



Land Drainage Consent with WSCC required to either remove or alter existing Ditch. (To be confirmed following survey of existing ditches by Contractor)

FULL EXTENTS OF EXISTING DITCHES NOT SHOWN ON TOPOGRAPHICAL SURVEY. AS PART OF PLANNING CONDITION 11, FULL EXTENTS OF DITCH NETWORK ALONG WITH ANY CONNECTIONS OR OUTFALLS ARE TO BE CONFIRMED BACK TO THE ENGINEER, IN ORDER TO DEEM WHETHER THE EXISTING DITCHES ARE REQUIRED TO REMAIN.

ARCHITECT TO FINALISE ALL SURFACE AND FOUL WATER DRAINAGE CONNECTION POINTS & THRESHOLD DRAIN REQUIREMENTS.

FULL EXTENTS OF EXISTING DITCHES NOT SHOWN ON TOPOGRAPHICAL SURVEY. AS PART OF PLANNING CONDITION 11, FULL EXTENTS OF DITCH NETWORK ALONG WITH ANY CONNECTIONS OR OUTFALLS ARE TO BE CONFIRMED BACK TO THE ENGINEER, IN ORDER TO DEEM WHETHER THE EXISTING DITCHES ARE REQUIRED TO REMAIN.

Land Drainage Consent with WSCC required to either remove or alter existing Ditch. (To be confirmed following survey of existing ditches by Contractor)

NOTES

- This drawing is to be read in conjunction with all other RGP drawings, and with all relevant Architect's and Engineer's drawings and specification. Any discrepancies found are to be reported immediately to the Engineer.
- RGP accepts no responsibility for inaccuracies in data provided by third parties such as topographic surveys or Ordnance Survey mapping.
- Do not scale, work to figured dimensions only. All dimensions are in millimetres unless noted otherwise and all levels are in metres from the topographic survey datum.
- Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care whilst undertaking the works.
- All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
- The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. Figured dimensions must be used for setting out and detailing. RGP logos and company information must be removed from copies if information is re-used.
- The main contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
- The main contractor is responsible for dealing with all occurrences of ground water during the construction period.
- The contractor must comply with all current legislation relating to health & safety.
- All products specified shall be installed in strict accordance with the manufacturers recommendations and instructions. If there are discrepancies between that information and the details on any RGP drawings, the manufacturers instructions must be used.
- Contractor to confirm all invert levels where connections are proposed prior to commencing any drainage works. Contractor to commence drainage works at the point of discharge.

DRAINAGE NOTES:

- All drainage works to be constructed in strict accordance with specification of the local authority, building regulations, sewers for adoption, BS5301 & BSEN 752-1.
- For location and setting out of building drainage points refer to architects drawings.
- All pipe runs near buildings to comply with the building regulations 2002 Part H1. Where a pipe is within 1m of a foundation the trench shall be filled with class GEN3 concrete up to the lowest level of the foundation. Where the trench is further than 1m from the foundation, the trench shall be filled with class GEN3 concrete to a level below the lowest level for the foundation equal to the distance from the foundation less 150mm. In both cases the pipe shall be bedded and surrounded in 150mm thick class GEN3 concrete.
- Where pipes, external to the structures, have a depth to soffit from ground level of less than 450mm they shall have a class GEN3 concrete encasement (150mm thick).
- Where a pipe, under a carriageway, has a depth of cover of less than 1.2m the pipe shall be laid with a concrete bed and surround.
- In any circumstances where pipes are bedded and surrounded in concrete flexible joints should be provided. Compressible boards (fibreglass or polystyrene) shall be provided at a maximum of 8m centres (coinciding with pipe joints). The boards shall be pre-cut to pipe diameter and to a height and width equal to the concrete cross section. A board thickness of 10mm for pipes up to 450mm nominal diameter and 30mm for pipes over 450mm nominal diameter.
- All private building drainage shall be constructed in strict accordance with BSEN 752-1 unless otherwise specified building drainage shall be 100mm diameter and shall be laid at a minimum gradient of $(1 \div 100) = 1 \text{ in } 100$ for all drains and $1 \text{ in } 80$ for surface water drains.
- All pipes, bends and junction for private building drainage shall be upvc conforming to BS4680 and BS5481 as appropriate and shall be laid in accordance with the manufacturer's specification.
- All gully connections other than at manholes to be 'Y' junctions. All road gully connections to be 150mm diameter.
- All stub stacks to be fitted with air admittance valves where branch drain exceeds 12m except at the head of the run. Soil vent pipes located at the head of a run to terminate to fresh air.
- All connections to be soffit to soffit unless otherwise noted.
- All concrete and concrete products to be in accordance with BRE 363 for sulphates.
- The locations and sizes of all syps and rwpes shall be cross referenced against the architects drawings during setting out.
- The precise depth and location and size of existing pipes or manholes where connections or diversion are proposed must be confirmed and reported to the engineer prior to commencement.

SUPPORTING DRAWINGS:

Drp No.	Drp Title
211	Setting Out
221	Surface Finishes
250	Drainage Details Sht 1
251	Drainage Details Sht 2
260	Construction Details
260	Layout and Details

Rev.	Date	Amendments	Drawn	Appr.



Transport Planning and Infrastructure Design Consultants
Metro House, Northgate, Chichester, West Sussex, PO19 1BE
Tel: 01243 410418 Fax: 01483 861682 www.rgp.co.uk

Client
Knightsgate Ltd

Project
North Bertsted, Bognor
West Sussex, PO22 9AA

Drawing Title
Drainage and Levels Layout

Scale 1:200 @ A1 1:400 @ A3	Drawn By LG	Checked By MJA	Approved By MJA
Date July 2017	Drawing No. 2017/D1304/201	Rev. -	

DRAWING LEGEND

SURFACE WATER DRAINAGE		MISC	
---	EXISTING SURFACE WATER DRAINAGE	F.F.L. 96.875	PROPOSED BUILDING FINISHED FLOOR LEVEL
---	PROPOSED SURFACE WATER DRAINAGE	HT. #	PROPOSED HOUSE TYPE
CL# # IL# #	TYPE 1-2 PRECAST CONCRETE RING MANHOLE	x 97.80	PROPOSED SPOT LEVEL
CL# # IL# #	TYPE 3 INSPECTION CHAMBER (Max 3m depth to invert, CP denotes Catchpit) Chambers deeper than 1.2m to be non-entry.	x 97.80	EXISTING SPOT LEVEL
CL# # IL# #	TYPE 4 INSPECTION CHAMBER (Max 0.6m depth to invert)	1.80	PROPOSED GRADIENT ARROW
RE IL# #	RODDING EYE		PROPOSED EMBANKMENT (1 in 3 max. gradient)
CL# # IL# #	HYDROBRAKE FLOW CONTROL DEVICE		PROPOSED RETAINING WALL
	POROUS PAVING (Private Driveway / Shared Access Road)		
	PERFORATED PIPE (Laid within subbase of Porous Paving)		
	DIFFUSER (Polytype Permaflow unit or similar approved)		
	CHANNEL DRAIN (100mm wide, Heelguard grating, trapped gully outlet) Unless noted otherwise		
FOUL WATER DRAINAGE			
---	EXISTING FOUL WATER SEWER		
---	PROPOSED FOUL WATER DRAINAGE		
CL# # IL# #	TYPE 1-2 PRECAST CONCRETE RING MANHOLE		
CL# # IL# #	TYPE 3 INSPECTION CHAMBER (Max 3m depth to invert) Chambers deeper than 1.2m to be non-entry.		
CL# # IL# #	EXTERNAL VERTICAL BACKDROP		

Refer to Architects drawings for further information on plot internal detailing, service points and threshold drainage details.

Refer to structural drawings for further information on structural slab levels.

Topographical information shown is based on survey undertaken by Shaw Colegate Land and Building Surveyors dated July 2013.

PRELIMINARY

1:200 @ A1
1:400 @ A3
0 2 4 6 8 10 12 14 16 18 20 m

RESIDUAL HAZARDS

- In addition to the hazards/risks normally associated with the type of work detailed on this drawing, note the following:
- Unknown services/depts within work zone. Contractor to undertake necessary precautions and investigation prior to excavating.
 - Existing Overhead Power and Telecoms Cables. Contractor is to prepare a method statement to ensure operatives are familiar and competent with the dangers of working near overhead cable.
 - The works will involve the movement of plant and machinery within a live carriageway and footway. There is a risk of potential conflict between plant/machinery and private vehicles/pedestrians. Contractor to undertake necessary precautions and ensure suitable traffic management is in place prior to commencement.
 - Working in live sewers. Contractor to ensure operatives are familiar and competent with the dangers of working in live sewers.
 - Excavations close to existing structures. Contractor to prepare method statement to ensure stability of existing structure.
 - Excavations within existing tree root zones. Contractor is to seek advice from an Arboriculturalist and work to the methodology and requirements set out in the Arboriculturalist's report.
 - Working within close proximity to an existing watercourse. Contractor is to prepare a method statement to ensure operatives are familiar and competent with the dangers of working close to water.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

- Foul Water Strategy:
- New off-site connection via existing manhole.
 - Post-development increase the peak flow rates to 0.46l/sec.
- S106 Foul Sewer Connection
- Direct connection to existing Southern Water manhole M12002.
 - 'Line & Level' to be agreed with Southern Water Clerk of Works.
 - Subject to S106 consent with Southern Water.

- Surface Water Strategy:
- Due to the nature of the underlying soils and depths of groundwater, infiltration techniques are not suitable for this site.
 - Design for 1:100yr + 40% Storm Event.
 - Porous Paving will be used as attenuation along with a Vortex Flow Control Device restricted to 5/s, discharging to the existing connection to the Highways Drain in North Bertsted Street.
 - Proposed connection to Highways Drain has been approved by WSCC.

Existing Overhead Powerline

ARCHITECT TO FINALISE ALL SURFACE AND FOUL WATER DRAINAGE CONNECTION POINTS & THRESHOLD DRAIN REQUIREMENTS.

Banking 1 in 3 (max.)

Banking 1 in 3 (max.)

LOW POINT

Hydrocote (Optimise)
CL# 25
IL# 2.84
1m head
1200

Ex SWMH S1
CL# 0.00 (bc)
IL# 2.80 (bc)
1.20m Deep
(From CCTV Survey)

Ex FWHM 2002
CL# 87
IL# 0.45 (bc)
34m Deep
(From CCTV Survey)

Existing WSCC Highway Surface Water Drain 1500 >>>

Existing Southern Water Foul Rising Man >>>

<<< Existing Southern Water Foul Sewer 2250