

LOADING:
— ROOF, IMPOSED UNFACTORED LOADS, NO ACCESS IS PROVIDED TO ROOF
(OTHER THAN THAT NECESSARY FOR CLEANING AND
MAINTENANCE):

UNIFORMLY DISTRIBUTED LOAD, SNOW = 0.75 KN/M²
CONCENTRATED LOAD = 0.9 KN

WIND:

BASIC WIND SPEED = 25 m/s
MAX. DESIGN WIND PRESSURE ROOF CLADDING = 1.0 KN/M²
MAX. DESIGN WIND PRESSURE WALL CLADDING = 1.5 KN/M²
(ABOVE LOADS ARE UNFACTORED)

TIMBER SPECIFICATION

ALL TIMBER WORK TO BE IN ACCORDANCE WITH THE ENGINEERS TIMBER
SPECIFICATIONS.

ALL PRODUCTS SHALL BE CE MARKED.

ALL TIMBER TO BE DESIGNED AND CONSTRUCTED TO EUROCODE 5 OR BS 5268, IS
440 AND IS444.

ALL ROOFING AND DECKING SHALL BE GRADE OSB/3 (SERVICE CLASS 2) TO EN
300, TYPE 'OSB3-T&G4' BY 'SMARTPLY' UNLESS NOTED OTHERWISE. NOTE
DIRECTION OF FACE GRAIN ON DRAWINGS. ORIENTATION OF THE FACE GRAIN OF
THE BOARD SHALL BE PERPENDICULAR TO SUPPORTS U.N.O. MINIMUM SIZE TO BE
NOMINALLY 1200 X 2400 X 18MM U.N.O.

ALL TIMBER SIZES AS PER PLAN AND DETAILS, GRADE C24 U.N.O. TO IS 444 AND
MARKED/STAMPED WITH THE APPROPRIATE STRENGTH CLASS.

ALL DIMENSIONS AND ROOF PITCHES TO BE CONFIRMED ON SITE PRIOR TO ANY
MANUFACTURE.

ALL TIMBER WORK USED ON SITE SHALL HAVE PRESERVATIVE TREATMENT USING
THE DOUBLE VACUUM TREATMENT PROCESS WITH AN ORGANIC SOLVENT
PRESERVATIVE TO COMPLY WITH BS5268. ENDS OF ALL TIMBER WORK, TIMBER
WORK SAWN CUT, NOTCHED, BIRDS MOUTHED ETC. ON SITE SHALL BE LIBERALLY
COATED WITH 2 NO. COATS COLOURED WOOD PRESERVATIVE 'PROTIM' OR SIMILAR
COMPATIBLE WITH THE DOUBLE VACUUM TREATMENT. BUILT-IN TIMBER SHALL BE
PROTECTED BY WRAPPING IN WATERPROOF MEMBRANE.

ALL NAILS TO BE A MINIMUM OF 3.5mm DIA (10 SWG) X 75mm LONG
GALVANISED ROUND WIRE NAILS U.N.O. WHERE PROPRIETARY HANGERS/TRUSS CLIPS
ARE USED EACH HOLE AVAILABLE FOR FIXING SHALL BE OCCUPIED WITH A NAIL.

SPACING OF JOISTS, RAFTERS AND STUDS SHALL BE AT 400 C/C NOMINALLY
U.N.O.
MINIMUM BEARING TO BE 50MM FOR TIMBER JOISTS AND RAFTERS,
PROVIDE BRIDGING TO FLOOR & ROOF JOISTS AS SHOWN / NOTED.

NOTCHING AND DRILLING OF JOISTS / BEAMS/STUDS SHALL CONFORM TO I.S. 444
OR I.S. EN 1995-1-1.

ROOF PANELS SHALL BE VENTILATED AS DETAILED.

STEELWORK

THE CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS OF STEELWORK LAYOUT
AND DETAILS TO THIS OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT OF
MANUFACTURE.

— ALL STEELWORK AND FABRICATION TO BE 'CE' MARKED; ALL STEEL EXECUTION
CLASS 'EXC2'.

CONTRACTOR AND STEELWORK FABRICATOR TO COORDINATE DETAILING AND
INSTALLATION OF STEELWORK

— ALL STEELWORK TO BE GRADE S275, ALL BOLTS TO BE GRADE 8.8 U.N.O., ALL
STEEL/STEEL CONNECTIONS BE MIN 4NO. M20 BOLTS OR 6MM FILLET WELD.
ALL STEELWORK IS TO BE PROTECTED IN ACCORDANCE WITH THE FOLLOWING:
HIDDEN INTERIOR STEELWORK; BLAST CLEAN TO SA2½, APPLY 80µm HIGH BUILD
ZINC PHOSPHATE EPOXY PRIMER.

EXTERIOR STEELWORK ENVIRONMENT CATEGORY 'C5' OR STEELWORK IN CONTACT
WITH MASONRY OUTER SKIN: HOT-DIP GALVANIZE 85 MICRON, MORDANT WASH, 40
MICRON EPOXY PRIMER, 100 MICRON 'MIO', FINISH COAT TO ARCHITECT'S DETAIL.
ALL INTERNAL STEELWORK AT GROUND FLOOR & UPPER FLOORS SUPPORTING
UPPER LEVELS TO BE FIREPROOFED BY APPROVED INTUMESCENT COATING TO
PROVIDE 1 HOURS FIRE RESISTANCE.

NOTE ON GROUND CONDITIONS & FOUNDATIONS:

A DESK STUDY OF GROUND CONDITIONS IN THE AREA SHOWS THAT TOPSOIL IS TYPICALLY UNDERLAIN
WITH BROWN BOULDER CLAYS. THIS SHALL BE CONFIRMED BY TRIAL PIT; 300–500mm OF TOPSOIL ON
FIRM/STIFF BROWN BOULDER CLAY WITH TYPICAL 'ALLOWABLE BEARING PRESSURE' OF 150kPa.
FOUNDATIONS SHALL BE TAKEN INTO THE BROWN BOULDER CLAY. FROM HISTORICAL MAPS NO MAJOR
WATERCOURSES WERE IDENTIFIED IN THE AREA. PRIOR TO POUR, THE ENGINEER SHALL BE IN
ATTENDANCE TO INSPECT THE PROPOSED FORMATION LEVEL(S) AND INSTALLATION OF REBAR. THE
CONTRACTOR SHALL INFORM THE ENGINEER IN GOOD TIME TO ARRANGE OF INSPECTION DATE/TIME.
SOFT SPOTS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED HARDWARE

DON'T FORGET SAFETY

**NOTE CE MARKING &
CERTIFICATION:**

TO SHOW COMPLIANCE WITH BUILDING REGULATIONS, CE
MARKING & TO ALLOW CERTIFICATION OF WORKS, THE
CONTRACTOR SHALL SUBMIT THE FOLLOWING
DOCUMENTATION TO THIS OFFICE FOR REVIEW:

BLOCKWORK:

Declaration of Performance

Certificates of Factory Production Control

Delivery docket w/ spec printed

READY-MIX CONCRETE:

Delivery docket w/ spec printed

AGGREGATE/HARDWARE

Declaration of Performance

Certificates of Factory Production Control

Delivery docket w/ spec printed

BLOCKWORK ACCESSORIES WALL TIES:

Declaration of Performance

Delivery docket(s) w/ spec printed

BLOCKWORK ACCESSORIES LINTELS:

Declaration of Performance

Certificates of Factory Production Control

Delivery docket w/ spec printed

MORTAR:

Declaration of Performance

Confirmation of specification/mix used for

site mixed mortar for walls, and provide

specification of ingredients / materials.

STRUCTURAL TIMBER:

CE mark Declaration of Performance

Delivery docket w/ spec printed

STRUCTURAL TIMBER FRAME:

CE mark Declaration of Performance

Delivery docket w/ spec printed

Certificate of NSA's Timber Frame

Manufacturers Approval Scheme

STRUCTURAL STEELWORK:

CE mark documentation incl.

Declaration of Performance

Factory Production Control

Welding Certs

Delivery docket w/ spec printed

R.C. & MASONRY SPECIFICATION

1 ALL LEVELS TO LOCAL DATUM
2 FOUNDATIONS TO BE CAST AGAINST
GROUND U.N.O. OR PRIOR AGREEMENT.
3 CONCRETE GRADES SHALL BE AS
FOLLOWS:

BLINDING : C12/15 ALL IN AGGREGATE
FOUNDATIONS C28/35, 20mm NOMINAL
AGGREGATE, CEMENT CEM IIIA WITH 50%
O.G.B.S., ALL TO ISEN 206.

4 ALL REINFORCEMENT BARS SHALL BE IN
ACCORDANCE WITH BS4449 OR BS4461
WITH A YIELD STRENGTH OF 500N/mm²
OR 250N/mm² FOR BARS DENOTED H
OR R RESPECTIVELY. ALL WIRE MESH
SHALL BE IN ACCORDANCE WITH BS4483
WITH MINIMUM YIELD STRENGTH OF
500N/mm².

COVER TO REINFORCEMENT:

CAST AGAINST GROUND 50mm

CAST AGAINST SHUTTER 40mm

CAST AGAINST BLINDING 40mm

5 WALLS TO BE CONCRETE BLOCKWORK TO
IS325 OR E06. COMPRESSIVE STRENGTH
TO BE 5N/mm² TO IS20 OR EQUIVALENT
MINIMUM 7.5N/mm² TO I.S. EN
771-3:2003.

USE DESIGNATION MORTAR M(X)(ii).

6 DO NOT EXCEED LIFTS OF 1.5m PER DAY.

PROTECT MASONRY FROM FROST, RAIN
AND WIND. ALLOW 14 DAYS FOR MORTAR
TO SET BEFORE BACKFILLING.

7 ALL PRECAST CONCRETE COMPOSITE

LINTELS TO HAVE MIN. 150MM BEARING &
2 COURSES OF SOLID BLOCKWORK U.N.O.

8 MOVEMENT JOINTS TO BE PROVIDED IN
OUTERLEAF OF EXTERNAL MASONRY WALL
AS INDICATED ON ARCHITECT'S

ELEVATIONS. FOR CONCRETE BLOCKWORK
JOINTS SHALL BE SPACED AT OPTIMUM

6M CENTRES UP TO A MAXIMUM 9M
CENTRES IF NO OPES ARE PRESENT.

LOCATIONS TO BE AGREED WITH ARCH.

9 SLAB SUB-BASE TO BE MIN 225mm
BLINDED COMPACTED HARDWARE U.N.O.
REFER TO SPEC.

ACRONYMS:

B.G.L. — BELOW GROUND LEVEL

T.O.C. — TOP OF CONCRETE

U.O.C. — UNDERSIDE OF CONCRETE

F.F.L. — FINISHED FLOOR LEVEL

S.F.L. — STRUCTURAL FLOOR LEVEL

U.N.O. — UNLESS NOTED OTHERWISE

B.O.S. — BOTTOM OF STEEL

T.O.S. — TOP OF STEEL

S/S — STAINLESS STEEL

T.B.C. — TO BE CONFIRMED

NOTE FOR HARDWARE: Hardware should conform with I.S.EN 13242:2014 and meet
the specification as outlined in Annex E of the accompanying guidance document to this
standard, SR21: 2014. The layer of hardware should be well compacted, clean and free from
matter liable to cause damage to the concrete.

Specific guidance is given in 3.4.2 of SR21: 2014 on limiting the presence of a reactive
form of pyrite which may give rise to swelling or sulfate attack on concrete

Only crushed rock aggregate shall be allowed under the floor slabs. The contractor shall
obtain specifications and Declarations of Performance from the quarry operator /supplier
of the hardware that the material being supplied to the site is compliant with the
specification and is fit for purpose.

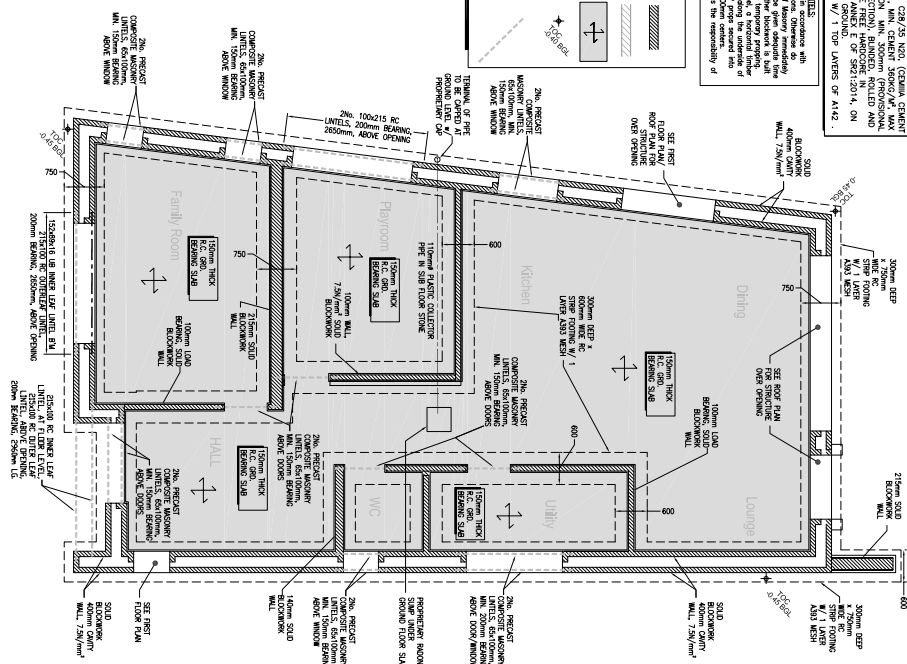
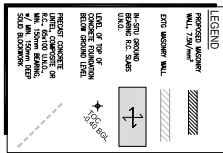
NO PART OF THIS DRAWING MAY BE REPRODUCED OR
TRANSMITTED IN ANY FORM OR STORED IN ANY
RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE
WRITTEN PERMISSION OF ANDREW RILEY CONSULTING
ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS
AGREED FOR USE ON THE PROJECT FOR WHICH THE
DRAWING WAS ORIGINALLY ISSUED.

A. THIS DRAWING SHALL BE READ IN CONJUNCTION
WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND
SPECIALISTS DRAWINGS.
B. ALL DIMENSIONS IN mm UNLESS NOTED.
C. DO NOT SCALE DIMENSIONS.
D. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS
PRIOR TO COMMENCEMENT OF CONSTRUCTION.
DISCREPANCIES SHALL BE REPORTED TO THIS
OFFICE IN WRITING.

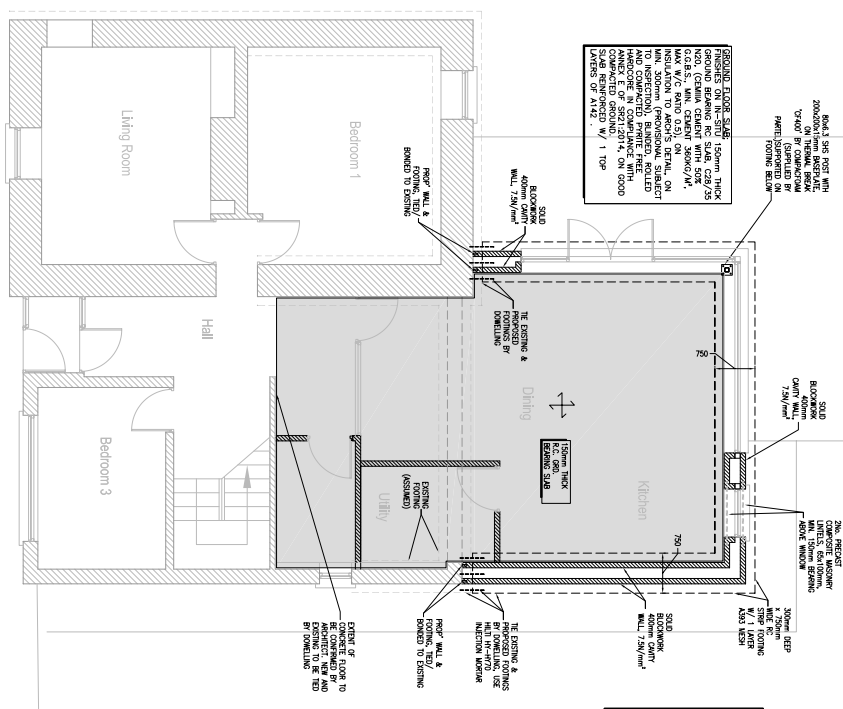
T	FOR TENDER	06/02/17	AR	AR
Rev	Description	Date	Drawn	Checked

ANDREW RILEY CONSULTING ENGINEER		Tel: +353 87 6096331 Email: andrew.riley@rahoia.com	
Client KEN & ANN-MARIE MCCULLAGH		Drawing GENERAL NOTES	
Job CLONLEA LODGE BALLINTREE			
Job Number	Drawing Number	Revision	Shl. Size
15020	000	T	A3
Scale AS NOTED		Date FEB '17	Drawn AR
		Engineer AR	

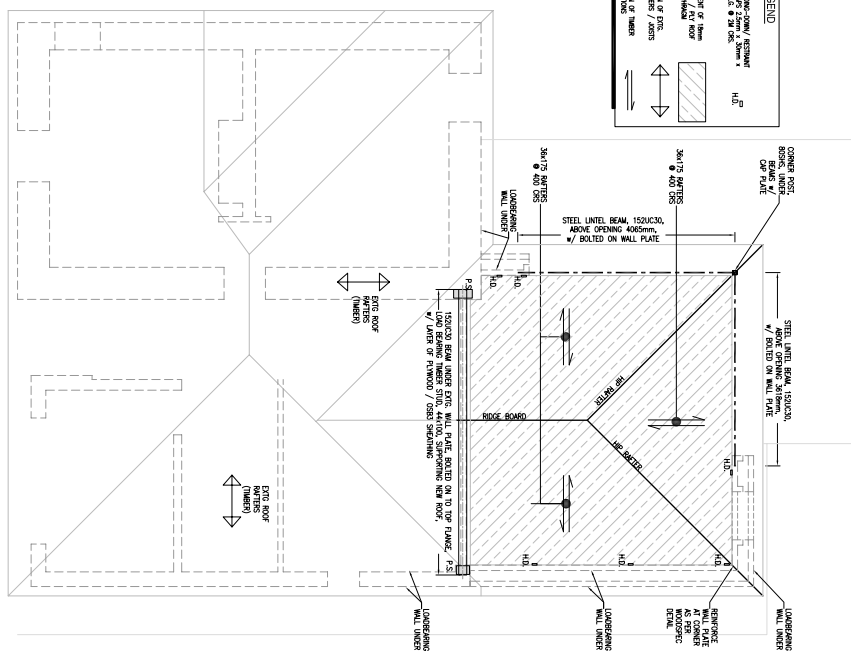
DON'T SCALE DIMENSIONS

[illegible]

GROUND FLOOR & FOUNDATION PLAN
SCALE 1:50



ROOF PLAN
SCALE 1:50



Rev	Description	Date	Drawn	Checked
1	TENDER ISSUE	06/02/17	AR	AR

A. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALIST DRAWINGS.

B. ALL DIMENSIONS IN mm UNLESS NOTED.

C. DO NOT SCALE DIMENSIONS.

D. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.

NOTES:

NOTES FOR CONCRETE & MASONRY:
SEE NOTES ON DRG. 000.

NOTE FOR HARDWARE:
SEE NOTES ON DRG. 000.

NOTE GRD. BEARING SLAB:
SEE NOTES ON DRG. 000.

NOTE ON GROUND CONDITIONS
& FOUNDATIONS:
SEE NOTED ON DRG. NO. 000

NOTES FOR TIMBER &
STEELW/1
SEE NOTES ON DRG. 000.

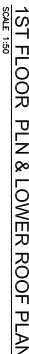
-DON'T SCALE DIMENSIONS

ANDREW RILEY
CONSULTING ENGINEER

Tel: +353 87 6393531
Email: andrew.riley@yahoo.com

NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF ANDREW RILEY CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY ISSUED.

Client	KEN & ANN-MARIE MCCULLACH			
Job	CLONLEA LODGE BALINTREER ROAD CO. DUBLIN			
Job Number	Drawing Number	Revision	Sh. Size	Scale
15070	001	T	A4	1:7.7
			Drawn	Engineered

[illegible]

**NOTES FOR PRECAST
CONCRETE FLOOR SLAB AT
1ST FL.:**

1. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND DRAWINGS FOR THE PRECAST CONCRETE FLOOR SLAB FOR APPROVAL PRIOR TO COMMENCEMENT OF MANUFACTURE. METHOD STATEMENT FOR ERECTION OF PRECAST TO BE SUBMITTED ALSO.

2. PRECAST CONCRETE UNITS SHALL BE DESIGNED FOR THE FOLLOWING SUPERIMPOSED LOADS:

- NORMAL, ZONE SCORED ALLOWANCE (FOR CARPET)
- CILING & SERVICES: 0.15kN/m²
- IMPOSED LOAD (CONCRETE): 1.5kN/m²
- FINISHES: 0.04kN/m²
- WINDS OR BLASTING WINDS AS SHOWN ON DRAWING. FLOOR FINISHES TO ARCHITECT'S SPECIFICATION.
- THE PROOFING TO ARCHITECT'S SPECIFICATION.

Client KEN & ANN-MARIE MCCULLUGH		Drawing PROPOSED 1ST PLAN PROPOSED ATTIC PLAN PROPOSED ROOF PLAN			
Job CLONILLA LODGE BALLINTER ROAD CO. DUBLIN					
Job Number 15020	Drawing Number 002	Revision 1	Sht. Size A5 NOTED	Date Jan '17	Drawn AR
					Engineer AR

Clonlea Lodge, Ballinter Road, Dublin 16

Drainage Design Planning Report

Doc No: 15020_REP_01
Planning Register Reference No: n/a
Issue: Planning
Rev: -
Author: Andrew Riley
Date: 17/12/2015

Contents

Introduction

1.0 Engineering Report

1.1 Waste Water

1.2 Surface Water

1.3 Flood risk assessment

1.4 Legal Consent

0.0 Introduction

This report outlines the drainage aspects of the proposed residential development at Clonlea Lodge as part of the planning submission. It is proposed to develop a new separate three storey structure to side of existing dwelling and alter the existing two-storey dwelling on the existing site. The site area is 695.0 sq.m., the existing building roof area is 129.0 sq.m. and the total area of existing hard surfaces (including roofs) is 306 sq.m. The proposed development proposes an overall roof area of 227 sq.m. ; an increase of 118.0 sq.m. The development proposes a total area hard surfaces (including roofs of 455 sq.m.; an net increase of 149 sq.m. The site is an urban site serviced by private combined drains connected to a foul public sewer on the public Ballinteer Road

1.0 Engineering Report

The works will be carried out in accordance with the Greater Dublin Regional Code of Practice for Drainage Works. The development shall incorporate Sustainable Drainage systems. There is no Dun Laoghaire Rathdown County Council (DLRCC) drainage infrastructure on site, see attached map in appendix. It is proposed that the development will use the existing connection which connects the private drains to the foul sewer at the front on Ballinteer Roads. The existing site underground drainage system is combined, there appears to be no existing connection to surface water sewers or watercourses outside the site.

Refer to attached drawings C001 and C002 showing extent of existing drainage, extent of proposed drainage, including pipe sizes, gradients and levels.

Note modifications of existing private site drainage within the site. Note existing and proposed separation within the confines of the site.

It is proposed to dispose of all surface water on site (subject to results of soakaway test) or reduce/attenuate surface water runoff from the development to the nearby public sewer using infiltration devices (soakaways) in the rear garden and permeable paving in the front driveway.

1.1 Waste Water

It is proposed to discharge waster water and soils to the existing 225mm diameter foul water sewer on Ballinteer Road via the existing private foul drain and to maintain the existing connection to the foul sewer.

All underground structures shall be constructed watertight.

All the works will be carried out in accordance with the specifications in the Greater Dublin Regional Code of Practice for Drainage Works and Part H of Building Regulations.

1.2 Surface Water

It is proposed to limit the surface water discharge from the site in accordance with Greater Dublin Regional Code of Practice for Drainage Works. If required, outfall of surface water run-off will be to the existing nearby sewer to the south east of the site via the private surface water drainage system and the proposed infiltration systems (suds) in the rear garden and front driveway.

It is proposed to dispose of all surface water within the site; however the site is not thought suitable for disposal of all surface water drainage within the site; therefore an overflow from the infiltration system is envisaged, see drawings. Soakage tests shall be carried out to as part of the pre-tender detailed design stage to size the infiltration system. The results will be recorded and submitted to DLRCC.

Furthermore note the area available to the infiltration system is constrained by way-leave around the nearby the DLRCC foul sewer and culvert and the requirement to leave a 5m offset between the structures and the infiltration system.

All the works will be carried out in accordance with the specifications in the Greater Dublin Regional Code of Practice for Drainage Works and Part H of Building Regulations. All underground structures shall be constructed watertight.

1.3 Flood Risk Assessment

In accordance with The Department of the Environment, Heritage and Local Government (DoEHLG) issued new Planning Guidelines "The Planning System and Flood Risk Management"; the assessment process uses a staged approach (step 1, 2 and 3) with the need for progression to a more detailed stage dependent on the outcomes of the former. The requirements of Step 1 are given below with the response in blue:

Step 1 - Screening

- *Indicative Flood maps produced by OPW;*

The on-line flood maps for Dun Laoghaire Rathdown County Council area have been viewed; these records show that the area has no recorded flooding in the past and is unlikely to be at risk of flooding in the future.

- *National coastal protection strategy study flood and coastal erosion risk maps;*

Data from this source is not yet publicly available as the study is still ongoing. However in view of the site's location and elevation the risk of coastal flooding is not thought significant.

- *Predictive and historic flood maps, such as those at <http://www.opw.ie>;*

The OPW on-line flood maps for Dun Laoghaire Rathdown County Council area have been viewed; the predictive mapping shows an apparent risk of the fluvial flooding during extreme events from the nearby River Slang or Ticknock Stream. The stream is located on the far side of the Ballinteer Road and has been culverted, presumably since the construction of the new Ballinteer Road (see attached copy of OPW map, note light blue shading, and the drainage records from DLRCC). No historical flooding was reported on the Flood.ie website.

No flooding was reported in the area during the October 2011 Flooding Event.

- *Catchment Flood Risk Assessment and Management Studies (CFRAMS);*

The site is within the Eastern Catchment Flood Risk Assessment and Management Study (CFRAM) area. There is no reference in the Eastern CFRAM study reports to the site or the surrounding area.

- *Previous Flood Risk assessments (FRAs) at national/regional, strategic and site-specific scales, including studies for flood-protection schemes;*

There are no previous FRAs for this area or nearby sites.

- *Topographical maps, in particular digital elevation models produced by aerial survey or ground survey techniques;*

The average level of the site is 85.9 m O.D.

- *Expert advice from OPW & Local Authorities who may be able to provide reports containing the results of detailed modelling and flood-mapping studies, including critical drainage areas, and information on historic flood events, including flooding from all sources;*

The Local Authority Dun Laoghaire Rathdown County Council and the OPW have been consulted and no additional data regarding significant risk of flooding has been procured.

- *Alluvial deposit maps of the Geological Survey of Ireland (which would allow the potential for the implementation of source control and infiltration techniques, groundwater and overland flood risk to be assessed). These maps, whilst not providing full coverage, could be used to identify areas, where alluvium has been deposited, which have flooded in the recent geological past, since that is the source of the alluvium;*

Not applicable to urban site.

- *Local libraries and newspaper reports;*

No relevant information has been found.

- *Interviews with local people, local history/natural history societies etc.;*

No relevant information has been uncovered.

- *Walkover survey to assess potential sources of flooding, likely routes for flood waters and the site's key features, including flood defences, and their condition;*

A walk over survey was carried out. No sources of flooding were observed. The existing drainage infrastructure was found to be in good condition.

• *National, regional and local spatial plans, such as the National spatial strategy, regional planning guidelines, development plans and local area plans provide key information on existing and potential future receptors.*

The Dun Laoghaire Rathdown County Council Development Plan was consulted. It does not identify this area as being subject to historical flooding.

Based on the above screening, the site is not thought to be at risk from significant flooding. In view of the small size of the site and its urban location a more detailed Flood Risk Assessment (FRA) is not deemed necessary.

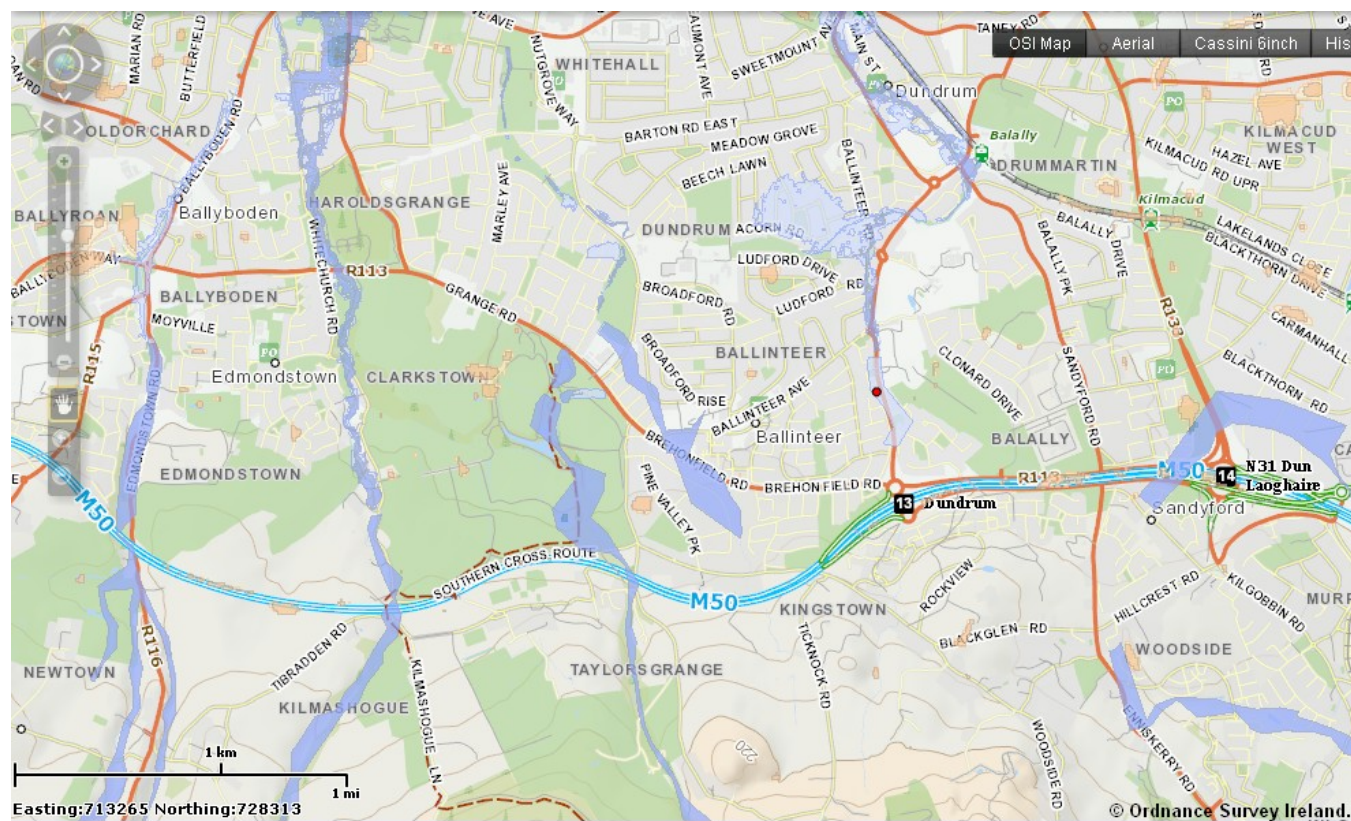
Furthermore the proposed construction of the infiltration systems will mitigate the risk of flooding downstream.

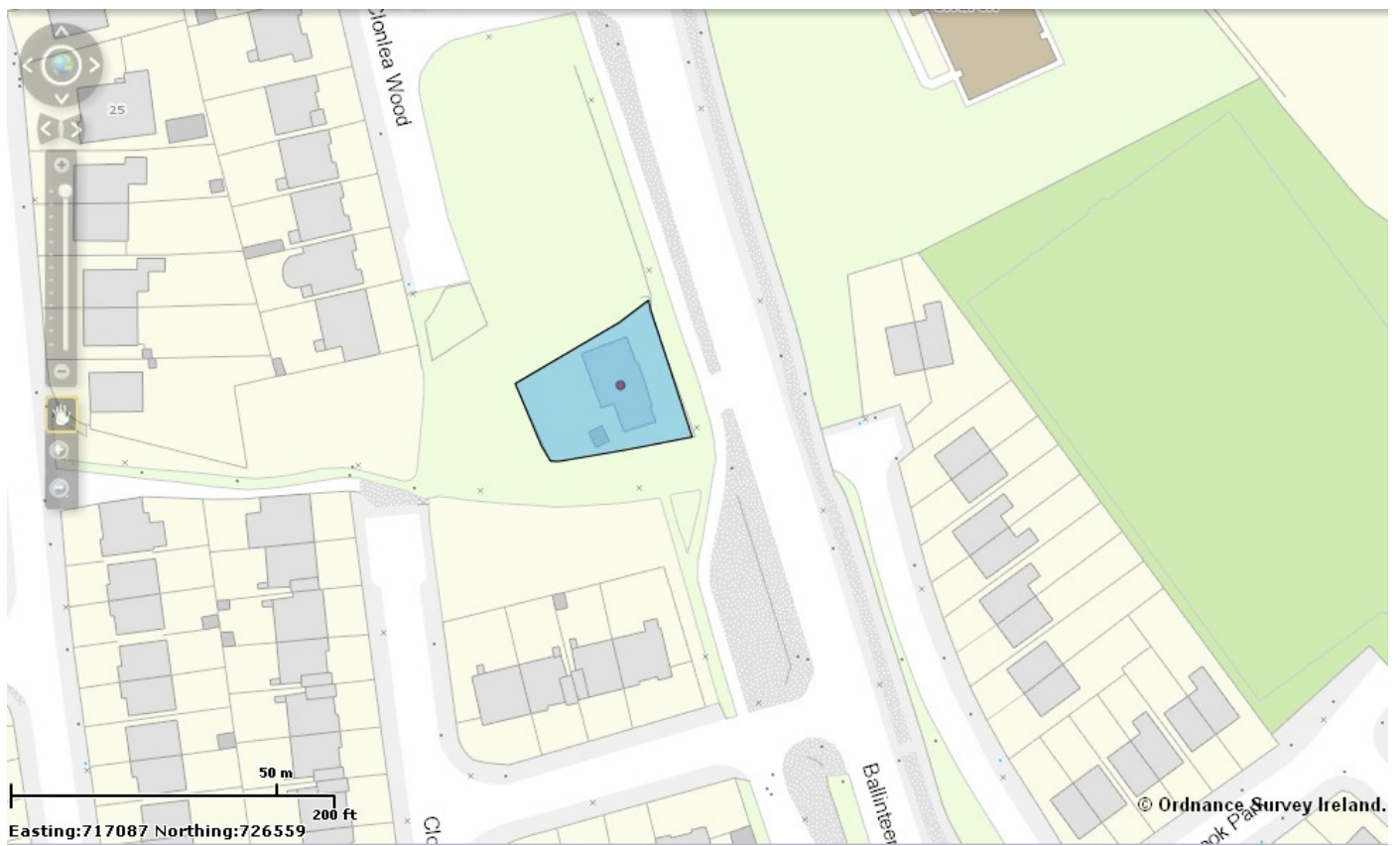
1.4 Legal Consent

No legal consent is required as the applicant's own site and infrastructure are used.

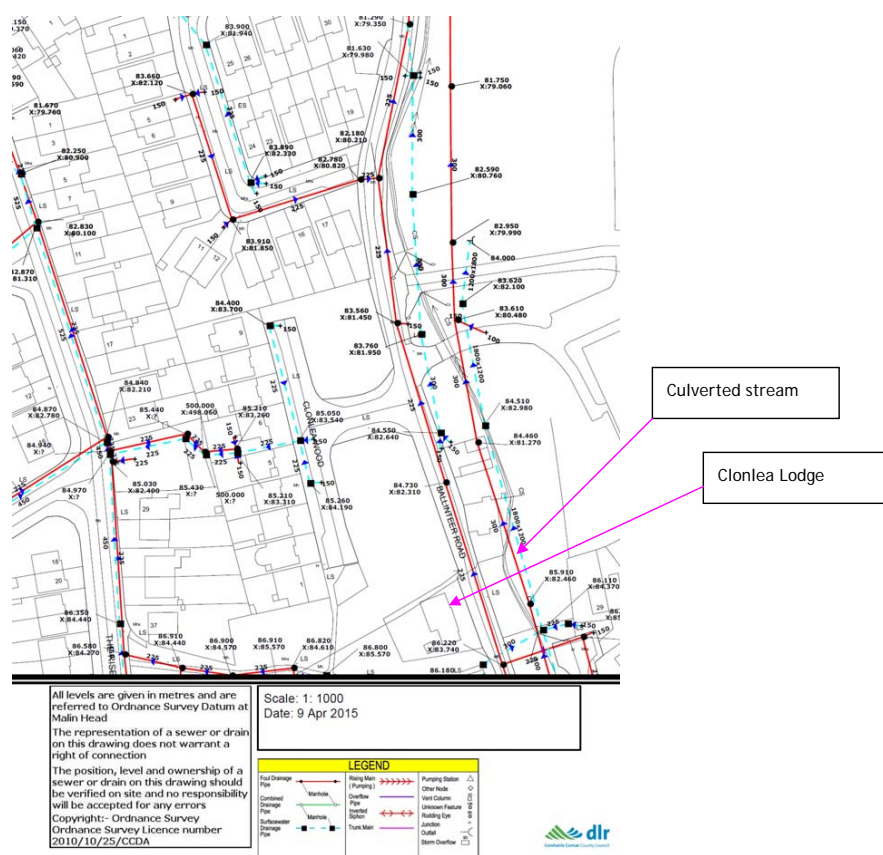
Appendices

Sewer record map, flood map and location map





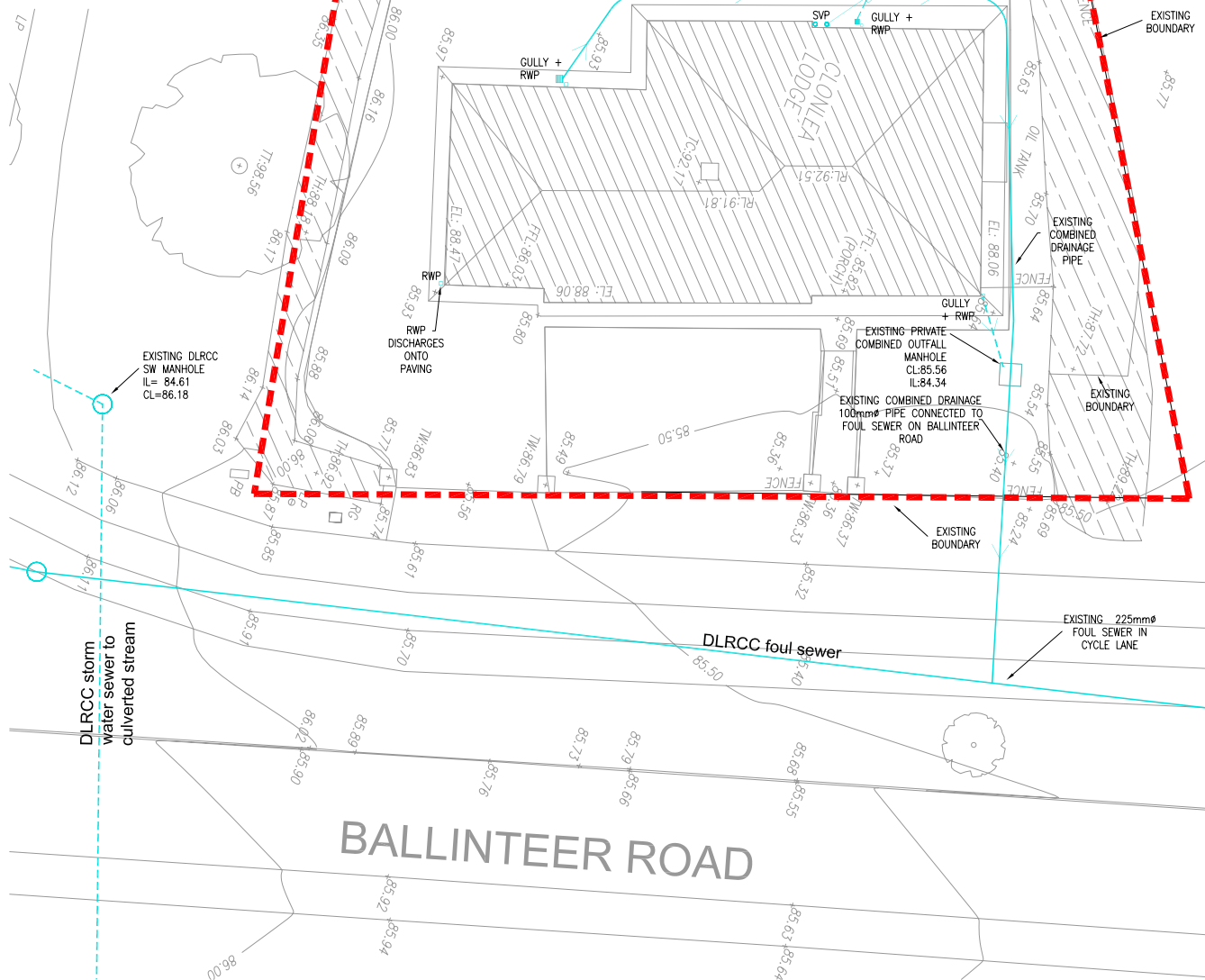
Map 2 _ location of site indicated by red dot and blue shading.



Map 3 – Dun Laoghaire Rathdown County Council public sewers in area.

DRAINAGE LEGEND

PROPOSED FOUL/COMBINED		FMH
PROPOSED SURFACE WATER		SWMH
EXISTING DEMOLISHED		
EXISTING RETAINED FOUL WATER DRAIN		EXMH
EXISTING RETAINED SURFACE WATER DRAIN		EXMH
MANHOLE / ACCESS JUNCTION		MH AJ
POPUP		PU
SOIL VENT PIPE / RAINWATER PIPE		SVP/RWP



EXISTING DRAINAGE PLAN

SCALE 1:100

NOTES:

NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF ANDREW RILEY CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY ISSUED.

- THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS.
- ALL DIMENSIONS IN mm UNLESS NOTED.
- DO NOT SCALE DIMENSIONS.
- THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.

NOTE:

LEVEL AND LOCATION OF SEWER TO BE CONFIRMED ON SITE. THE LEVELS AND LOCATION MUST BE PROVED PRIOR TO ANY NEW DRAINAGE AND FOUNDATION WORKS GOING AHEAD TO AVOID POSSIBLE CLASHES

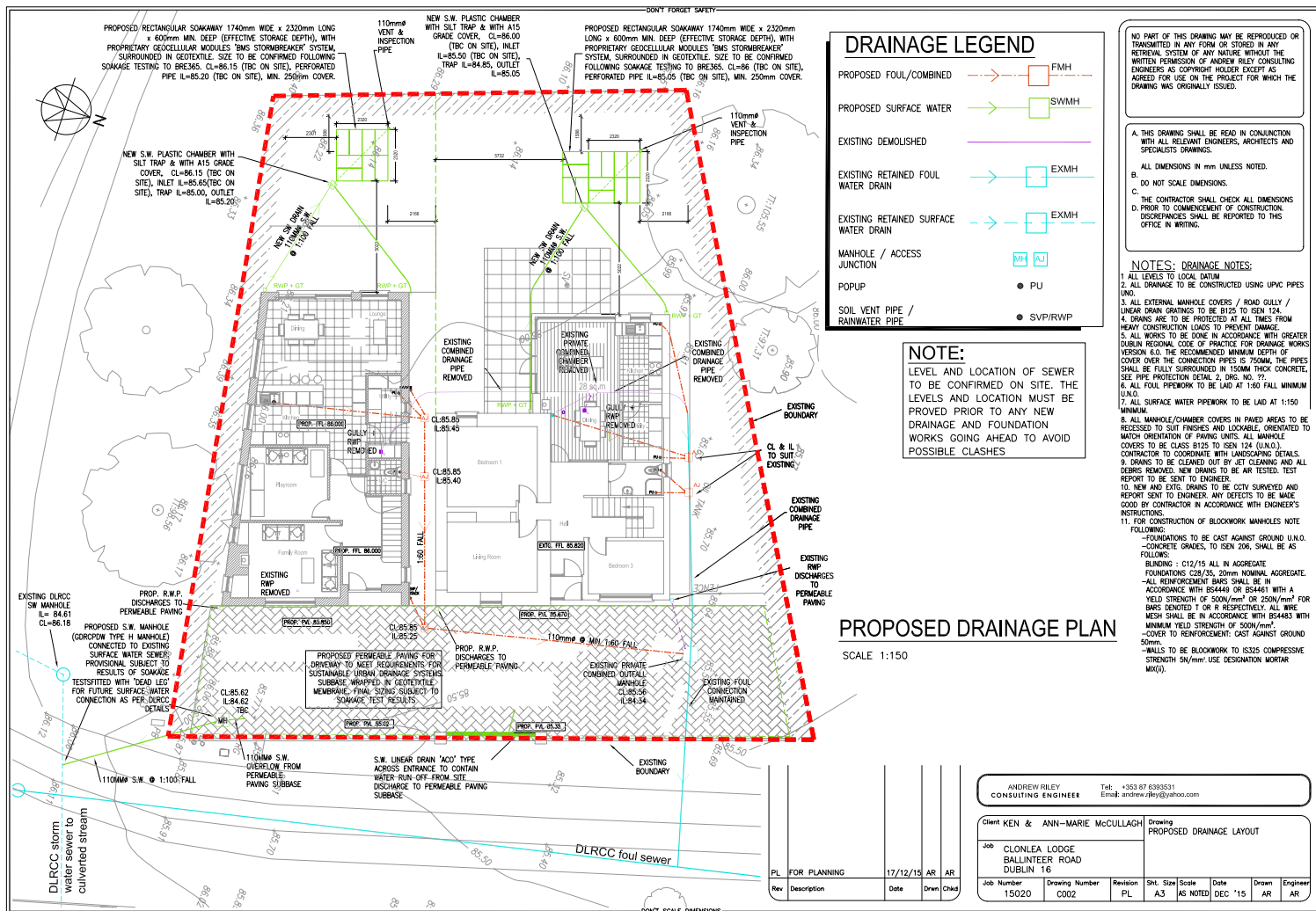
ANDREW RILEY
CONSULTING ENGINEER

Tel: +353 87 6393531
Email: andrew.riley@yahoo.com

Client KEN & ANN-MARIE McCULLACH Drawing
EXISTING DRAINAGE LAYOUT

Job	CLONLEA LODGE BALLINTEER ROAD DUBLIN 16
Job Number	15020
Drawing Number	C001
Revision	PL
Sht. Size	A3
Scale	1:150
Date	DEC '15
Drawn	AR
Engineer	AR

PL	PLANNING ISSUE	17/12/15	AR	AR
Rev	Description	Date	Drawn	Chkd



ANDREW RILEY CONSULTING ENGINEER	Tel: +353 87 6393531 Email: andrew.riley@yahoo.com
---	---

Client KEN & ANN-MARIE McCULLAGH	Drawing PROPOSED DRAINAGE LAYOUT
Job CLONLEA LODGE BALINLEIGH ROAD DUBLIN 16	
Job Number 15020	Drawing Number C002
Revision PL	Sht. Size A3
Scale AS NOTED	Date DEC '15
Drawn AR	Engineer AR