

25th April 2022

Cath

Please find enclosed an A1 plan of the proposed Douglas Links Routing .

In my initial studies I found there was substantial information and data on the subject of golf ball dispersal.

The two main sources of dominant information comes from :

Dr.Micheal Hurdzan – Golf Course Architecture 1996 (Melbourne)

Dr Mark Broadie Columbia University

Dr Broadie's data base has over 55.000 golf shots recorded and his summation is that golfers fall into 3 categories aged between 9 and 70 years old and cover skill levels from Tour professionals, low handicap players and amateurs in two classes – Am 2..Middle handicap players and Am 3.. High handicap players.

His research concluded that low handicap golfers (better players) hit the ball further with less lateral dispersion than higher handicap golfers (poorer players).

Hurdzans citation was that 92% of Am 3 players hit within a 15 degree line (cone) from either side of the centerline of the fairway, this line I have filled in on the plan , I have also drawn a line at a 20 deg deviation which would contain 97% of mis hit shots from the Am 3 category.

Please take into account that natural hazards (bunkers etc) and wind would have a great effect on how players aim , and please take into account the fact that players hate losing balls and that green keepers pick up most of the balls lost.

The vast majority that will play the Douglas Links would fall into the low and Middle handicap divisions and Broadies final assertion is that these statistics are based on a player hitting Driver (a club that hits the ball the furthest) but in many case players' play for position and don't use the club that has the highest dispersion possibility and also there are 4 shorter holes (Par 3's) where the players hits irons that have minimal left/right off hits.

Dr Broadie's percentage for Am 3 players is 93.6% of mishits fall within the 15 deg cone for the worst players.

Please feel free to call and discuss if you require any other assistance to explain this.

Regards

Allan McKay
Project Manager
The Douglas Links
Grenadier Ltd
Wellington

Tasman S

Extent of UAV Coverage



Topographical and other physical features shown are based on surveys completed by Land Matters in July 2020 using GNSS, Unmanned Aerial Vehicle (UAV) using structure from motion processing and LIDAR data sourced from Horizons Regional Council.

Vertical accuracy of the model in areas captured by Land Matters via LIDAR is +/- 0.2m and possibly greater where there is significant difference in elevation and/or significant vegetation. Contours are to be interpreted with caution. Accuracy of the model in areas sourced from Horizons Regional Council LIDAR data is +/- 0.5m and possibly greater. In areas of dense vegetation, any critical levels in these areas will need to be verified via a traditional survey.

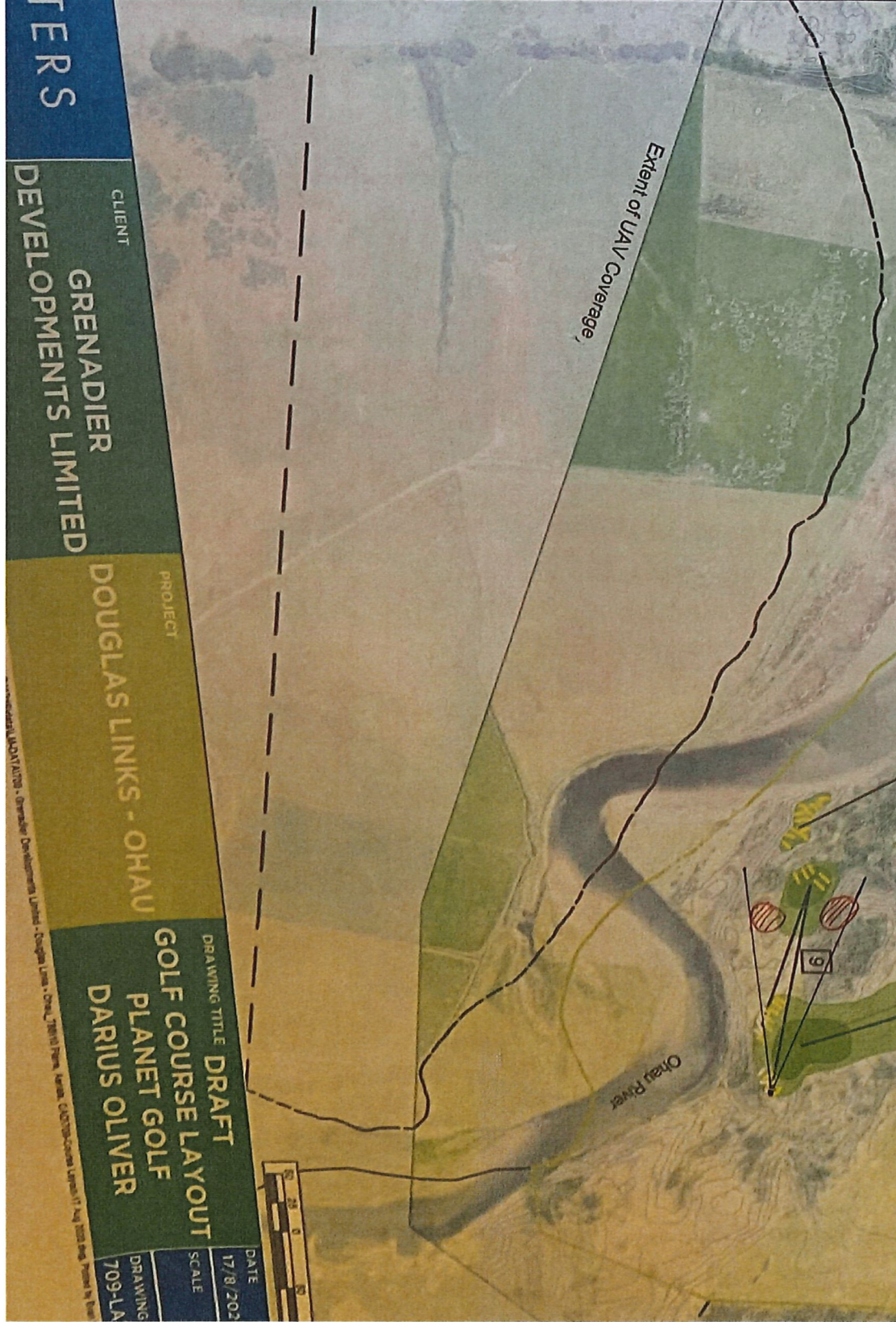
Vertical survey, interpolation of levels may not be appropriate or accurate for planning or interpretation of a specific project and may not be altered or used for other purposes without the prior written consent from Land Matters. Boundaries shown have been calculated to Cadastral Standards including Water Boundaries along the coast and Chau River. Water features have been interpolated from underlying plans and/or LINZ data.

- data sourced from LINZ Data Service
 - ground Aerial Photography has been sourced from LINZ Data Service
 - is licensed under Creative Commons 4.0
 - the data/labels are in hidden layers for clarity

Vertical Datum:
 ID 2000
 Vertical Circuit
 ID 48282 (F2H0)
 ID 48282 (F2H0)
 043 886 MN
 794 464 ME
 LINZ Geodetic Database
 LINZ Geodetic Database
 Local Datum:
 Vertical Datum 1983
 in of Levels:
 ID 48282 (F2H0)
 LINZ Geodetic Database (Height Conversion)
 Limited - i.e. no OP
 hits its outside
 of a 20 cone
 dispersion

GREEN HITS FROM HIGH HANDICAP PLAYER FOR 3 HOLES FOR 12 HIG DISPERSION IS LIMITED - I.E. NO OP HITS ITS OUTSIDE OF A 20 CONE DISPERSION

Legend:
 Boundary
 Greens
 Maintained Turf Areas
 Cut > 0.5m
 Fill > 0.5m



CLIENT: **GRENADIER DEVELOPMENTS LIMITED**

PROJECT: **DOUGLAS LINKS - OHAU**

DRAWING TITLE: **DRAFT GOLF COURSE LAYOUT PLANET GOLF DARIUS OLIVER**

DATE: 17/8/2021
 SCALE: 709-LA

PREPARED BY LAND MATTERS

CLIENT GRENADIER DEVELOPMENTS LIMITED

PROJECT DOUGLAS LINKS - OHAU

DRAWING TITLE DRAFT GOLF COURSE LAYOUT PLANET GOLF DARIUS OLIVER

