OCP Ready COLO Facility Assessment	*Hydro66 Hydrogränd 2 - Hall 1*		
Self Assessment Status:	COMPLETE-MEETS REQUIREMENTS		
Data Center Location Name	Hydro66 Hydrogränd 2 - Hall 1		
Data Center Location Address	Hydrogränd 2, Boden Sweden 961 43		
Site Description: White Space Area	500m2		
Site Description: Critical IT Power	1.6MW		
Site Description: Network Provider Availability	Telia AS3301, Tele2 AS3292, IT Norbotten, IP Only AS12552, Hydro66 AS200675, BDTV AS59913, Telia Carrier (option) AS1299		
Site Description: Facility Features	Direct free air cooled 100% renewable hydro powered datacentre. Flywheel UPS & dual power from diverse transmission and TX		
Site Description: Other Services	24x7 Security and Access. Remote Hands. Cabling. Telecoms services.		
Date Original Assessment is Completed	6/14/2019		
Re-Assessment Date:	10/18/2021		
REQUIREMENTS - Attribute (Must have an Optimum or Acceptable result)	**Parameter**	**Result**	**Notes**
ACCESS			
Building Access	2. Road level with step and threshold free access	**Acceptable**	Loading bay is directly accessed from facility car park. Entire facility is at ground level.
Delivery pathway, Loading dock to Goods in	1. ≥2.7m (108in) H x ≥2.4m (96in) W x ≥2.4m (96in) D unobstructed access and threshold free	**Optimum**	2700x2450. New dock under construction which will expand this further.
Delivery pathway, Goods in to White space	1. ≥2.4m (96in) H x ≥1.8m (72in) W unobstructed access and threshold free	**Optimum**	2600x1800
Corridor floor rolling load	1. ≥680kg (1500lb) (6.67kN)	**Optimum**	
Unboxing/pre-staging/storage area floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	**Optimum**	1300kg rack - 2166kg/m2
Unboxing/pre-staging/storage area floor concentrated load	1. ≥680kg (1500lb) (6.67kN)	**Optimum**	
RAMPS			
Gradient	1. Not Applicable - No Ramps Required	**Optimum**	Entire site is built on single level.
Width	1. Not Applicable - No Ramps Required	**Optimum**	
Landing area	1. Not Applicable - No Ramps Required	**Optimum**	
Railings	1. Not Applicable - No Railings Required	**Optimum**	
LIFTS / ELEVATORS			
Weight loading	1. Not Applicable - No Lift/Elevator Required	**Optimum**	
Door height	1. Not Applicable - No Lift/Elevator Required	**Optimum**	
Width	1. Not Applicable - No Lift/Elevator Required	**Optimum**	
Depth	1. Not Applicable - No Lift/Elevator Required	**Optimum**	
WHITE SPACE			
Floor rolling load	1. ≥680kg (1500lb) (6.67kN)	**Optimum**	
Floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)	**Optimum**	1300kg rack - 2166kg/m2
Floor concentrated load	1. ≥680kg (1500lb) (6.67kN)	**Optimum**	
Finished floor to ceiling height	2. ≥3.1m (124in)	**Acceptable**	power and network are delivered overhead so ORV2 height of 2210 is maximum acceptable as standard
Access floor clearance	1. Not Applicable - No Access Floor	**Optimum**	
ELECTRICAL			
Number of independent circuits to the rack	1. 2N (A+B)	**Optimum**	Red & Blue power fed from overhead busbars. Diverse switchgear, transformers and upstream feeds. UPS protection on red side only.
Maximum circuit capacity	1. 3ϕ 32A/230V	**Optimum**	
Circuit voltage	1. 400/230 VAC nominal	**Optimum**	400v 3p
Circuit frequency	1. 47-63 Hz	**Optimum**	50Hz
Power receptacle / WIP Type	1. IEC60309 532R6W	**Optimum**	Delivered via 4 x 1600A EAE KX hall busbars to top of row busbars and tap off boxes
Circuit receptacle location	1. Overhead	**Optimum**	EAE tap off box with IEC60309 Socket
Upstream UPS options	1. UPS and non UPS feeds available	**Optimum**	Flywheel UPS protected Red feed and direct from TX blue feed as standard
Rack-based batteries permitted	1. Allowed	**Optimum**	
Generator load acceptance time	1. <60 seconds	**Optimum**	No generator as standard. Customer option for large deployments. Option accepts load in <60 seconds.
COOLING			
Rack airflow direction	1. Front to Back	**Optimum**	
Air containment methods	2. Hot/Cold aisle containment for all cabinets in white space	**Acceptable**	Cold aisle containment
Maximum rack density	2. ≥8kw	**Acceptable**	10kw

Minimum cold aisle width	2. ≥1200mm (48in)	Acceptable	1200mm
Minimum free width cold aisle (Inside cage)	1. ≥1200mm (48in)	Optimum	1200mm
Minimum hot aisle width	1. ≥1200mm (48in)	Optimum	1800mm
Inlet air conditions	2. ASHARE Recommended	Acceptable	
Air quality	2. Other (Notes required)	Acceptable	EN779G4
Temperature rise	1. ≥12 Deg C DeltaT	Optimum	Direct free air design with return plenum for ciculation means no restriction on deltaT. Exhaust air is only recirculated to raise inlet temperature when outside air is below desired setpoint.
Cabinet blanking of open space	1. Mandatory	Optimum	
CABLING			
Cabling infrastructure pathways	2. Top and Rear of rack fed	Acceptable	top of row cable trays
Overhead Network Infrastructure containment levels	2. 2 Levels (Intra-Pod cabling; Inter-Pod cabling)	Acceptable	
Fibre Type (if installed)	2. Installed Per Customer Requirements	Acceptable	installed on demand to customer specification by onsite engineer and local cabling firm
Fibre connection presentation (if installed)	2. Installed Per Customer Requirements	Acceptable	installed on demand to customer specification by onsite engineer and local cabling firm
CONSIDERATIONS (For information only)	**Parameter**	**Result**	**Notes**
SERVICE			
Replacement PSU Modules	2. Secure storage available	Acceptable	Customer storage cages and indivudual lockers for parts available to rent
Replacement BBU Modules	2. Secure storage available	Acceptable	Customer storage cages and indivudual lockers for parts available to rent
Option to monitor PSUs and BBUs	2. No	Acceptable	
Remote hands for PSU and BBU replacement or expansion	1. Yes	Optimum	24x7 hourly rate
Remote hands for OCP IT hardware replacement or expansion	1. Yes	Optimum	24x7 hourly rate
EFFICIENCY			
Site Operations Standards	2. Other (Notes required)	Acceptable	Operations closest to model 1 in OCP Critical Facilities Operations Guidelines. Multi-suppliers contracted by Hydro66 operations team. Operations and risk management is run in accordance with Hydro66's ISO27001 certified ISMS Manual and associated systems.
Site PUE Monitoring	2. Periodically measured	Acceptable	data continously recorded, calculated periodically
Site Design PUE	1. <1.2	Optimum	PUE <= 1.07
Site Annualized PUE Current Achievement	1. <1.2	Optimum	1.075
Site WUE Monitoring	2. Periodically measured	Acceptable	.059l water used per kWh. calculated from water usage over period divided by kWh used
Site CUE Monitoring	2. Periodically measured	Acceptable	CUE=CEF*PUE = 0.0428 (0.04KgCO2eq/kWh*1.07PUE)
OPENNESS			
PUE Published	2. Available upon request	Acceptable	
Facility Design Drawings & Files	2. Available to view upon request	Acceptable	