A1 1:2000 0 20 40 60 80 100 120 140

N W E S

Outfall to drain to ditch/watercourse downstream of culvert discharging westward towards Crymlyn Bog

Basin volume: 1,100m³
Plan Area: 2,880m²
Assumed depth: 1.5m
Assumed freeboard: 300mm
Indicative CL: 30.7mAOD
Indicative IL: 29.2mAOD

Indicative 600mm dia. Pipe

Flow control to limit discharge from Catchment D to 56.70l/s up to the 1 in 30 Year Event

750mm dia.
1.35m cover

Conveyance may be below ground/piped where within 20m of assumed rail embankment edge

Flow control to limit discharge from Catchment B strategic storage to 213.7l/s

RISK ITEM ⚠ No. 2

750mm dia. outfall

Basin volume: 6,000m³
Plan Area: 5,900m²
Assumed depth: 2m
Assumed freeboard: 300mm
Indicative CL: 18.0mAOD
Indicative IL: 16.0mAOD

Swale with Check Dams
Plan Area: 3,400m²
Assumed depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 44.5mAOD
DSCL:37.5mAOD
USIL: 43.0mAOD
DSIL: 36mAOD

300mm dia.
1.2m cover

Swale with Check Dams
Plan Area: 4,300m²
Assumed Max. depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 30mAOD
DSCL:26.5mAOD
USIL: 29mAOD
DSIL: 25.2mAOD

Flow control to limit discharge from basin B1 to 26.8l/s

Basin volume: 2,720m³
Plan Area: 3,520m²
Assumed depth: 1.5m
Assumed freeboard: 300mm
Indicative CL: 59.5mAOD
Indicative IL: 83mAOD

750mm dia.
1.2m cover

675mm dia.
1.2m cover

Basin volume: 380m³
Plan area: 1,480m²
Assumed depth: 1.5m
Assumed freeboard: 300mm
Indicative CL: 37.5mAOD
Indicative IL: 36mAOD

Flow control to limit discharge from basin E1 storage to 23.1l/s

BASIN E
DEPTH: 1.5m
VOLUME: 930m³

Flow control to limit discharge from basin C3 to 54.3l/s

Potential to utilise check dams along attenuation feature to maximise storage

Basin F2
1.1m Deep
Volume: 120m³

Utilise check dams along attenuation feature to maximise storage

Basin volume: 810m³
Plan Area: 2,820m²
Assumed depth: 1.5m
Assumed freeboard: 300mm
Indicative IL: 43.5mAOD
Indicative CL: 42mAOD

Basin F1,
Depth: 1.1m
Volume: 450m³

Basin volume: 8,310m³
Plan Area: 6,800m²
Assumed depth: 2.0m
Assumed freeboard: 300mm
Indicative CL: 25.7mAOD
Indicative IL: 23.7mAOD

1,200mm dia.
0.6m cover
Likely to need reinforcement

RISK ITEM ⚠ No. 3

Swale with Check Dams
Plan Area: 1,290m²
Assumed depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 66mAOD
DSCL:60mAOD
USIL: 64.5mAOD
DSIL:58.05mAOD

750mm dia.
1.2m cover

375mm dia.
1.2m cover

525mm dia.
1.2m cover

Swale with Check Dams
Plan Area: 630m²
Assumed depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 50.0mAOD
DSCL:48.5.0mAOD
USIL: 44.0mAOD
DSIL:42.5mAOD

Swale with Check Dams
Plan Area: 700m²
Assumed depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 61.0mAOD
DSCL:56.0mAOD
USIL:59.5mAOD
DSIL:54.5mAOD

525mm dia.
1.35m cover

Indicative 600mm dia. Pipe

675mm dia.
1.4m cover

600mm dia.
1.24m cover

Swale with Check Dams
Plan Area: 1,000m²
Assumed depth: 1.5m
Assumed width: 10m
Side slopes: 1:3
USCL: 76.0mAOD
DSCL: 69.0mAOD
USIL:74.575mAOD
DSIL:67.20mAOD

225mm dia.
1.2m cover

Existing residential development currently has free discharge into nsr via trapezoidal channel with no on-plot attenuation

Existing residential area to the south is equipped with drainage that currently discharges northwards across the railway. It is proposed that the existing drainage (location to be confirmed) be disconnected and rerouted westwards through a piped network to provide adequate 1 in 100 year +40%CC attenuation.

For catchment A Drainage Details please refer to 05474-SK-0002

Existing foul pipe potentially increases to 300mm diameter

Existing 150mm foul pipe running through the site may cause potential conflicts/clashes with proposed development

Conveyance shown as below ground/piped where within 20m of assumed rail embankment edge

Flow control to limit discharge to 50.0l/s

Refer to Outfall Arrangement

Flow control to limit discharge to 26.3l/s

Basin F3
Depth: 2m
Volume: 1,885m³

Basin F9
Volume: 620m³

Basin F4
Depth: 1m
Volume: 350m³

Basin F8
Depth: 1.5m
Volume: 2,400m³

Existing Sewer to be diverted

RISK ITEM ⚠ No. 4

Basin F5
Depth: 1m
Volume: 310m³

Basin F6
Depth: 1.5m
Volume: 880m³

Basin F7
Depth: 1.5m
Volume: 330m³

RISK ITEM ⚠ No. 1

Un-attenuated Flows up to the 1 in 100 Year + 40% CC: 23l/s - SuDS to be implemented to ensure a SAB Compliant Scheme

OUTFALL ARRANGEMENT

NOTES

These drawings have been produced with reference to the CDM Regulations 2015. Please note that these are pre-construction phase drawings and should be subject to further design risk management as required in accordance with Regulation 9

1. These drawings should be read in conjunction with all relevant documentation, drawings and standard details.
2. PJA accept no liability for the accuracy of third party data.
3. All dimensions in meters unless otherwise stated. Do not scale from this drawing.
4. Surface water drainage design based on Masterplan Design (dwg no: 21009(05) 101) from DobsonPowell architects, Proposed Original Level Gradient Map (dwg no: 04020-A-0122) and Existing Levels Gradient Map (dwg no: 04020-A-0120).
5. Surface water drainage strategy based on:
 - 5.1. Simple Microdrainage Network design for residential development west of Site. Source Control used elsewhere.
 - 5.2. Peak maximum discharge rate of 5.5l/s/ha as agreed with NRW for discharge to the Crymlyn Bog.
 - 5.3. No attenuation proposed within unmodelled conveyance features at this stage.
 - 5.4. No infiltration has been assumed.
6. Plan areas of attenuation basins do not show earthworks extents. Please refer to relevant earthworks plans for this information.
7. Conveyance features modeled as pipes. These could be filter drains, filter trenches, swales or rain gardens to enhance SAB compliance.

RISK ITEM 1 - Existing foul drainage to be diverted.

RISK ITEM 2 - Outfall to existing ditch subject to detailed survey. Ditch may be required to be re-profiled to enable gravity connection and receive flows.

RISK ITEM 3 - Pipe may have shallow cover and require reinforcement

RISK ITEM 4 - Existing utilities may be present which require diversion. Subject to utilities survey.

RISK ITEM 5 - Further level information / survey required to understand invert levels of the Bridge House Outfall and opportunity for a gravity led solution.

KEY

- Existing Watercourse/Drain
- Indicative Surface Water Sewer
- Indicative Surface Water Conveyance Feature (modelled as pipes)
- Indicative Surface Water Conveyance Feature (not modelled)
- Indicative Attenuation Location
- 3m Indicative Maintenance and Access Buffer
- Indicative Earthworks Extent / Site Boundary
- Existing DCWW Combined Sewer
- Existing DCWW Foul Sewer
- Existing DCWW Surface Water Sewer
- Proposed Surface Water Flow Route
- Proposed Headwall
- Area Assumed to Remain as Existing
- Site Boundary

REV	DATE	REVISION NOTE	BY
P12	23.11.21	Updated Site Boundary	JP
P11	19/11/2021	Revised Outfall Labelling	PR
P10	06/10/2021	Revised Site Boundary & Masterplan	PR
P09	22/09/2021	Revised for inclusion in FCA	PR
P08	16/09/2021	Revised Masterplan	PR
P07	25/08/2021	Revised Commercial Development Design	PR
P06	24/08/2021	Revised to Network Design for West Site	PR
P05	17/08/2021	Draft for Comment	PR
P04	13/08/2021	Revised Masterplan	PR
P03	29/07/2021	Revised Based on Earthworks	PR
P02	27/07/2021	Revised Masterplan	PR
P01	17/06/2021	Drainage Strategy Plan Draft	PB

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CLIENT
St. Modwen Developments Ltd

PROJECT
Coed Darcy

DRAWING TITLE
Indicative Surface Water Drainage Strategy South

DRAWING ISSUE STATUS
INFORMATION

PJA JOB No.	SUB-CODE	DRAWING NO.	REVISION
05474	A	0004	P12

Revision Letter : P - Prelim / A - Approval / T - Tender / C - Construction

BIM DRAWING REFERENCE

SCALE	DRAWN	REVIEWED	DATE
A1@1:2000	PB	AC	Jun 21

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