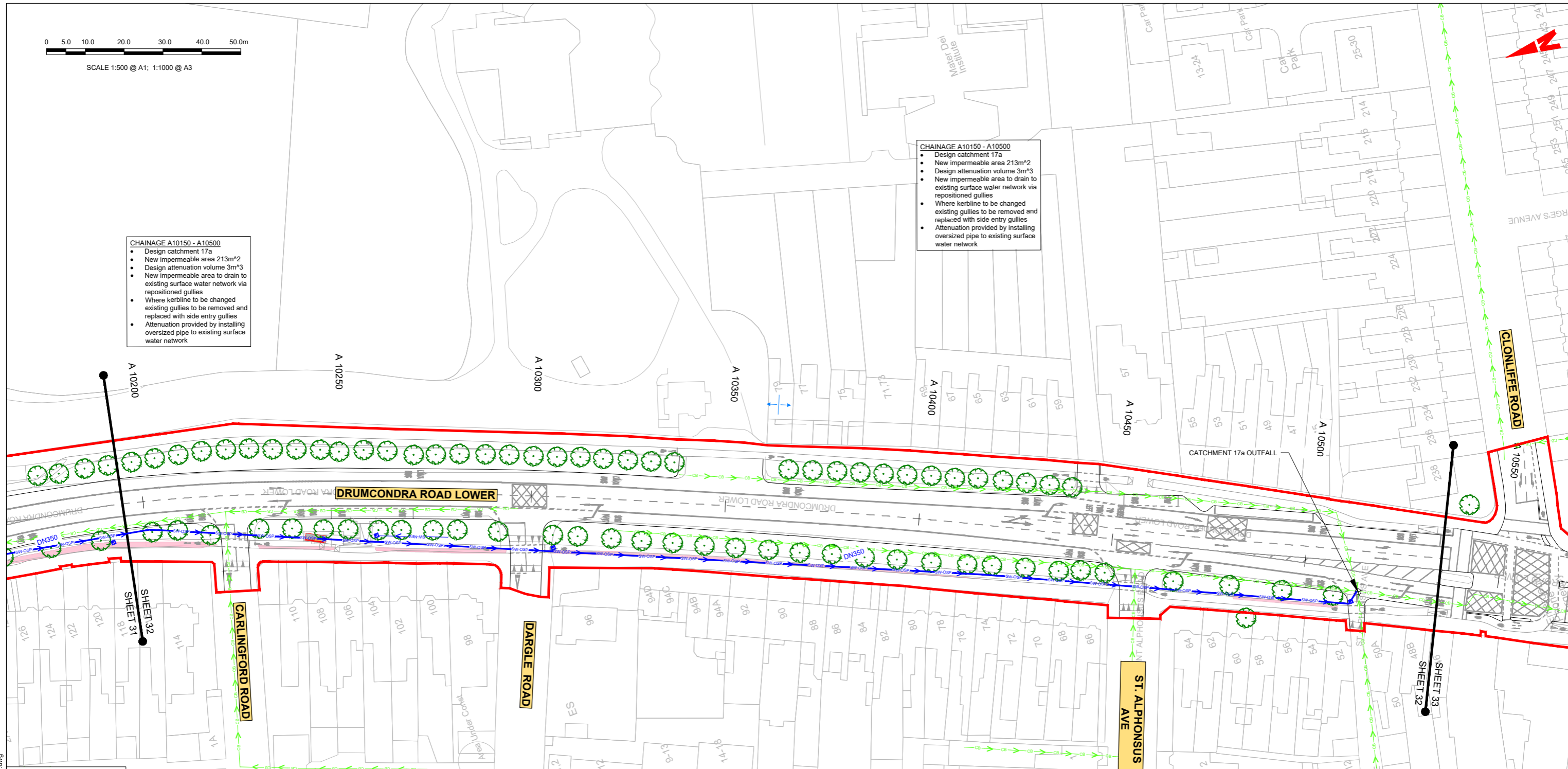


CHAINAGE A10150 - A10500

- Design catchment 17a
- New impermeable area 213m²
- Design attenuation volume 3m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network

CHAINAGE A10150 - A10500

- Design catchment 17a
- New impermeable area 213m²
- Design attenuation volume 3m³
- New impermeable area to drain to existing surface water network via repositioned gullies
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies
- Attenuation provided by installing oversized pipe to existing surface water network



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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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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		

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ABBREVIATIONOS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

<p>Rev M01 06/04/2023 FM IL HOS ISSUED FOR PHASE 4: PLANNING</p>		<p>Client: NTA Údarás Náisiúnta Iompair National Transport Authority</p>		<p>Engineering Designer: Jacobs</p>		<p>Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS</p>	
<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3</p>		<p>Date: 06/04/2023 Scale: 1:500 @ A1, 1:1000 @ A3</p>		<p>Drawn: FM, Checked: IL, Approved: HOS</p>		<p>Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS</p>	
<p>Project Code: BCIDB, Originator Code: JAC</p>		<p>Project Code: BCIDB, Originator Code: JAC</p>		<p>QMS Code</p>		<p>Drawing File Name: BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0032</p>	
<p>Sheet Number: 32 of 37</p>		<p>Status: A</p>		<p>Rev: M01</p>		<p>Sheet Number: 32 of 37, Status: A, Rev: M01</p>	

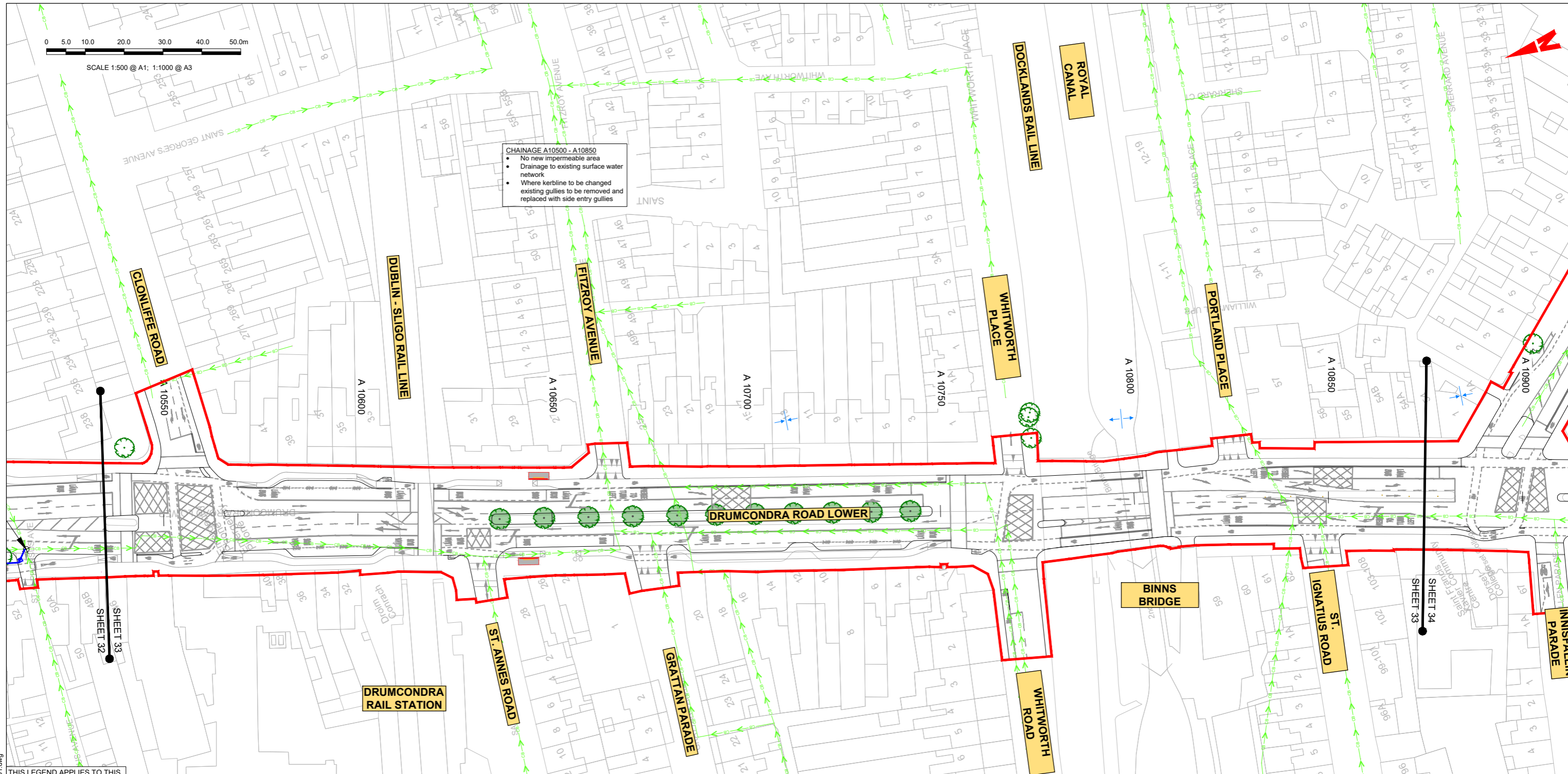
DO NOT SCALE USE FIGURED DIMENSIONS ONLY



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

CHAINAGE A10650 - A10850

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 PAVING
	PROPOSED PERMEABLE PAVING		

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ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUED FOR PHASE 4: PLANNING

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

Date: 06/04/2023 Scale: 1:500 @ A1
1:1000 @ A3

Project Code: BCIDB Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM Checked: IL Approved: HOS

QMS Code: _____

Programme Title: BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title: SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name: BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0033	Sheet Number: 33 of 37	Status: A	Rev: M01

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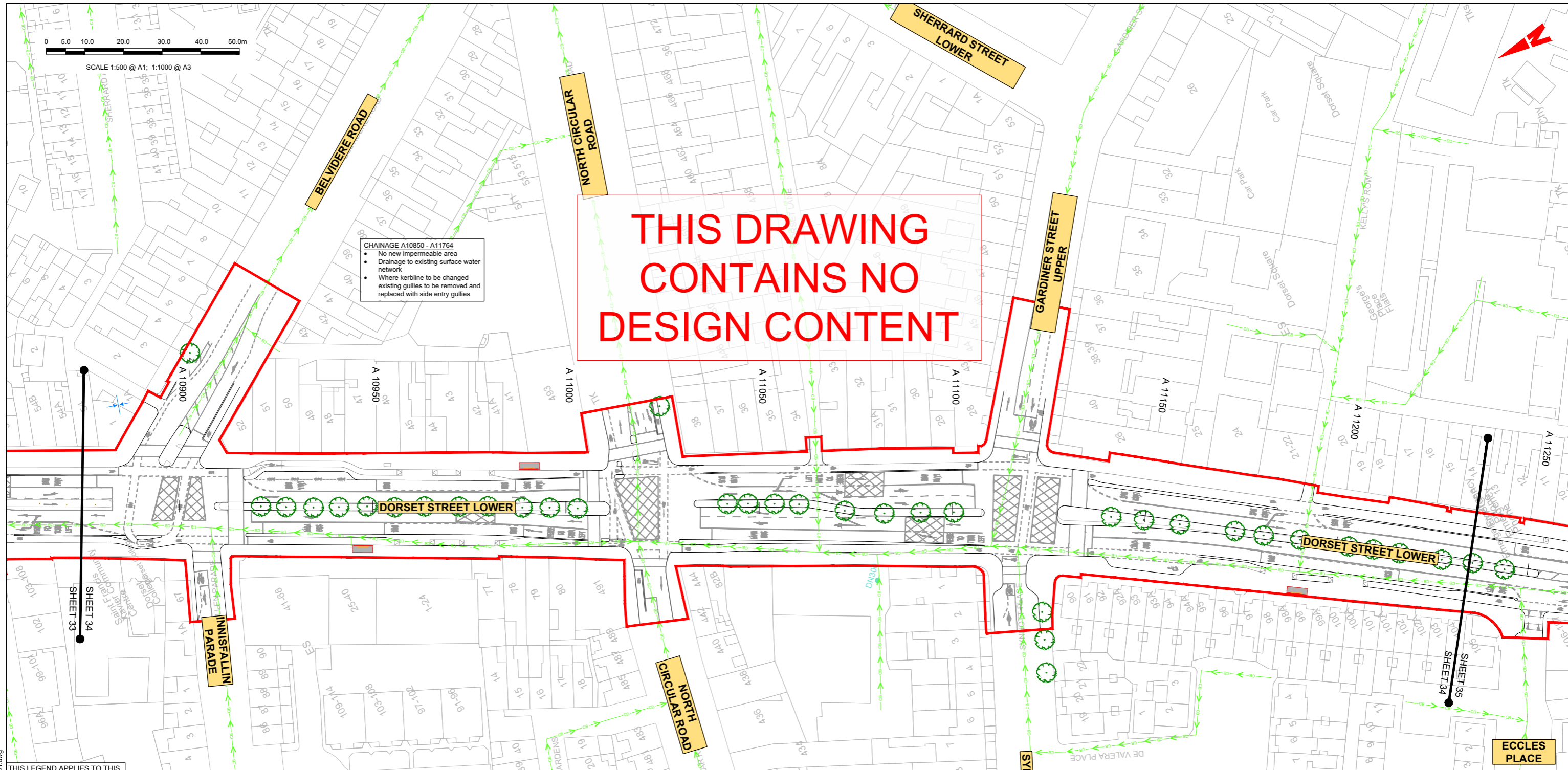


SCALE 1:500 @ A1; 1:1000 @ A3

THIS DRAWING CONTAINS NO DESIGN CONTENT

CHAINAGE A10850 - A11764

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	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.

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- EXISTING MANHOLE COVERS SHALL BE ADJUSTED TO MATCH FINISHED SURFACES.
- ALL THE EXISTING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
- EXISTING GULLY CONNECTIONS TO BE MAINTAINED WHERE POSSIBLE WHERE ADDITIONAL GULLIES ARE REQUIRED NEW CONNECTIONS MAY ALSO BE REQUIRED. NUMBER AND SPACING TO BE DETERMINED DURING DETAILED DESIGN.
- 2NO. OF GULLIES SHALL BE PROVIDED AT LOW POINTS AND AT LEAST ONE GULLY TO BE PROVIDED IMMEDIATELY UPSTREAM OF PEDESTRIAN CROSSINGS.
- ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.

ABBREVIATIONS:

ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Building Ireland's Future

Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUED FOR PHASE 4: PLANNING

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

Date: 06/04/2023 Scale: 1:500 @ A1
1:1000 @ A3

Project Code: BCIDB Originator Code: JAC

Engineering Designer: **Jacobs**

Drawn: FM Checked: IL Approved: HOS

Programme Title	BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS		
Drawing Title	SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS		
Drawing File Name	BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0034	Sheet Number	34 of 37
Status	A	Rev	M01

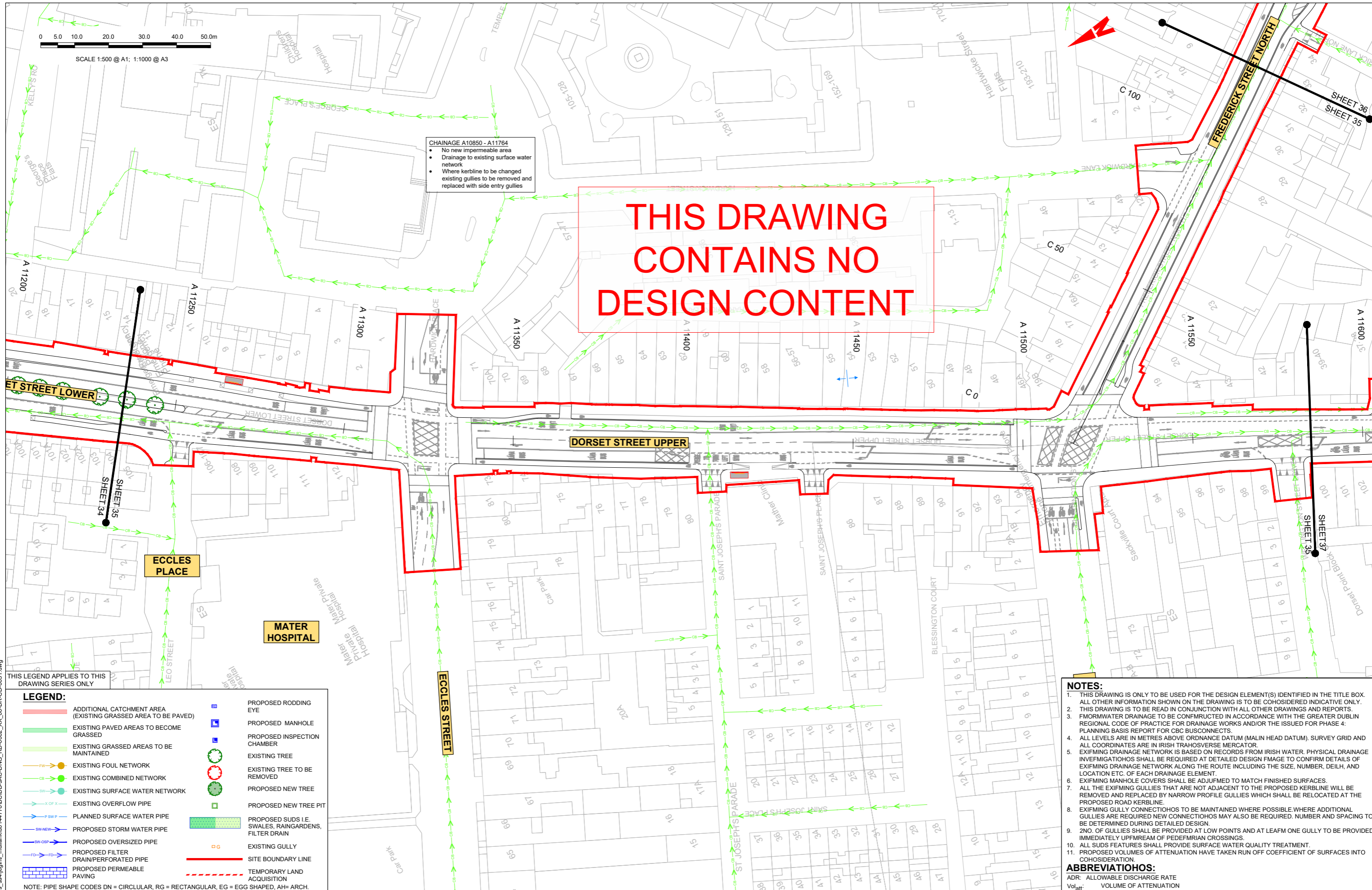


SCALE 1:500 @ A1; 1:1000 @ A3

CHAINAGE A10850 - A11764

- No new impermeable area
- Drainage to existing surface water network
- Where kerbline to be changed existing gullies to be removed and replaced with side entry gullies

THIS DRAWING CONTAINS NO DESIGN CONTENT



THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK
	EXISTING SURFACE WATER NETWORK
	EXISTING OVERFLOW PIPE
	PLANNED SURFACE WATER PIPE
	PROPOSED STORM WATER PIPE
	PROPOSED OVERSIZED PIPE
	PROPOSED FILTER DRAIN/PERFORATED PIPE
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	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

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- ALL THE EXIFMING GULLIES THAT ARE NOT ADJACENT TO THE PROPOSED KERBLINE WILL BE REMOVED AND REPLACED BY NARROW PROFILE GULLIES WHICH SHALL BE RELOCATED AT THE PROPOSED ROAD KERBLINE.
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- ALL SUDS FEATURES SHALL PROVIDE SURFACE WATER QUALITY TREATMENT.
- PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO COHOSIDERATION.

ABBREVIATIONOHS:
ADR: ALLOWABLE DISCHARGE RATE
Vol_{att}: VOLUME OF ATTENUATION

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Rev	Date	Drn	Chk'd	App'd	Description
M01	06/04/2023	FM	IL	HOS	ISSUED FOR PHASE 4: PLANNING

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

Date: 06/04/2023
Scale: 1:500 @ A1
1:1000 @ A3

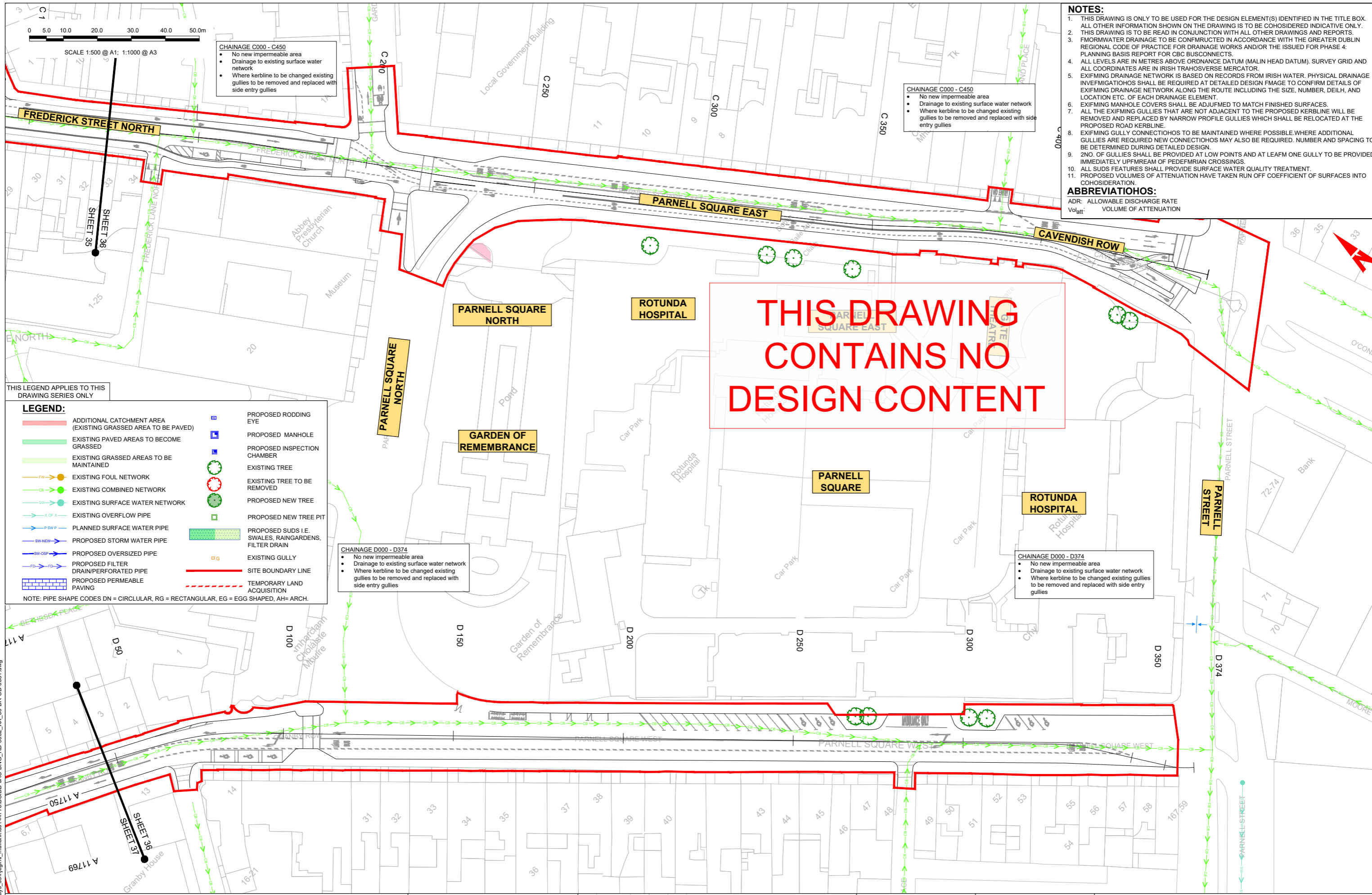
Engineering Designer: **Jacobs**

Drawn: FM
Checked: IL
Approved: HOS

Project Code: BCIDB
Originator Code: JAC
QMS Code:

Programme Title			
BUSCONNECTS DUBLIN CORE BUS CORRIDORS INFRASTRUCTURE WORKS			
Drawing Title			
SWORDS TO CITY CENTRE CORE BUS CORRIDOR SCHEME PROPOSED SURFACE WATER DRAINAGE WORKS			
Drawing File Name	Sheet Number	Status	Rev
BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0035	35 of 37	A	M01

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 - PROPOSED VOLUMES OF ATTENUATION HAVE TAKEN RUN OFF COEFFICIENT OF SURFACES INTO CONSIDERATION.
- ABBREVIATIONS:**
 ADR: ALLOWABLE DISCHARGE RATE
 VolAtt: VOLUME OF ATTENUATION

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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		

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<p>Date: 06/04/2023</p> <p>Project Code: BCIDB</p>		<p>Scale: 1:500 @ A1 1:1000 @ A3</p> <p>Originator Code: JAC</p>		<p>Drawn: FM</p> <p>Checked: IL</p> <p>Approved: HOS</p>			<p>Drawing File Name: BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0036</p> <p>Sheet Number: 36 of 37</p> <p>Status: A</p> <p>Rev: M01</p>					

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**THIS DRAWING
CONTAINS NO
DESIGN CONTENT**



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

CHAINAGE D000 - D374

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

CHAINAGE A10850 - A11764

- No new impermeable area
- Drainage to existing surface water network
- Where kerblines to be changed existing gullies to be removed and replaced with side entry gullies

THIS LEGEND APPLIES TO THIS DRAWING SERIES ONLY

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 NETWORK		EXISTING TREE TO BE REMOVED
	EXISTING SURFACE WATER NETWORK		PROPOSED NEW TREE
	EXISTING OVERFLOW PIPE		PROPOSED NEW TREE PIT
	PLANNED SURFACE WATER PIPE		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 PAVING
	PROPOSED PERMEABLE PAVING		

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ABBREVIATIONS:

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		<p>Date 06/04/2023</p> <p>Scale 1:500 @ A1 1:1000 @ A3</p> <p>Project Code BCIDB</p> <p>Originator Code JAC</p> <p>QMS Code</p>	<p>Drawn FM</p> <p>Checked IL</p> <p>Approved HOS</p>	<p>Drawing File Name</p> <p>BCIDB-JAC-DNG-RD-0002_XX_00-DR-CD-0037</p>	<p>Sheet Number 37 of 37</p> <p>Status A</p> <p>Rev M01</p>

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