RECENT DEVELOPMENT ADJACENT TO THE NORTHERN BOUNDARY WILL RESTRICT OVERLAND FLOW FROM THE NORTH

LEVELS IN CLOUDED AREA ELEVATED TO PROVIDE ADEQUATE DEPTH TO DRAINAGE/ACCOMMODATE SURCHARGE

Existing pond to remain unchanged

Existing pond to remain unchanged

Existing pond to remain unchanged

Existing pond to remain unchanged

300mm (nominal) high bund to reduce existing risk of existing ponds overtopping onto Copper Lane. Extent/provisions to be agreed. Shown indicatively. To extend as far eastwards as practicable for maximum benefit.

Proprietary interceptor.
Invert/cover requirements vary between manufacturers.
Subject to detailed design. Installation to be in strict accordance with Manufacturer's recommendations.

Proposed foul pump station
Rising main anticipated to outfall into public sewers within Albion Road, near main site entrance

Flow control
Hydrobrake or similar
Design Flow: 11.4 l/s
Design Head: 1.2 m

Proposed attenuation pond.
1 in 3 batters in accordance with LLFA guidance.
Permanent water level: 24.000 mAOD
Pond base level: Approx. 22.800-23.400mAOD (TBC at detailed design)
1 in 100 year +40% (FEH) Water Level: 25.296 mAOD
300 mm freeboard to be provided above 100 year water level
Top of bank level: 25.600 mAOD
Pond depth to suit landscape/ecological requirements for permanent water depth (aquatic planting etc.)

Surface water to discharge via new manhole on existing outfall. Pipe should be minimum 150mm diameter laid at a gradient of 1 in 150

Legend

GREY	Existing typically shown in GREY. See notes.
BLACK	Proposed typically shown in **BLACK**
	Approximate site boundary.
101.839 S51	Proposed surface water drainage
	Proposed flow control chamber
24.25 / 24.00	Indicative landform contours Shown in 200mm intervals and 1000mm prominent
	Existing overland flow route
	Proposed exceedance route
+25.40	Proposed top of bank levels

General Notes

1. The purpose of this drawing is to illustrate a notional surface water drainage strategy and indicative attenuation basin provisions.
2. Do not scale. All dimensions shown are in metres unless noted otherwise
3. The existing basins are to be retained in an unchanged form.
4. Until all of the relevant approvals (including, Planning, Technical and Building Regulation) have been obtained from the relevant Authorities it should be understood that all drawings issued are preliminary and NOT for construction. Should the contractor start site work prior to approval been given, it is entirely at his own risk.
5. All work is to be carried out in accordance with the current British and or European standards, BS codes of Practice & Building Regulations.
6. Existing information has been reproduced from the Survey Solutions drawing referenced 422289VUG-01 dated 01.06.2022.
7. The proposed information is based upon OSP drawing 22037-SK05 dated May 2022. Details have been digitised and may be subject to alterations.
8. This drawing is to be read in conjunction with all other Engineers and Specialists drawings and details. Should there be any discrepancy between details indicated on this drawing and those indicated on other drawings the Engineer should be informed PRIOR to construction on site.
9. The information shown and which orginators from others may have been simplified for clarity. Refer to the originators details for additional information.
10. Initial site investigation works have indicated that the existing strata consists mainly of clay/clayey soils and offers low potential for the use of infiltration based drainage systems. Using the precautionary principle, for the purpose of spatial arrangement the basin assumes no infiltration.
11. The outline drainage model assumes that the basins are 'dry'. However, basins may be deepened and designed as 'wet' to enhance the biodiversity potential if required and in conjunction with appropriate specialist advice.

Drainage Strategy Notes

1. The following summarises the surface water drainage strategy.
   1.1. A flood risk assessment has been undertaken by HSP Consulting. The key findings are:
      1.2.1. The site is not located within a fluvial floodplain.
      1.2.2. The site is not at significant risk of surface water flooding.
      1.2.3. That underlying soils would not support the use of infiltration drainage systems (based upon site investigation by others).
      1.2.4. An existing ditch located to the south west of the site
      1.2.5. Four ponds exist on the site. Three of the ponds are unconnected.
      1.2.6. The fourth pond (located in the south west) discharges into the local ditch network.
      1.2.7. The existing outfall should be used for the development.
   1.3. Qbar/greenfield rate for the undeveloped site is estimated to be 4.6l/s/ha (Source: UKSuDS).
   1.4. For the purpose of demonstrating feasibility, an outline/simplified hydraulic model has been constructed using Causeway Flow.
   1.5. The model is based upon:
      1.5.1. The combined area being distributed pro-rata based upon the pipe network.
      1.5.2. Indicative finished highway levels.
      1.5.3. An equivalent Qbar discharge rate for the hard paved area (11.4l/s)
   1.6. Simulations indicate that the 1 in 100 year + 40% FSR and FEH storms can be accommodated within the network without flooding.
   1.7. Using the precautionary principle, all hard areas are assumed to be 100% impermeable. The use of permeable surfacing within pavements may reduce the volume of storage required within the attenuation farm and/or basin.
   1.8. A 10% allowance for urban creep has been included within the model.
   1.9. All drainage is indicative only for the purpose of 'proof of concept'. The detailed design will vary manhole provisions, pipe routes, pipe sizes etc. Similarly, cover and invert levels will vary.
   1.10. Existing ponds remain unchanged and do not form a functional part of the drainage strategy for the proposed development.

Drainage Maintenance Notes

1. A detailed drainage design has not yet been produced. The following summarises the surface water drainage maintenance strategy as it is currently envisioned.
2. Drainage serving more than 1No dwelling will be maintained by management company and/or offered for adoption and subsequently maintained by the Sewerage Undertaker.
3. Strategic drainage (i.e. that depicted herein) to be offered for adoption and will be maintained by the adopting authority. Where adoption cannot be secured, drainage will be maintained by management company.
4. Basins to be maintained by management company
5. Drainage serving single dwellings will be the responsibility of the property owner.
6. The Management Company shall be financed in perpetuity by the occupiers of the site.

REV	BY	DATE	DETAILS	CKD
P02	SA	24.05.24	Attenuation basin revised to attenuation pond	PD
P01	CJ	02.02.23	First Issue	PD

STATUS: S2 - INFORMATION

CLIENT: Rydon Homes Ltd

PROJECT: Residential Development
Albion Road & Copper Lane
Marden

TITLE: Surface Water
Drainage Strategy

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SCALE	PROJECT NO.	SHEET SIZE
1:500	C3571	A0
DATE	DRAWN	CHECKED
02.02.23	CJ	PD

DRAWING NO. MAR-HSP-00-00-DR-C-1000 REV P02