

Boundary Lake Golf Course Eighth Hole Flood and Drainage Appraisal

Introduction

This flood and drainage appraisal has been provided for the proposed amendment to the eighth hole at the Boundary Lake Golf Course of the Ageas Bowl.

The current eighth hole will be re-labelled in the new layout as the fifth hole and with the relocated second hole to the south.

The proposed amendment is for the creation of earth formed and landscaped bund situated between these two holes (i.e. between the current eighth / future fifth and future second).

The bund is required to provide a degree of separation between the two holes and also to help improve the safety of those playing on the golf course.

It is understood that the hole will be left in play whilst the works are carried out. The aspiration is to commence the works as soon as possible to restore the area to its previous condition.

A plan of the proposed amendment has been included as **Figure 1** and also as **Appendix A**.



Figure 1 – Proposed Amendment

Background Understanding

The site has a central post code of SO30 4DA and OS national grid reference of E: 447579 and N: 113503.

The Local Planning Authority (LPA) is Eastleigh Borough Council (EBC) and the Lead Local Flood Authority (LLFA) is Hampshire County Council (HCC).

The site is shown to be within the EA hydrological catchment of the South East Hants Bracklesham Group Water Body. However, the River Hamble is approximately 3.2km to the

south-east of the site with this draining south-west into Southampton Water near Hamble-le-Rice approximately 8.0km to the south. The River Hamble is tidal for approximately half of its length, and navigable in its lower reaches.

More locally, there is a watercourse that drains from the southern part of Telegraph Woods and then east across the Boundary Lakes Golf Course, to the east of the site. It is understood that this watercourse then drains via a culverted section under the M27. This culverted section continues under the superstores that are to the east of the site, before draining into the River Hamble.

OS data indicates a gentle fall in ground levels across the site from the west towards the east and south-east, therefore indicating that local natural drainage would be towards the culverted section under the M27.

There are also three ponds to the north and north-east of the site, with these within and associated with the golf course.

An extract from the Flood Map for Planning has been included as **Figure 2**. The site is located on the Flood Map for Planning in Flood Zone 1, indicating a low level of risk from fluvial and tidal sources.

The Flood Map for Planning shows the watercourse as it drains from the southern part of Telegraph Woods, and the culverted section under the M27 and north-east under the superstores. It also shows the three ponds to the north and north-east of the site. It also shows the three ponds.

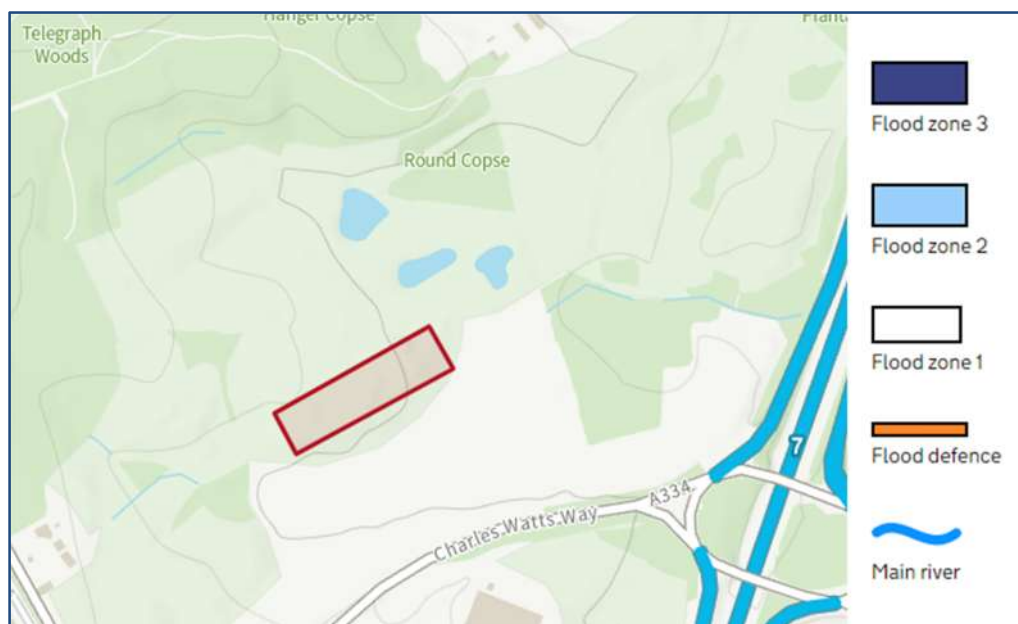


Figure 2 – EA Flood Map for Planning

An extract from the Long Term Flood Map has been included as **Figure 3**. This shows the site to be located outside of an area that could be affected by surface water flooding, and therefore classified as having a very low level of risk.

There is a surface water flow path located outside of the site to the south, draining in an easterly and then north-easterly direction. This drains from the westerly and north-westerly part of the golf course. There is another surface water flow path located outside of the site to the north and north-east. This drains from Telegraph Woods and then across where the three ponds are located. The presence of the ponds would most likely help to capture and contain this flow of water, with the ponds having been located to benefit from this water source.

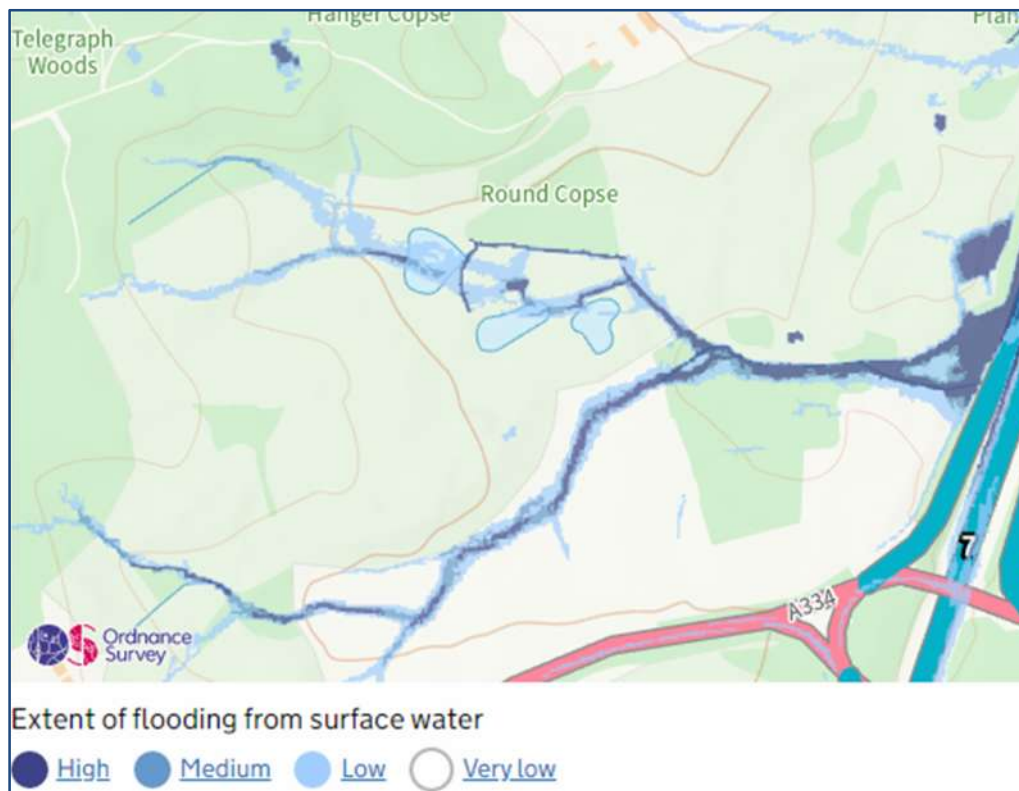


Figure 3 – Long Term Flood Map – Surface Water

Based on information from the British Geological Survey (BGS), the local bedrock geology is classified as the Wittering Formation with this a sedimentary deposit comprised of sand, silt and clay. There are not shown to be any superficial deposits recorded in this area.

Based on information from the Cranfield University Soilscales website, the local soils are classified as loamy and clayey, and these would typically have impeded drainage.

Although soil infiltration testing in this area has not been completed, it is anticipated that there would be some limited infiltration drainage into the ground but that the remainder of the surface water runoff would drain in accordance with topography across or near the ground surface to the east and south-east.

Mitigation and Management Measures

From the assessment of sources of flooding, there is no requirement for specific mitigation measures for the management of the identified risks.

In terms of the local drainage, the proposed amendment would introduce an earth formed and landscaped bund situated between the current eighth / future fifth and future second holes.

It is assumed that the material used to form the bund would either be similar or potentially less impervious than the local soils in this area. The orientation of the bund is roughly in a west to east direction. As described earlier, there is a gentle fall in ground levels across the site from the west towards the east and south-east.

There is anticipated to be some limited infiltration drainage into the ground with the remainder of the surface water runoff draining in accordance with topography across or near the ground surface to the east and south-east.

Therefore, the placement of the bund would not cut-off an existing flow route either from or into the site, and as such is not expected to have any adverse drainage impact.

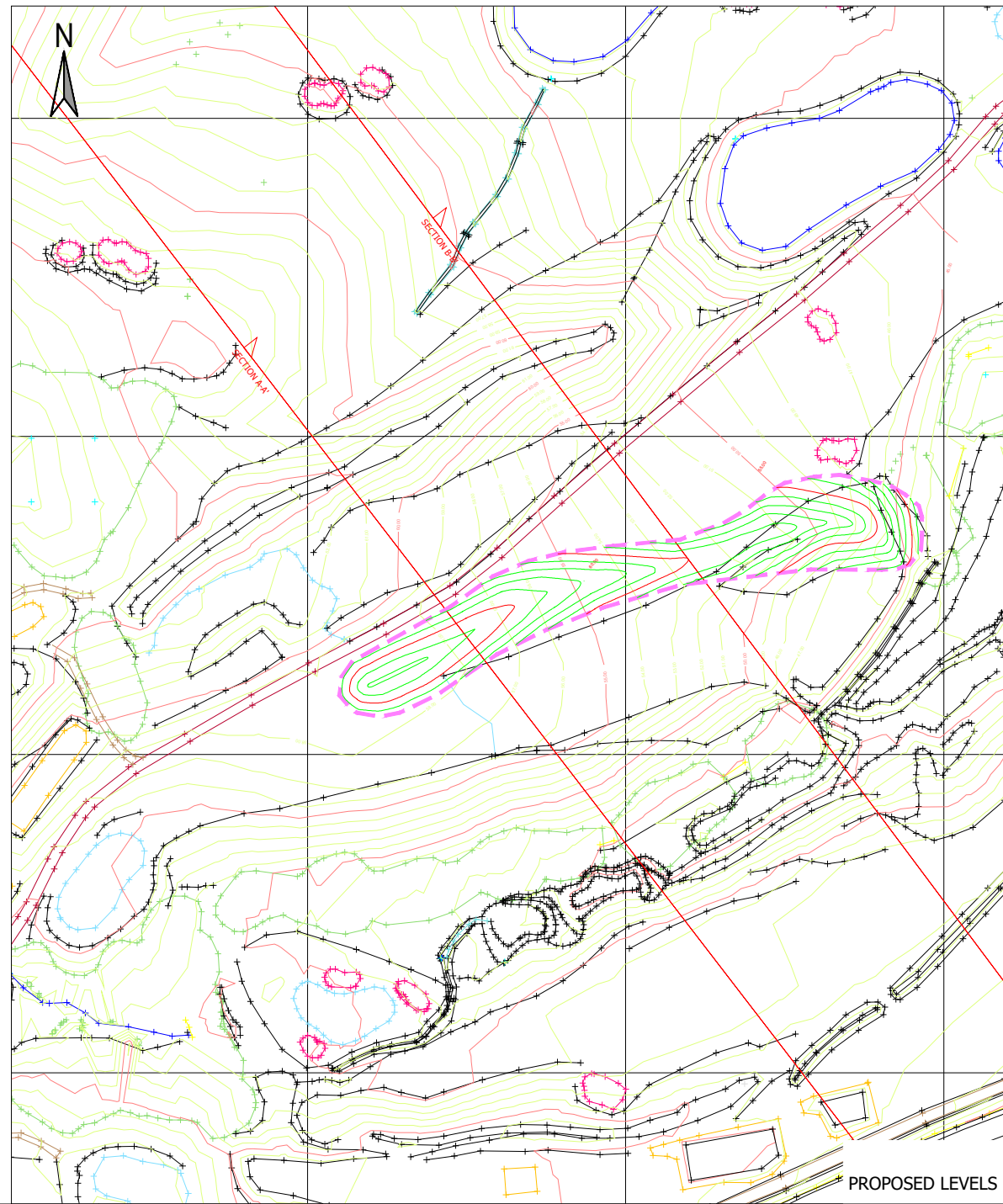
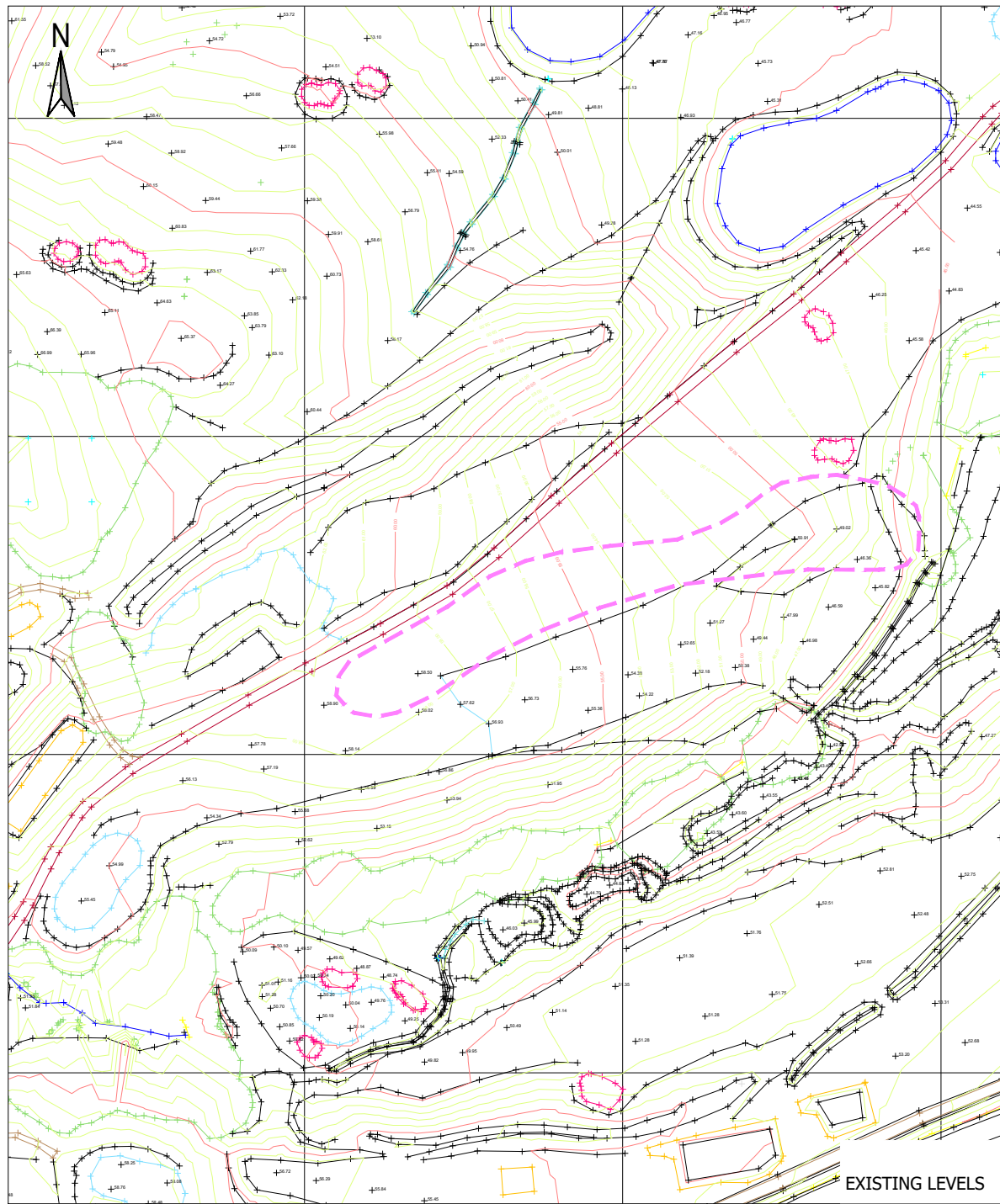
Given the orientation of the bund roughly from west to east and situated between the two holes, it would also help to convey surface water to the south-east and towards the watercourse that drains from the southern part of Telegraph Woods.

Conclusions

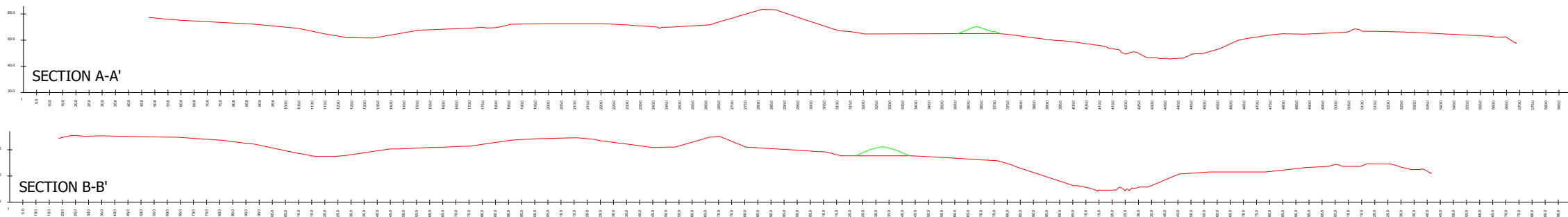
Based on the findings of this flood and drainage appraisal and with the inclusion of the suggested measures, the proposed amendment to the eighth hole is not considered to result in an adverse flood and drainage impact and no further assessment is required.

Appendix A

Plan of Proposed Amendments



- KEY:**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXTENT OF WORKS



INERT RECYCLING UK LIMITED							
BOUNDARY LAKES GOLF COURSE HOLE 2							
PROPOSED IMPROVEMENT WORKS SEPARATION BUND							
Drawing Number IRUK-AGS-HLE-02	Drawn DJE	Date 17-03-22	Approved	Date	Issue W3	Sheet 1 OF 1	Scale @ A3 1:2000
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