

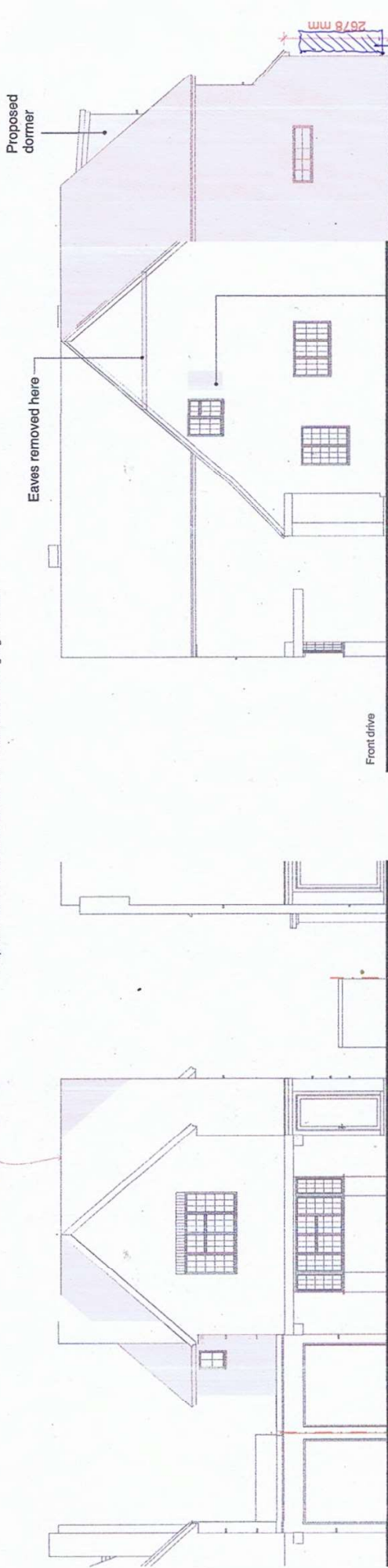
MICHAEL OAKES ARCHITECTS LTD.

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KEY

- Obscured glazing to windows
- Proposed structure

Existing ridge height kept



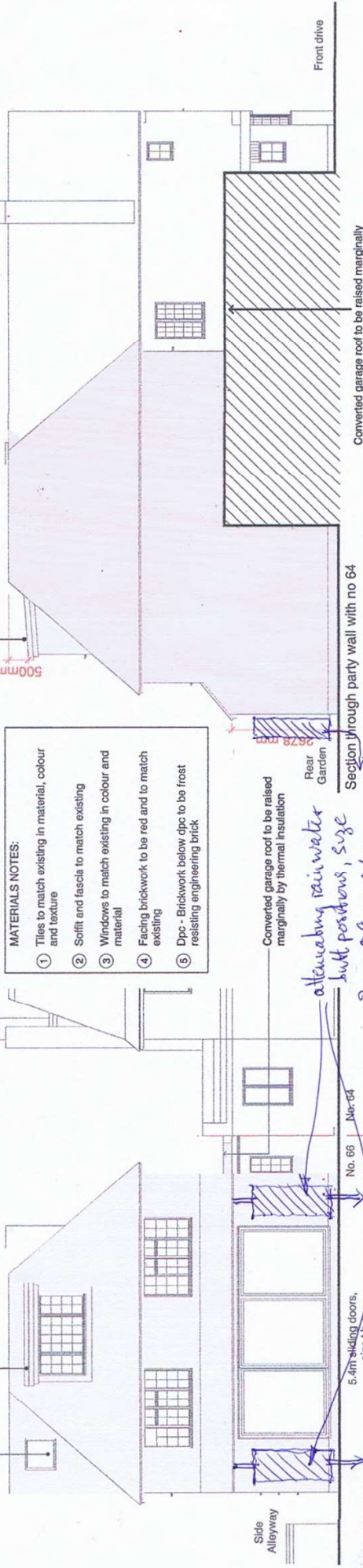
Front Elevation

Side Elevation

780x980mm
Velux window
dormer

Note: Some boundaries are not shown
for clarity:
Ground levels vary, to be re-checked on
site

- MATERIALS NOTES:**
- 1 Tiles to match existing in material, colour and texture
 - 2 Soffit and fascia to match existing
 - 3 Windows to match existing in colour and material
 - 4 Facing brickwork to be red and to match existing
 - 5 Dpc - Brickwork below dpc to be frost resisting engineering brick



Rear Elevation

Section through party wall with no 64

Converted garage roof to be raised marginally by thermal insulation

Address: 66 Broadwood Avenue, Ruislip, HA4 7XR
 Client: Mr + Mrs Dontchev
 Date: May 2021

Drawing Title

As Proposed
Elevations

1:100 @ A3
 0 1 2 3 4 5 10m

Project no. / Stage / Revision

0343- PLA-

53_E

Drawn by: BR

Revision notes:
 A - First Issue
 B - Updates 12.08.21
 C - Updates 25.08.21
 D - Updated roof 14.09.21

E - reworked 19.12.22

MICHAEL OAKES

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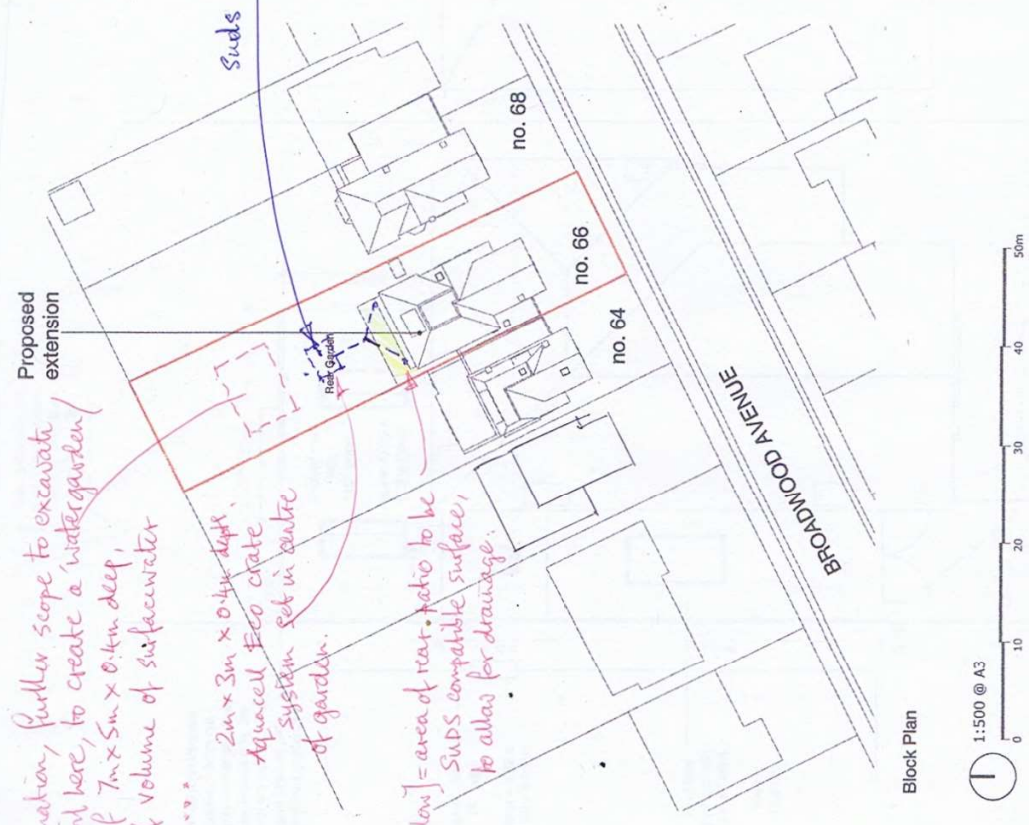
KEY:

- Pile foundation (Diameter and depth stated on drawings)
- Pre-stressed, high strength reinforced concrete lintel
- Concrete mass fill foundations C30P (Width + depth stated on drawings)
- Locations where existing foundations checked on site
- 20mm of flexible / compressible boarding between the old and new foundations
- SVP 110mm dia. Soil and vent pipe (SVP)
- ST 110mm dia. Stub stack (Durgo valve)
- RWP Proposed rainwater downpipe (RWP)
- Rainwater ACO drainage channel
- Proposed plumbing services
- Existing manhole to be broken out (size and invert stated on drawings)
- Existing manhole (size and invert stated on drawings)
- Proposed manhole (size and invert stated on drawings)
- Existing inspection chamber to be removed (size and invert stated on drawings)
- Existing inspection chamber (size and invert stated on drawings)
- Proposed inspection chamber (size and invert stated on drawings)
- Existing gully broken out
- Existing gully
- Proposed gully
- Existing drainage run
- Proposed drainage run
- Thames water sewer run

for information, further scope to excavate ground/soil here, to create a 'water garden' Swale; if 7m x 5m x 0.4m deep, = 14 m³ of volume of surface water available...

2m x 3m x 0.4m deep Aquacell Eco crate system set in centre of garden.

[yellow] = area of rear patio to be SuDS compatible surface, to allow for drainage.



Block Plan

1:500 @ A3

Address: 66 Broadwood Avenue, Ruislip, HA4 7XR
Client: Mr + Mrs Dontchev
Date: May 2021

Drawing Title: Flood Mitigation Measures Rainwater Disposal and SuDS

Single storey rear and side extension planning application

Project no. / Stage / Drawing no. / Revision: 0343 PLA-55_A
Revision notes: A - First Issue
Drawn by: FK

Sustainable Drainage Options:

- 1) Rainwater attenuation - for impervious ground conditions (e.g. clay), storing of rainwater and releasing slowly once the drainage permits
- For example, Wavin AquaCell Eco (encapsulated in geomembrane, then wrapped in a protective geotextile layer to allow attenuation of water)
- 2) Rainwater infiltration - for pervious ground conditions, allowing rainwater to soak into the surrounding ground
- For example, Wavin AquaCell Eco (wrapped in a geotextile to allow infiltration of water)



Fig. 1 - Wavin AquaCell Eco - a geotextile wrapped subsurface drainage principle for principal use

- 3) Rainwater harvesting - storing close to where it falls to be used for another means

Rainwater Calculation

Volume of water to be drained to the front garden = 2.33 m³ - existing downpipes, unaffected.

Volume of water to be drained to the rear garden = 56 m³
Volume required for soakaway = 56 m³ x 0.040 (daily rainfall) = 2.33 m³
Using Wavin AquaCell Eco (standard dimensions)
1m x 0.5m x 0.4m = 0.2m³
2.33 m³ / 0.2m³ = 12 cells to rear garden.

And provide 1 soakaway in the rear garden a minimum of 5m from any building line, 1m below invert of inlet pipe 2m x 2m with a minimum of 12 cells.

See manufacturers details for lining materials and backfill.



Eco is manufactured from specially reformulated, recycled material and has been designed for shallow, non-traffic, landscape applications.

Prime is the latest addition to the AquaCell range, manufactured from specially reformulated, recycled material. It is ideal for use in both shallow and deep applications, subject to either regular traffic loading - such as car parks (for vehicles up to 12 tonnes) - or for landscaped areas.

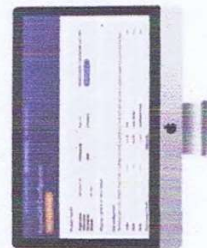


Core has been designed for use in deep applications, subject to both regular and heavy traffic loadings, such as cars and HGV's (for vehicles up to 44 tonnes).

Plus has been designed primarily for use in applications where inspectability is required, and is suitable for use in all applications from landscaped areas to heavily trafficked areas (for vehicles up to 44 tonnes).

Optimise tank and soakaway designs with the AquaCell Configurator Tool

The AquaCell configurator tool adds and speeds the efficient design of stormwater tank or soakaway solutions. The tool guides users through a step-by-step specification process and, based on responses, will recommend the optimum design, based on the loadings, depths and site conditions of each project. The tool generates a PDF of the design for easy download and can store the data online for future reference. To start using the tool or to learn more visit: myportal.wavin.co.uk/tools



www.wavin.co.uk | Email: technical.design@wavin.co.uk

Wavin AquaCell Systems P/LM

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Address: 66 Broadwood Avenue,
Ruislip, HA4 7XR

Client:

Mr + Mrs Dontchev

Date:

May 2021

Drawing Title

Flood Mitigation Measures
Manufacturers Guidance

Project no. / Stage /

0343 PLA-

Revision no. / Revision

56_A

Revision notes:
A - First Issue

Drawn by: PK

Product Details AquaCell Eco

Application

AquaCell Eco is manufactured from specially reformulated, recycled material and has been specifically designed for shallow, non-traffic, landscaped applications. AquaCell Eco is NOT suitable for locations subject to high water tables.

AquaCell Eco is typically suitable for installations to a maximum depth of 1.5 metres, to the base of the units from ground level, with a minimum cover depth of 0.3 metres. Wavin's recommendation, is to allow a cover depth of 0.5 metres.

Any installation using AquaCell Eco must NOT be subjected to additional loading at any time. Trafficking by construction plant on site, including mechanical equipment, must be avoided.

If trafficking of the buried tank by construction plant or other vehicles is unavoidable, the installation should be constructed using AquaCell Core units (see page 11).

The width of an AquaCell Eco installation should not exceed 12 metres to allow for mechanical backfilling without loading. There is no limit to the length of the installation.

Features and benefits

- Manufactured from specially reformulated, recycled material
- Suitable for both soakaway and attenuation applications
- Proven vertical loading capacity of: 17.5 tonnes/m²
- Proven lateral loading capacity of: 4.0 tonnes/m²
- Integral "hand holds" for ease of carrying/handling
- Black in colour, for ease of identification
- BBA approved - Certificate No 03/0018



Material: Reformulated polypropylene

Normal size (mm)	Unit size (mm)	Dimensions (mm)
160	EL8025	W 500 H 400 L 1000

Maximum installation depths (to base units) and minimum cover depths

Typical soil type	Typical angle of shearing	Maximum depth of installation (m)	Minimum cover depth (m)
Stiff over-consolidated clay (e.g. London clay)	24°	0.95	0.30
Normally consolidated silty sandy clay (e.g. alluvium, made ground)	26°	1.05	0.30
Loose sand and gravel	29°	1.2	0.30
Medium dense sand and gravel	33°	1.5	0.30
Dense sand and gravel	38°	1.9	0.30

(1) These values relate to installations where the groundwater is a minimum of one metre below the base of the excavation. AquaCell Eco units should not be used where groundwater is present.

Source: BBA

www.wavin.co.uk | Email: technical.design@wavin.co.uk

Wavin AquaCell Systems P/LM

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