

**OCADO OFFICES & CARPARK, TRIDENT PLACE
BUSINESS PARK, MOSQUITO WAY, HATFIELD,
HERTFORDSHIRE, AI10 9BW**

ADDENDUM DRAINAGE STATEMENT

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1.0 INTRODUCTION

This Addendum Drainage Statement has been prepared to outline an additional drainage construction detail required to allow a minor variation to be made to the approved development drainage strategy.

Some existing channel drains within the works area on site could not be maintained during the ongoing construction works. It is proposed that these channels will be replaced with concrete dished channels to capture and dispose of the surface water runoff.

Information on the concrete dished channels is outlined in this report below and a specification sheet for the concrete dished channel is appended to this report in Appendix A.

2.0 SITE INFORMATION

2.1 Site Surface Water Runoff Layout

The proposed carpark deck (part of the approved development), above the existing ground floor carpark, will be the primary exposed area and the main receptor of rainfall. The carpark deck will be drained by 44 no. Wade grated gullies which provides the capacity to capture runoff from the carpark deck which is as per the approved development drainage statement.

The existing ground floor carpark thus becomes an intermediary floor and will only be subject to wetting from the open sides and wetting brought in on cars. As a result the channels change from being in an external space to being in an internal space. The proposed parking of this carpark is business parking with typically full day stays per bay and so will be on the lower scale of wetting brought in on cars.

2.2 Concrete Dished Channel Information

The majority of the existing channel drain on the ground floor carpark could not be maintained during construction works and it is proposed to replace full sections of this existing channel drain with concrete dished channels and gullies.

The concrete dished channel provides a simpler, easier maintained detail due to the fact that self-cleansing velocities in a channel drain will be less likely achieved in an internal carpark space. This also provides a more durable solution due to the reduction in the number of components of the drainage channel.

A capacity check of the concrete dished channel was undertaken and is as follows:
The worst case surface water runoff loading on a section of concrete dished channels will be between a section of the ground floor car park (Ref. Gridline 15-21) where the concrete dished channel could convey water from 24 car parking spaces and 80m² of green wall plan (Conservative runoff coefficient of 1 taken for the Green Wall Area for this calculation).

Calculation for a 60min storm of 50mm/hr intensity are as follows;

- 22 parking spaces @ 2 litres per parking space per parked vehicle for intermediate carpark floors (Taken from '*Design Recommendation for multi-storey and underground car parks*' paragraph 9.2.3 by IStructE 2011).
Assuming full carpark and one vehicle change during storm = 22 x 2litres = 44 litres/hour = 0.012l/s
- 80m² of Green wall = $Q = 2.78 \times I \times A = 2.78 \times 50 \text{ mm/hr} \times 0.008 \text{ ha} = 1.11 \text{ l/s}$

Total possible flow in section of channel is therefore = 1.122 l/s

The capacity of a 255mm (wide) x 125mm (deep) with a 25mm dish depth Marshalls concrete dished channel at a grade of 1/150 = 1.6l/s.

3.0 CONCLUSION

The capacity of the concrete dished channel, at the worst case scenario location on site, is capable of conveying the required runoff flow.

The concrete dished channel outlined in this addendum is a proposed, suitable, construction detail to undertake the approved development drainage strategy.

This minor alteration to the drainage statement will have no impact on the surface water drainage on site, providing sufficient capacity and a practicable solution.

APPENDIX A
Concrete Dished Channel Specification Sheet

Type	Profile	Height (mm)	Face Length (mm)	Width (mm)	Weight (kg)	Item Code
Channel	Square	125	914	255	70	RK3050000
Channel	Square	150	914	150	51	RK3150000
Channel	Square	125	914	150	43	RK3200000
Channel	Bullnosed	150	914	305	102	RK0150000
Channel	Bullnosed	125	914	255	70	RK0350000
Channel	Bullnosed	150	914	440	110	RK3500000
Channel	Dished	150	914	440	81	RK3550000
Channel	Dished	90	914	305	53	RK3620000
Channel	Dished	125	914	255	62	RK3600000
Channel	Dished	75	914	230	33	RK3640000
Edgings	Flat Top	150	914	50	15	Please Call
Edgings	Flat Top	200	914	50	19	Please Call
Edgings	Flat Top	250	914	50	25	Please Call
Edgings	Bullnosed	150	914	50	16	Please Call
Edgings	Bullnosed	200	914	50	20	Please Call
Edgings	Bullnosed	250	914	50	27	Please Call
Edgings	Round Top	150	914	50	15	Please Call
Edgings	Round Top	200	914	50	19	Please Call
Edgings	Round Top	250	914	50	25	Please Call

Channels & edging with reference numbers indicated in **bold** black are available ex-stock.

*Natural products are manufactured from aggregates sourced locally to the works and contain no pigmentation, therefore colour variation between products from different works is possible.

Channels



Bullnose Channel*



Square Channel*



Dished Channel***

Edgings



Bullnose Edging**



Flat Top Edging**



Round Top Edging**

** mostly used along footpath edges, *** mostly used as an aid to drainage, *used as a spacer between the kerb and the carriageway or used off road parking and lay-bys



Channels & Edgings

BS Standard Concrete Kerb



Natural*

A highly durable precision-manufactured selection of channel and edging units used for a wide variety of landscaping purposes. These hydraulically pressed products are available in many different shapes and profiles to fulfil a wide range of design requirements.

See my related products...

Standard Paving pg 68

Standard Kerb..... pg 98-99



n55Plus
Q24 110 Q10 10
Q24 111 Q10 110



For the latest carbon value visit
www.marshalls.co.uk/commercial/carbon-calculator