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Ref: Erect "Granny flat" annex +  
Garage extension

Hérons Reach  
Green Road  
The Green

Millom, Cumbria LA18.5JA.

'Rockland'

Lady Hall

Millom

Cumbria LA18 5JR

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## Flood risk Assessment (issue 2)

28/07/2023

Enclosed ● O.S. map, scale 1:2500, showing:

- A) Position of proposed extension/annex + boundaries - - - identified **RED**
- B) O.S. levels, located on highway, running parallel to beck - - - " **PINK**
- C) Black Beck adjacent - - - - - " **ORANGE**
- D) Access (+ evacuation route if required) - - - - - " **YELLOW**
- E) Section where 2009 flooding overtopped beck sides - - - " **↑ ↑**

- Environment Agency flood map for planning.
- Block Plan, Scale 1:1000, showing levels, existing + proposed.

### INTRODUCTION

It is proposed to erect a granny flat annex + garage extension to an existing detached garage within the curtilage of 'Hérons Reach', The Green LA18.5JA, being a private dwelling with approx 1.5 ha paddock adjoining. This is to provide additional accommodation for the applicant's parent.

### FLOOD RISK

The proposed site is at risk from river flooding as shown on the "Environment agency flood map for planning" (25/07/2023) from the adjacent "Black Beck".

The flood map shows some flood defences either side of Black Beck which mainly are in the construction of stone wall lined earth embankment + vary a little in height. It shows one side terminating adjacent the development site.

### PROBABILITY

The proposed site sits within Flood Zone 3, + with climate change the forecast allowance on peak river flow in the area is 30%.

This puts the site at greater risk in the future, Presently HIGH probability.

### RECENT FLOODING HISTORY

Nov. 2009, Major flooding generally. The Black Beck topped the earth-work banking at a point approx 80 metres N.W. of the access bridge into the development site, initially on its S.W. side where the banking is not as high + also form a hedge. This resulted in 100/150mm water travelling southward across the fields running to lower ground which forms the tidal flood plane.

The flood path included the lowest areas of the applicant's site. Later the water topped the N.E. bank at the same point, to a lesser degree, + ran down the highway towards the station.

At this time, the water was level with the ground on site, at a position approx 10m eastward of the existing bungalow (Hérons Reach) at a point beyond the raised earthwork which shows as flood

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defences on the flood map. At that time there was no additional walling lining the beck edge, but since then a stone/cement wall has been erected at a height of 450/500 mm, with its top following the fall of the beck, extends to the existing earthwork defences, & is 1.6 m above the beck bottom.

Dec 2015 (storm Desmond). No flooding occurred via the beck:

#### DEVELOPMENT & FLOOD RISK MANAGEMENT

The proposed granny flat will have a footprint of  $64.12\text{m}^2$  & the proposed garage extension  $241\text{m}^2$ , all adjoining an existing detached garage.

The accompanying 'Block plan' shows the ground levels, & floor levels of the existing & proposed buildings along with the base of 'Black Beck'

The ground falls away generally from the beck edge southward & eastward towards the tidal flood plane.

The proposed granny flat floor level will be no lower than the existing dwelling. This allows for drainage to the septic tank, cover to same, & mm 150 to Damp proof course.

All the building construction is to be cavity wall-concrete blockwork.

The area between Annex & septic tank is to be raised locally to cover drainage, & provide an access path to the annex at higher level.

All other ground around the existing bungalow etc falls south & eastward to the lower flood plane.

Measures already in place to limit flood water entering the site are

- stone/cement wall edging 'Black Beck', following the beck level at 1.6 m high above beck bottom, to the south side, & abutting the exist earth flood defence.
- Access bridge of Universal Beam & concrete construction with its deck level at 1.9 m above beck bottom, & the earlier mentioned wall stepping up to that level.
- Stone & cement wall starting on the west side of the bridge at 200 mm higher than the deck & continuing around the bungalow west boundary, stepping down to a height of 1 m above field level. This section of wall will divert flood water from the recent known overspill point, to the lower ground without entering the site of the dwelling etc.

The ground on site is free draining & permeable as shown from the percolation tests carried out for septic tank drainage field & rainwater soakaways & the impact from rainwater will be minimal. There are no plans to form concrete hardstandings etc.

The garages will always be susceptible to flooding, being 710 mm lower, & while floodboards are recommended made for the 2 door openings, it is sometimes wiser to leave the doors open & let water in & out freely, having removed vehicles to safer ground, & with all oils, paints, pesticides & other contaminants stored above bench height.

- ③ Electrical works, sockets + switches in the granny flat to be located between 450 + 1200 above floor level, as per Building Regs requirements, + all electrical sockets + switches in the garage to be located at 1200mm high, + all wired top down.
- There is no planned limit to the lifespan of use as a granny flat + it will always be 'tied' to the main dwelling, in "family" use.

#### FLOOD ACTION PLAN

The applicant is well aware of the risk of flooding having witnessed the 2009 event.

The applicant is to register with the E.A. automatic flood warning system + as the annex is for use by family, both units will benefit from this.

Nation + Local weather reports/forecasts are readily available on TV, radio + other social media, so plans can be put in place to take action if required.

Whilst both bungalow + Annex floors are well above the surrounding fields, if evacuation is decided upon, the route to higher ground is up the highway, a distance of 190 metres from the annex, in a N.W direction, less than 5 minutes walk. (This is the access road to the site)

However evacuation would need to be prior to any flooding, as this section of road is also liable to flooding as stated in the "2009 historical" comments mentioned earlier.

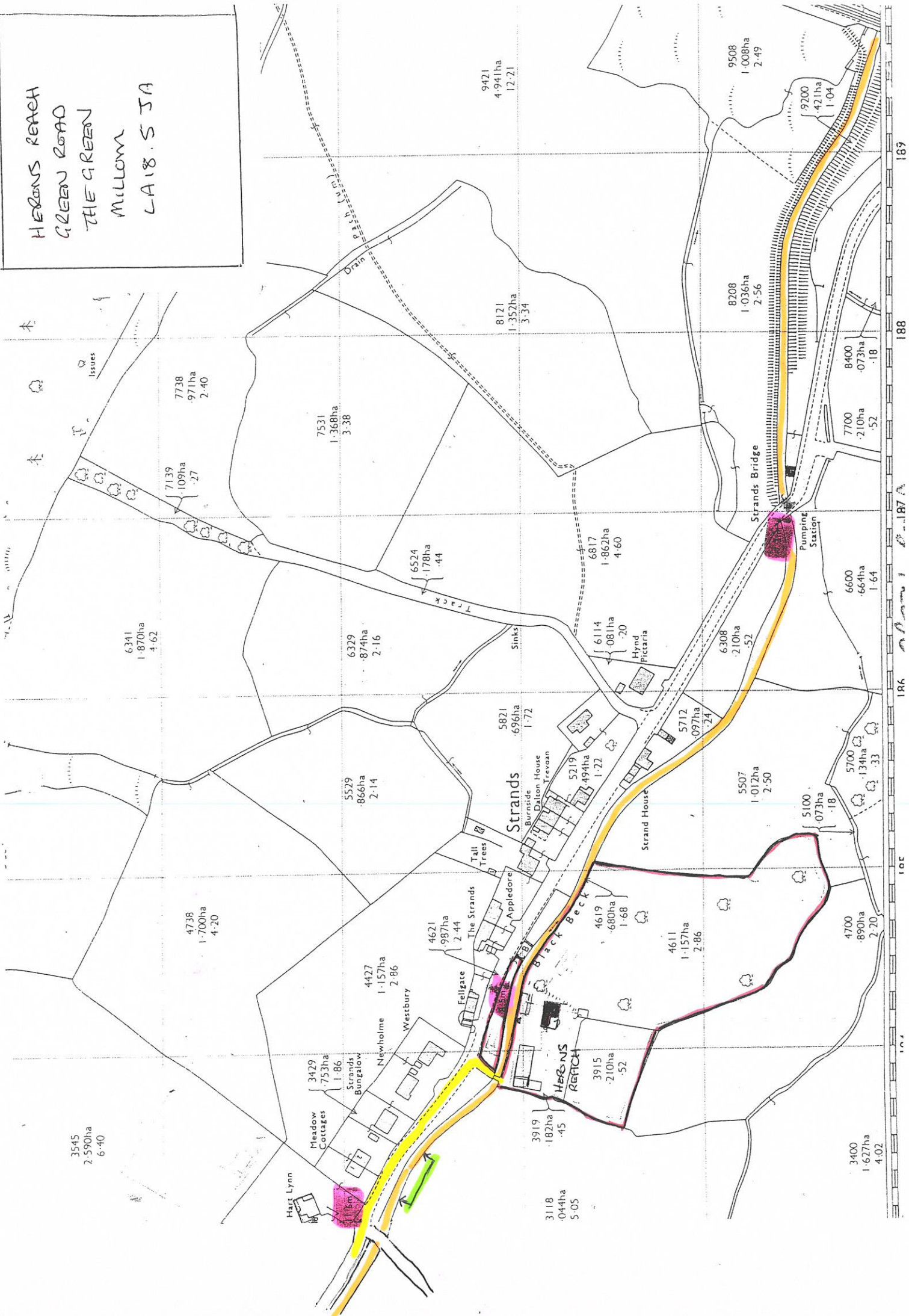
This route is coloured yellow on the site plan.

The fact that initial overtapping of the beck occurs to the N.W, + on the southern side of the beck onto open fields, helps to reduce the flooding effect to most of the properties in this area, including 'Herons reach'.

The highest point locally is the access bridge + top of the access ramps both sides, + this area could be used as a temporary refuge, if signs of flooding were subsiding, but there is also a risk of flooding affecting the structure of the bridge.



HERONS REACH  
 GREEN ROAD  
 THE GREEN  
 MILLOW  
 LA18 5 JA





# Flood map for planning

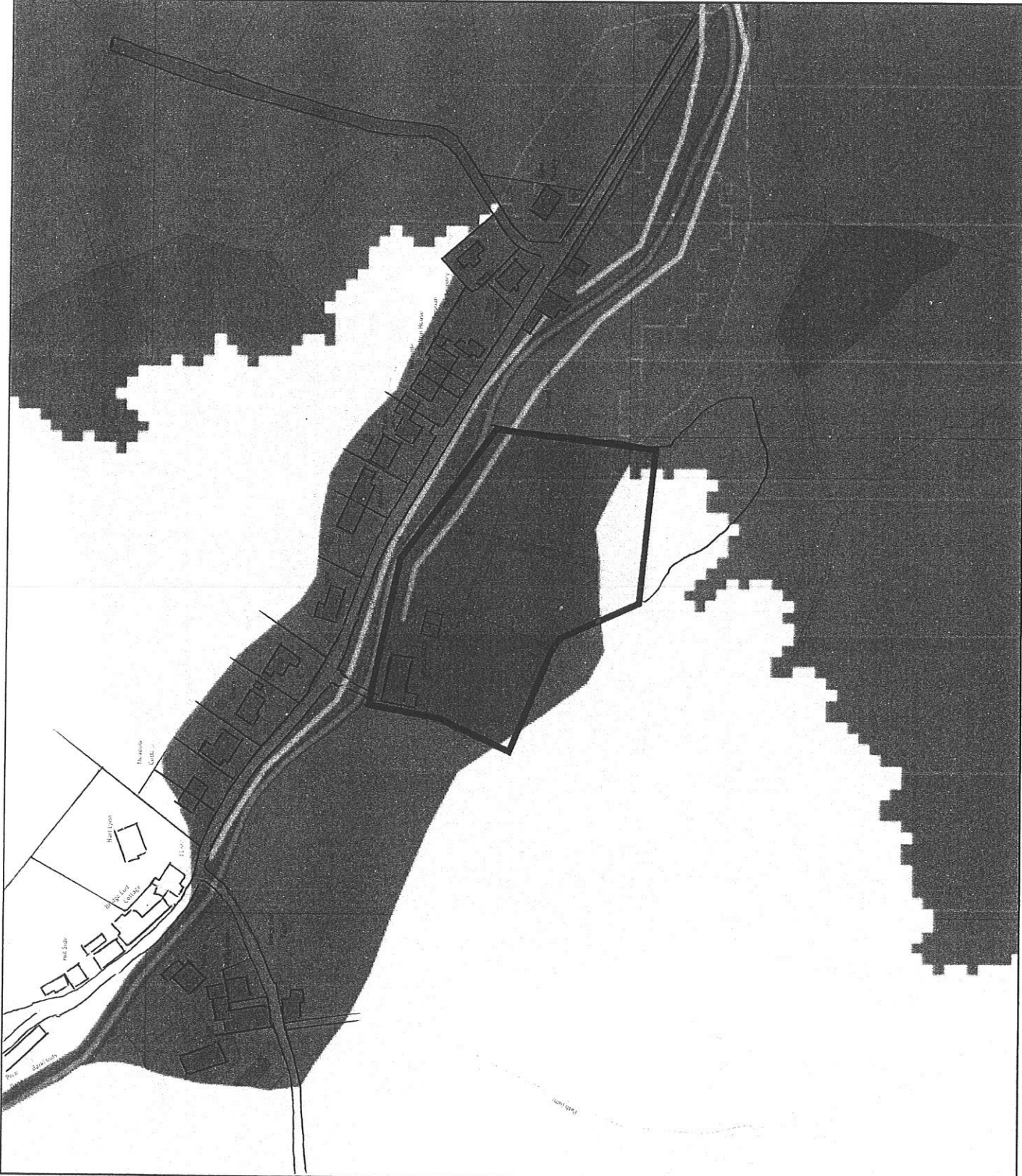
Your reference  
<Unspecified>

Location (easting/northing)  
318429/484147

Scale  
1:2500

Created  
25 Jul 2023 20:12

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area





-1500 BLACK BECK

0.45m O/S HIGH WALL FOLLOWING BECK BOTTOM LEVEL AT 1.6m

← TO ACCESS AT BRIDGE AT +0.49

I.C COVER - 270  
INVERT - 570

5.5 (981)

13.72 (456)

-360

S.T. COVER - 510  
INLET INVERT - 760

EXISTING 4000 LIT CAPACITY SEPTIC TANK

EXISTING DRAIN LINE TO SOAKAWAY RE DIRECTED TO NEW SOAKAWAY FIELD MIN 15m (50ft) FROM BUILDING

FAIL NEW LINE

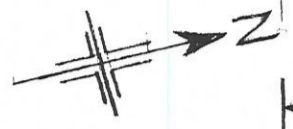
EXISTING HARDWARE ACCESS TO GARAGE

0' DATUM  
FLOOR LEVEL

HERONS REAR (4 BEDROOMS)

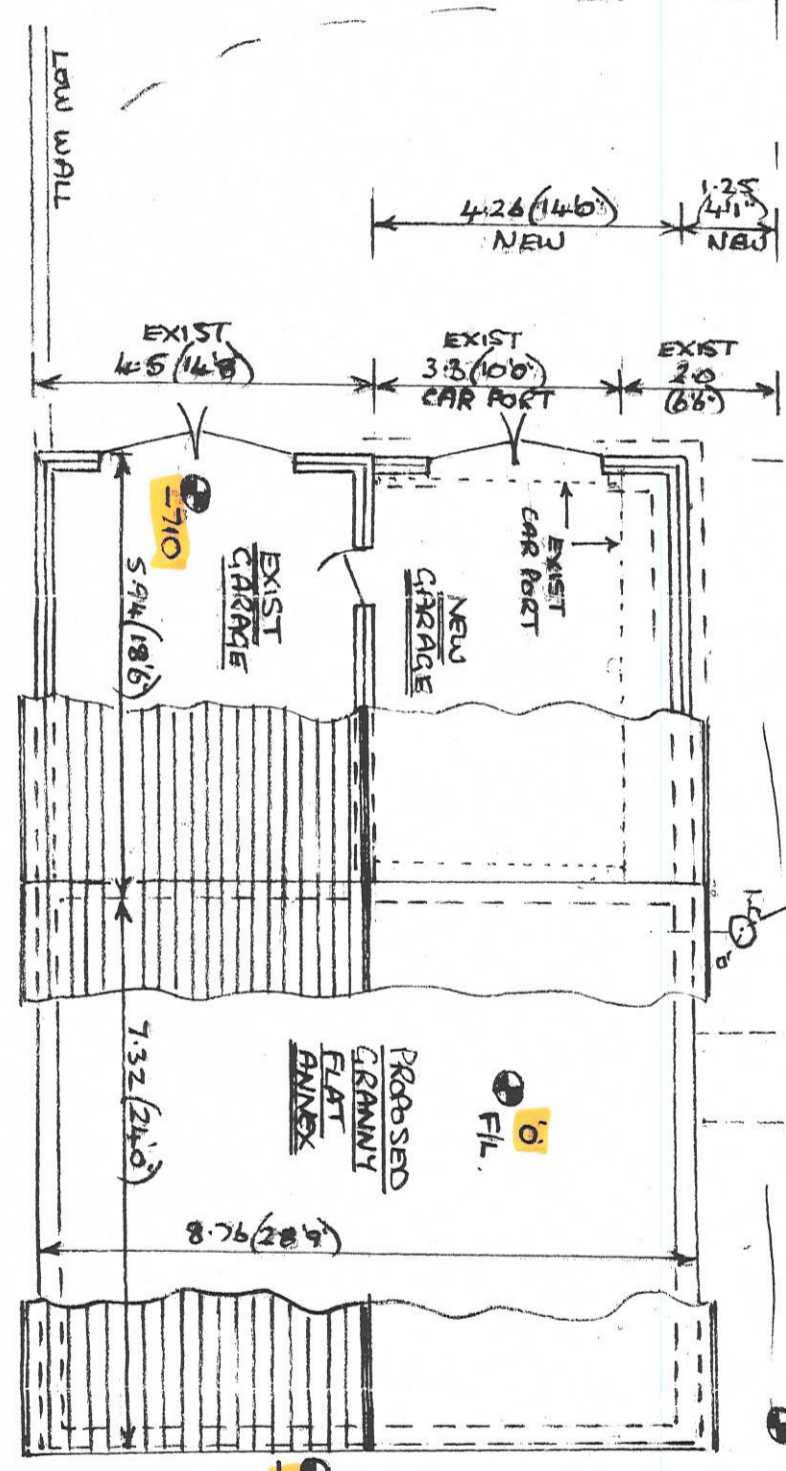
11.42 (376)

8.84 (286)



BLOCK PLAN / DRAIN PLAN / LEVELS.

SCALE 1:100



-910

SEE SH1  
SLOPE DOWN

-1140

-910