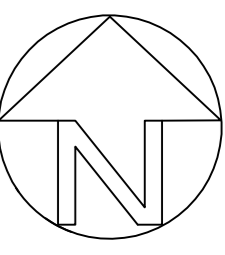


All works to be constructed in accordance with the Design and Construction guide (DCG).



**General Notes**

- All dimensions are in metres unless otherwise stated.
- All levels are in metres.
- This drawing is to be read in conjunction with all relevant Engineers and Architect's drawings, Specifications, Reports and Engineering Details.
- Do not scale from this drawing.

**Section 104 Notes**

- All adoptable drainage works shall be in accordance with WRC Code for Adoption and Severn Trent Water's guidance notes.
- All adoptable manhole covers shall comply with WRC Code for Adoption.
- Lateral manholes with a depth of less than 1.2m from cover to soffit shall have a chamber with a minimum internal diameter of 450mm.
- Lateral manholes with a depth of more than 1.2m from cover to soffit shall have a chamber with a minimum internal diameter of 450mm, with a restricted access opening of 350mm for safety reasons.
- All pipework with less than 1.2m cover in Highway or less than 0.9m cover in soft shall have a concrete protective cover slab to adopting water company requirements.
- Flow routes need to facilitate the potential route of flood flow in rainfall events exceeding the storm sewer design criteria, as required by Code for Adoption. Flow routes shall be kept clear of permanent physical obstructions which may obstruct the flow of surface water and cause flooding.
- Screen/grill to be located in last manhole to prevent any debris/rubble from entering the existing network during construction.
- All uncovered and shallow pipework to be protected against construction traffic as part of the contractor's temporary works.
- Manholes with outgoing pipes greater than 600mm diameter shall be fitted with guard bars, safety chains or other approved safety device.
- A Section 106 application and approval is required with Water Company for all connections (including indirectly) to the existing public sewer network prior to any connection being made.
- Any amendments to pipe materials that may be suggested by the groundwork contractor once technical approval compliance is issued, will result in a design amendments charge from Severn Trent Water of 1% of their estimated construction cost.
- All pipe lengths and gradients are based on centre of manhole to centre of manhole.
- The exact position, level, size and use of existing sewers to be confirmed on site and reported to the Engineer prior to the commencement of works.
- All pipes are to be laid with level soffits or as indicated.
- Trapped road gullies to be used for all gullies designed in shared parking areas.
- No in-fill covers and frames to be used in blocked paved areas.
- Protective concrete cover slabs to be used on pipes in non traffic area which do not achieve 0.9m cover level and 3.2 cover in traffic area.
- Where pipe crossing, plastic membrane to be used for protection to eliminate any chance of cross contamination.
- Pre-cast concrete manhole rings will not be cut under any circumstances. Other options will instead be utilised such as building up with concrete or brickwork to the top of the pipe.
- Covers and frames should be hitemarked.
- Pipes of different diameters entering the same manhole should be installed with soffits at the same level.
- All pipes located within the carriageway are located at least 1m from the kerb. The manholes are located 0.5m from the kerb.
- All manholes covers to be 675x675mm cover and frame to maintain clear 600x600mm access in accordance with BS EN 124 Class D400 and embossed FW or SW as appropriate. All proposed manhole covers must comply with Severn Trent Water Ltd current Health & Safety Standards.

**Drawing key**

- Site Boundary (taken from latest site layout referenced below)
- Adoptable Section 104 surface water sewer showing manhole reference cover and invert level, pipe size, pipe length and pipe code
- Private foul water sewer showing manhole reference cover and invert level, pipe size, pipe length and pipe code
- Private foul water rising main
- Adoptable Pre-Cast Concrete Headwall
- Private Surface Water Drainage
- Private Foul Water Drainage
- Existing Site Level
- Section 38 Trapped road gully
- Private trapped road gully
- Finished Floor Level
- Banking Works
- Section 104 Sewer Easement and Dimension
- Extent of Detention Basin Proposed for Adoption
- Overland Flooding Routing Arrow

Type	Company	Drawing Date	Drawing Title	Date received	Rev
Site Layout	Armstrong Burton Architects	06.04.2021	P21-2060_120 (Site Plan)	17.11.2022	H
Site Layout	Armstrong Burton Architects	20.05.2021	P21-2056_1100 (Site Plan)	06.07.2023	H
Topographical Survey	Geoff Perry Associates Ltd	October 2021	S219-1068-E (Lambley Lane Nottingham)	25.10.2021	E
Existing Drainage and Services	VIA East Midlands Ltd	September 2021	HW0050/002 Drainage and Services in the vicinity of Keppelmot Site, Lambley Lane	10.09.2021	-

**DRAWINGS HAVE NOT BEEN APPROVED, UNTIL THE DRAWINGS ARE APPROVED THE DESIGNS AND DETAILS SHOWN ON THIS DRAWING ARE SUBJECT TO CHANGE**

**ANY WORKS UNDERTAKEN PRIOR TO TECHNICAL APPROVAL IS ENTIRELY AT THE CONTRACTORS' RISK**

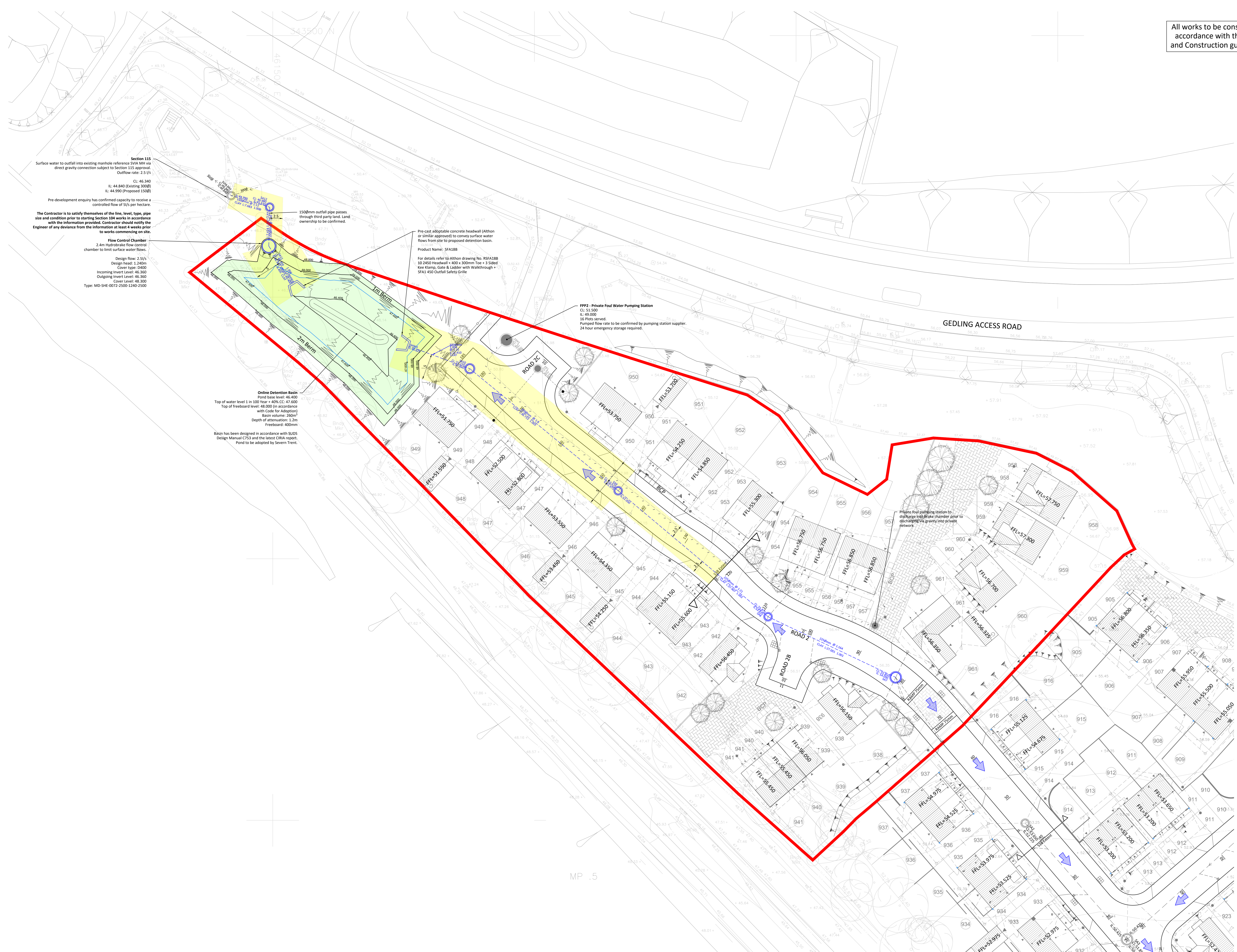
**ALL ADOPTABLE HIGHWAY WORKS TO BE IN ACCORDANCE WITH NOTTINGHAMSHIRE HIGHWAYS DESIGN GUIDE**

**ALL ADOPTABLE DRAINAGE WORKS TO BE IN ACCORDANCE WITH CODES FOR ADOPTION**

Harworth Land Approval Tracker	
Agreement	Approval Granted
S104	NOT APPROVED
S38	NOT APPROVED
S106 (FW)	NOT APPROVED
S23 (SW)	NOT APPROVED

Rev	F	FP1 & FP2 invert level amended.			By	CDG	Checked	11.07.2023
Rev	E	Drawing updated to reflect ramp position on Road 2.			By	MD	Checked	16.06.2023
Rev	D	Drawing updated to reflect amended levels and latest site layout.			By	MD	Checked	14.06.2023
Rev	C	Drawing amended to suit comments from STW			By	PW	Checked	28.09.2022
Rev	B	Surface water manhole chamber note amended to Section 115			By	PW	Checked	23.09.2022
Rev	A	Adoptable foul drainage removed, layout updated to suit			By	PW	Checked	04.09.2022

Drawn By:	MD	Client:	Keppelmot Homes
Chkd By:	CDG	Project:	Residential Development Land Off Lambley Lane Gedling Harworth Land Section 104 Layout
Scale @ A0:	1:250	Title:	FOR TECHNICAL APPROVAL
Date:	June 2022	Project No.:	20560
Status:	FOR TECHNICAL APPROVAL	Drawing No.:	511
Project No.:	20560	Rev:	F



**Section 115**  
Surface water to outfall into existing manhole reference SVA.M1 via direct gravity connection subject to Section 115 approval.  
Outfall rate: 2.5 l/s  
CL: 46.340  
IL: 44.840 (Existing 3000)  
IL: 44.900 (Proposed 1500)

Pre-development enquiry has confirmed capacity to receive a controlled flow of 5l/s per hectare.

The Contractor is to satisfy themselves of the line, level, pipe size and condition prior to starting Section 104 works in accordance with the information provided. Contractor should notify the Engineer of any deviance from the information at least 4 weeks prior to works commencing on site.

**Flow Control Chamber**  
2.4m Hydrobrake flow control chamber to limit surface water flow.  
Design flow: 2.5 l/s  
Design head: 1.240m  
Cover type: 2400  
Incoming Invert Level: 46.300  
Outgoing Invert Level: 46.300  
Cover level: 48.300  
Type: MD-SHE-0072-2500-1240-2500

**Online Detention Basin**  
Pond base level: 46.400  
Top of water level 1 in 100 Year +40% CC: 47.600  
Top of freeboard level: 48.000 (in accordance with Code for Adoption)  
Basin volume: 260m<sup>3</sup>  
Depth of attenuation: 1.2m  
Framedwidth: 400mm

Basin has been designed in accordance with SUDS Design Manual C73 and the latest CIRIA report. Pond to be adopted by Severn Trent.

Pre-cast adoptable concrete headwall (Althon or similar approved) to convey surface water flow from site to proposed detention basin.  
Product Name: SFA138B  
For details refer to Althon drawing No. R5FA138B 10 2450 Headwall + 500 x 300mm Top + 3 Sided Yoke Ramp, Gate & Ladder with Walkthrough + SFA1450 Outfall Safety Gate

**FPF2 - Private Foul Water Pumping Station**  
CL: 51.500  
IL: 49.000  
16 Pits served  
Pumped flow rate to be confirmed by pumping station supplier.  
24 hour emergency storage required.

Private foul pumping station to discharge into drainage chamber prior to discharging via gravity into private network

- Infrastructure Design
- Geotechnical & Environmental
- Structural Engineering
- Surveying
- Development Planning
- Professional Advice

